

2011



USER GUIDE

Table of Contents

| | |
|--|----|
| Using the Project Wizard | 3 |
| Namespace Page | 3 |
| Framework | 4 |
| Database Connection Page | 5 |
| Data Provider | 5 |
| Connection String | 5 |
| Database Tables | 6 |
| Business Logic Layer Page | 7 |
| Views | 7 |
| Working with Views | 7 |
| Planning For Code Customization | 8 |
| Application Construction Process | 10 |
| Affecting the Construction Process | 10 |
| Membership Page | 16 |
| Dedicated Login | 17 |
| Remember Me | 18 |
| Password Recovery | 19 |
| Sign Up | 19 |
| My Account | 20 |
| Idle User Detection | 20 |
| Standalone Membership Database | 21 |
| Membership Page | 21 |
| Layout Page | 23 |
| Simple | 23 |
| Tabbed | 24 |
| Classic | 25 |
| Inline | 26 |
| Stacked | 26 |
| Themes Page | 28 |
| Aquarium | 29 |
| Belltown | 29 |

| | |
|--|----|
| Citrus | 30 |
| Granite | 30 |
| Lacquer..... | 31 |
| Lichen | 31 |
| Petal | 32 |
| Plastic | 32 |
| Simple..... | 33 |
| Verdant | 33 |
| Using the Designer | 34 |
| Modifying User Interface with CSS | 34 |
| Conditional CSS Styling | 38 |
| Conversion and Validation of User Input..... | 41 |
| Conversion | 41 |
| Accessing Field Values..... | 43 |
| Validation | 44 |
| Tall and Wide Pages | 47 |
| Make a Page Tall and Wide..... | 47 |
| Maximize Real Estate of the Page..... | 48 |
| User Controls | 52 |
| Adding External Links..... | 61 |
| Making Database Views Updatable | 66 |
| Custom Logo and Footer..... | 68 |
| Using the Designer Spreadsheet..... | 72 |
| Using Excel to Build ASP.NET/AJAX Apps..... | 72 |
| Learn More..... | 81 |

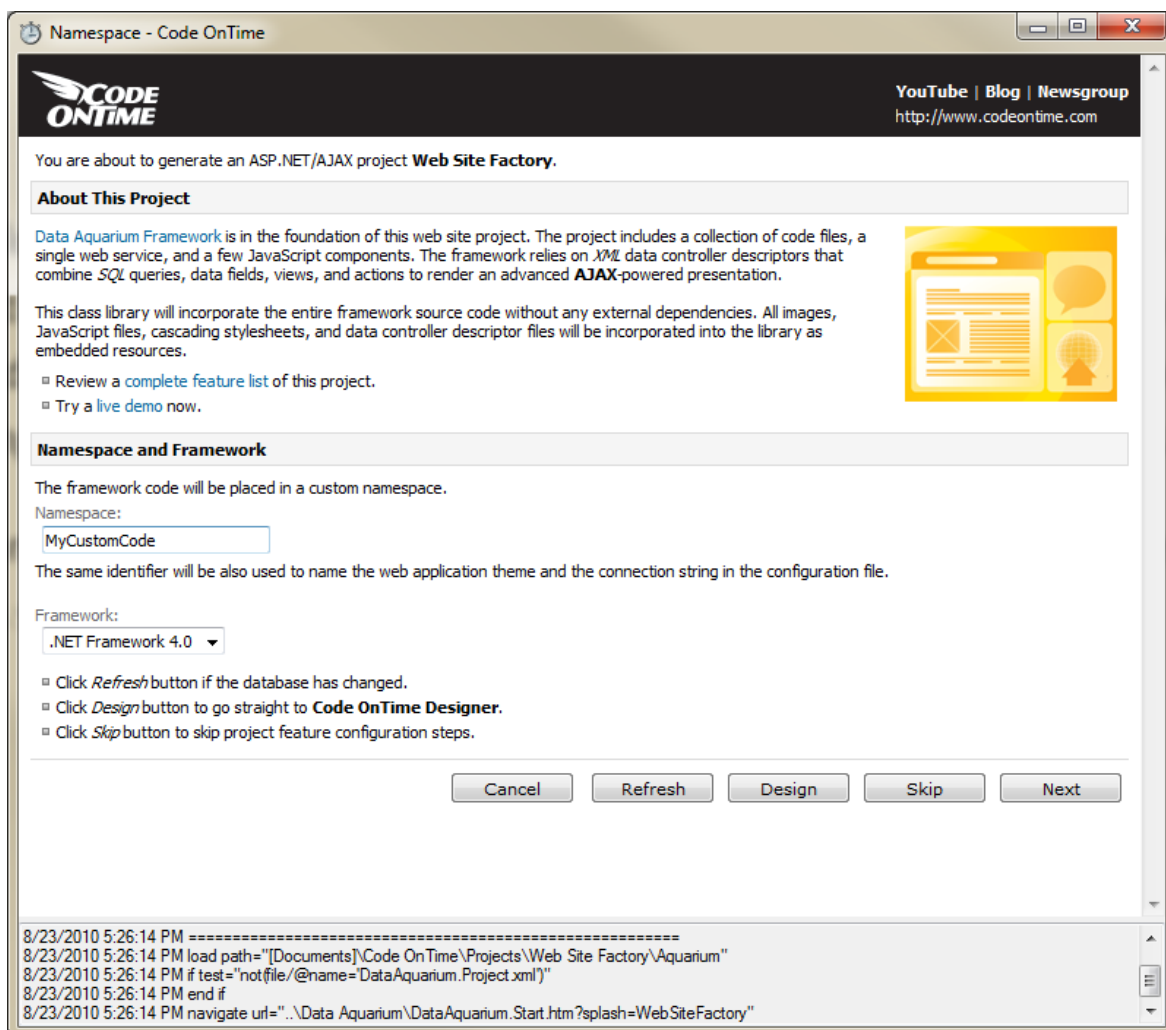
Using the Project Wizard

This chapter will aid you in using the various pages for the Web Site Factory project in Code On Time Generator. You can click on the title of each section to access its respective YouTube video.

Namespace Page

The “Namespace” field determines the namespace of the application code. This is commonly used to aid in custom coding for the generated application. If you are not going to engage in custom coding, then it is unnecessary to modify this field. The namespace must be a valid identifier for the programming language you are using. It must start with an alphanumeric character and not contain any spaces.

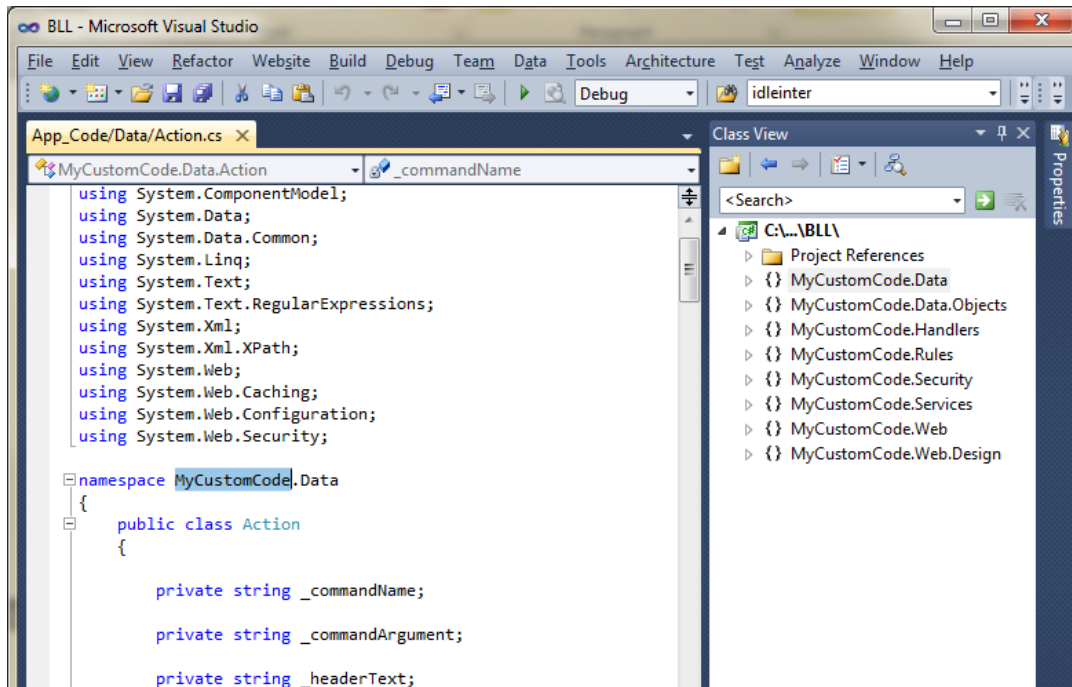
Let’s see how a custom namespace affects the code generation. Change the namespace field to “MyCustomCode”, as shown in the image below.



Now, generate the application by going through the project wizard pages. When generation finishes, the application will appear in your web browser.

The generated application uses Data Aquarium Framework, which can be expanded upon with your own custom code. The namespace of your project will include the application framework, as well as any custom code.

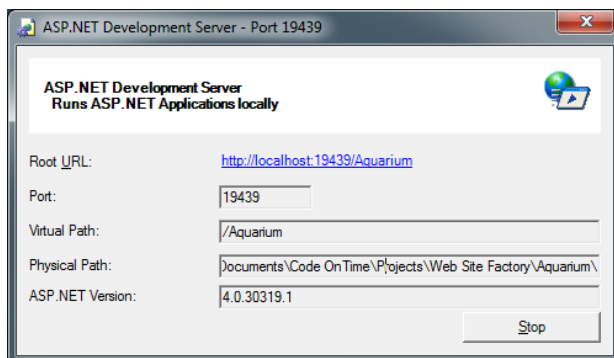
Open the website in Microsoft Visual Studio, and look at the class view. You can see that all of the code is grouped in the namespace that you specified. There are no external dependencies.



Framework

Your application can be compatible with ASP.NET 3.5 or 4.0 Framework. .NET 4.0 is recommended, as it includes the latest enhancements to Microsoft technologies and performs faster than .NET 3.5.

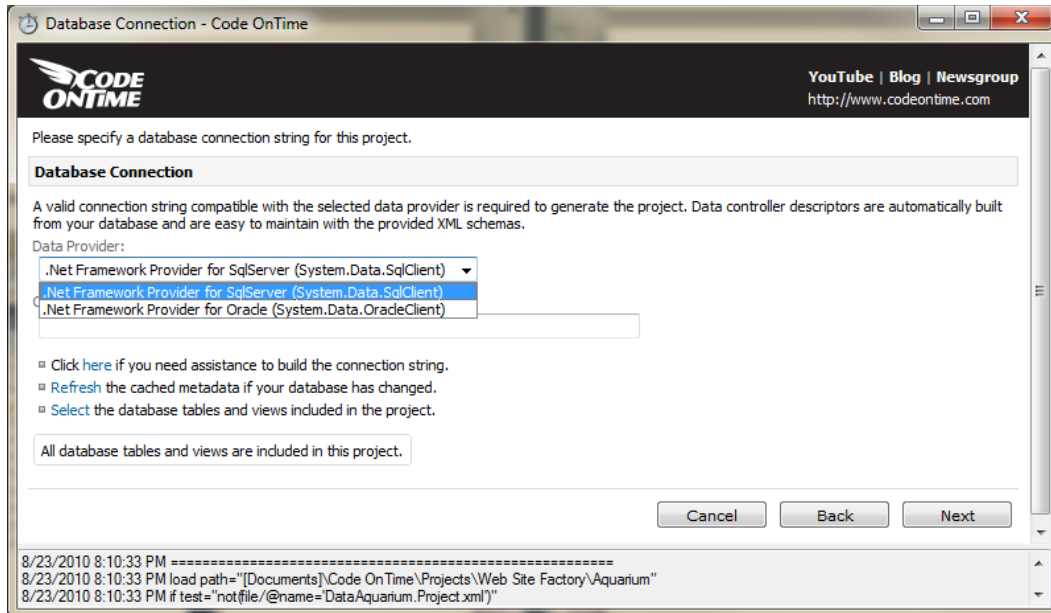
However, both options will result in functionally equivalent generated web applications. Choose which version you wish to implement using the dropdown. You can tell which version of .NET you are using by accessing the ASP.NET Development Server. It will be listed under ASP.NET Version.



Database Connection Page

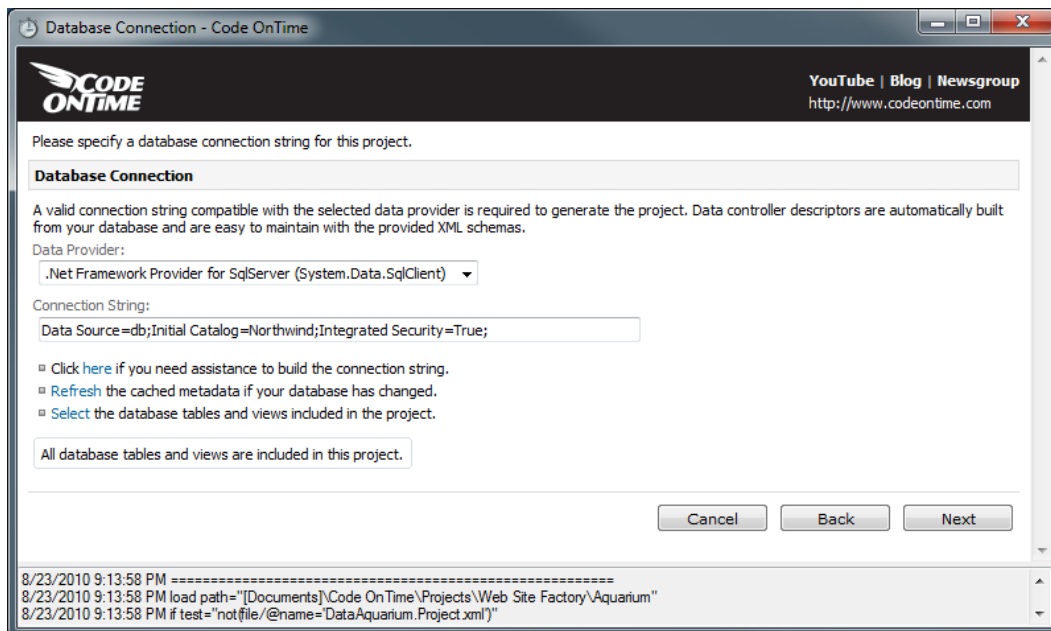
Data Provider

Code On Time Generator bases the generated web applications on an existing database. You can choose to select a database stored in SQL Server or Oracle by using the dropdown, as illustrated below.



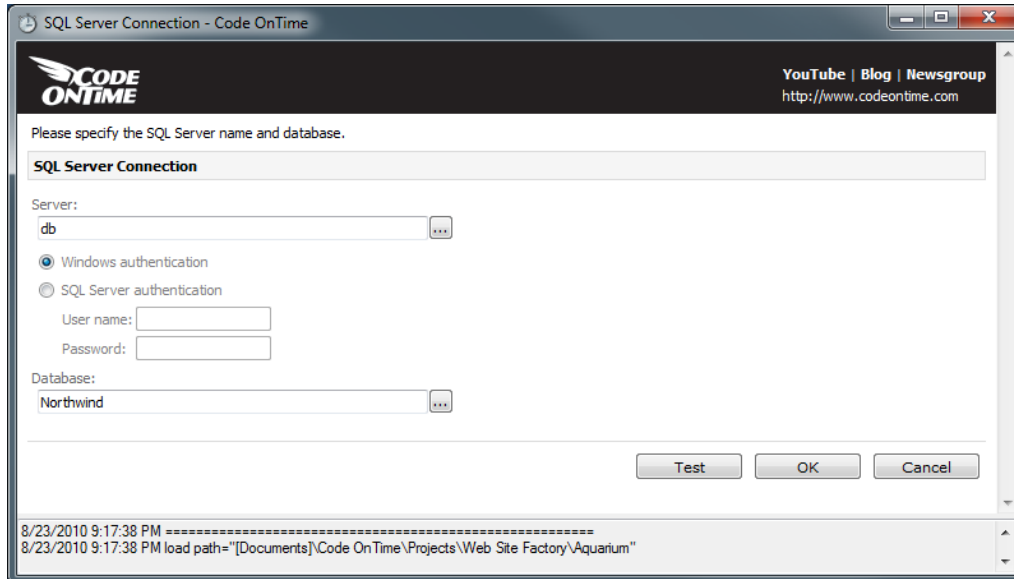
Connection String

You can insert your connection string to the database you would like to use in the field provided.



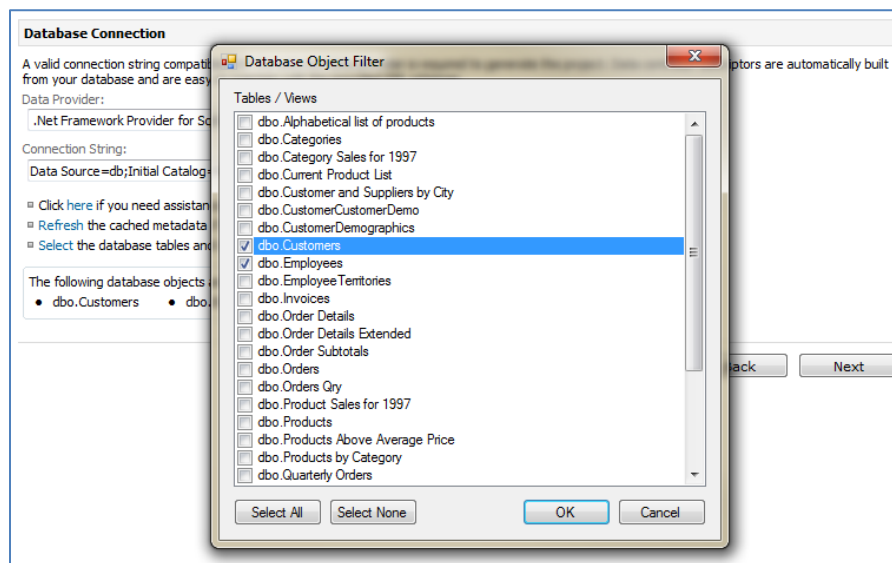
If you need assistance to build the connection string, then click on the link below to access the Connection String Builder. Type in your database in the first field and provide your credentials, if

necessary. Then type in your database name, or select from the dropdown. You can press the Test button to test the connection to the database.



Database Tables

You can specify which tables and views you would like to be generated for your web application. This scope can be determined by using the link near the bottom of the page. A table selection window will appear, with a checkbox list of all the database tables and views in the application. Check the ones that you wish to generate. In the example below, only Customers and Employees tables were selected.



When you press Ok, the list of data objects will be updated with your selection.

Business Logic Layer Page

When you are writing custom code for your application, the options available on this page are a real life saver. You can choose to include database views, and affect the construction process in multiple ways.

Business Logic Layer

A business logic layer is a collection of data controllers representing entities of the logical domain model of your application. Business objects represent a [denormalized](#) view of data suitable for display in user interface and coding of business rules. All possible relationships are discovered automatically for each database table through the available foreign keys. Optional discovery depth can limit the number of fields in objects.

Advanced Options:

- Generate a shared business rules class to implement [global logging](#) of actions executed by data controllers of your application.
- Include database views as read-only data controllers for reporting and customization.
- Use custom discovery depth, labeling expressions, field exclusion rules, table keys, and table field mapping to compose business objects.
- Generate business logic layer code objects for this application for use in [business rules](#) and custom [user interface](#) forms.

Views

The code generator will by default automatically include all database views in your project. The database views are treated as reports in the application, and can be used to import data from other database application. To enable views, check the second option on the business logic layer page.

The example below displays the database view called *Customer and Supplier by City*.



MyCompany

Home Customers Employees Categories Customer Demographics Region Reports Membership Site Actions

Home > Reports > Customer and Suppliers by City

Customer and Suppliers by City

This is a list of customer and suppliers by city.

Quick Find Actions Report View: Customer and Suppliers by City

| Company Name | City | Contact Name | Relationship |
|------------------------------------|-------------|--------------------|--------------|
| Alfreds Futterkiste | Berlin | Maria Anders | Customers |
| Ana Trujillo Emparedados y helados | México D.F. | Ana Trujillo | Customers |
| Antonio Moreno Taquería | México D.F. | Antonio Moreno | Customers |
| Around the Horn | London | Thomas Hardy | Customers |
| Aux joyeux ecclésiastiques | Paris | Guyène Nodier | Suppliers |
| Berglunds snabbköp | Luleå | Christina Berglund | Customers |
| Bigfoot Breweries | Bend | Cheryl Saylor | Suppliers |
| Blauer See Delikatessen | Mannheim | Hanna Moos | Customers |
| Blondesdøl søn og datter | Strasbourg | Frédérique Citeaux | Customers |
| Bólido Comidas preparadas | Madrid | Martín Sommer | Customers |

< Previous | Page: 1 2 3 4 5 6 7 8 9 10 ... | Next > Items per page: 10, 15, 20, 25 | Showing 1-10 of 120 items | Refresh

This view combines data from the Customers and Suppliers tables. You can page, sort, and filter the data. You can also download and export, generate an RSS feed, or create reports. However, you cannot select or delete any records.

Working with Views

Normally, data controllers based on views do not permit data modification. If you explicitly specify a primary key, then you will gain the ability to select data. If you choose a physical table to save to, then you will be able to update and create data. You can also make stored procedures to update data tables hidden by views.

Planning For Code Customization

You can choose to generate business logic layer code objects. A shared business rules class can also be generated, useful for global logging.

Code Object CRUD Methods

When you activate code objects, you have the option of specifying different names for the CRUD object methods. By default, method *Insert* allows creation of data. Method *Select* and *SelectSingle* allow the reading of data. Method *Update* updates the data, and method *Delete* removes the data from the database. The code objects will be generated in the language of your choice.

Generate business logic layer code objects for this application for use in **business rules** and custom **user interface** forms.

You can create object instances by calling *data selection* methods of object factories, manipulate object properties, *insert*, *update*, and *delete* objects. All objects of business logic layer are designed to support *data binding* with **ObjectDataSource** component.

Full support is provided for paging, sorting, filtering, and editing of records of any size with maximum flexibility and minimal database interaction. Business layer objects are provided with methods that allow to **create**, **read**, **update**, and **delete** database information. Please specify the method names.

Create method to insert a record in a database table:

Read method to retrieve **all records** that match specified filtering parameters:

Read method to retrieve a **single record** matched to a primary key value:

Update method to modify a record in a database table:

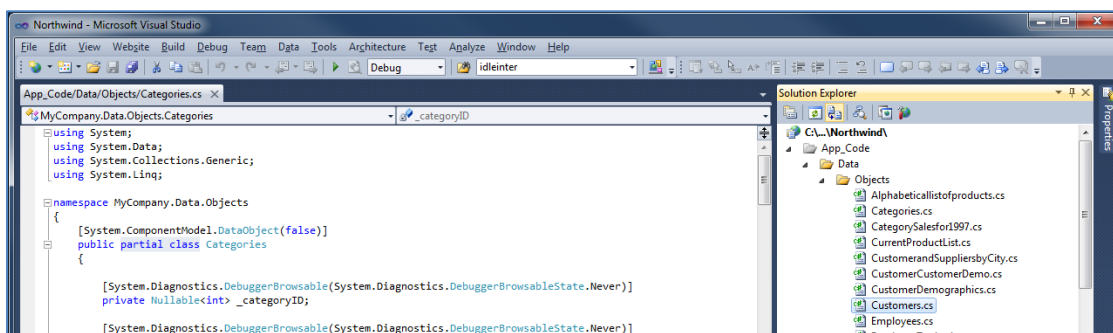
Delete method to remove a record from a database table:

If you change the business object method names then please make sure to use these names when following instructions in online tutorials.

Using Code Objects

Code objects are stored in *[YourNamespace]/Data/Objects*, and can be used to write custom business logic when you need to manipulate data.

Open the website in *Visual Studio* by clicking on *File | Open Web Site*, and select the correct folder location. Using the solution explorer, open up *App_Code/Data/Objects*. By opening *Customers.cs*, you can see that the class is declared as partial.



You can scroll down to see the *Select*, *SelectSingle*, *Insert*, *Update*, and *Delete* methods that have been generated for this controller. The code will be in the programming language of your choice.

```

...
public static List<MyCompany.Data.Objects.Categories> Select(MyCompany.Data.Objects.Categories qbe)
{
    return new CategoriesFactory().Select(qbe);
}

public static MyCompany.Data.Objects.Categories SelectSingle(Nullable<int> categoryID)
{
    return new CategoriesFactory().SelectSingle(categoryID);
}

public int Insert()
{
    return new CategoriesFactory().Insert(this);
}

public int Update()
{
    return new CategoriesFactory().Update(this);
}

public int Delete()
{
    return new CategoriesFactory().Delete(this);
}
...

```

Shared Business Rules

There is a single point of entry for Update, Insert, and Delete operations, which can be used to log all data manipulations. You can also use it to enrich data with common properties, such as Modified By, Modified On, and etcetera.

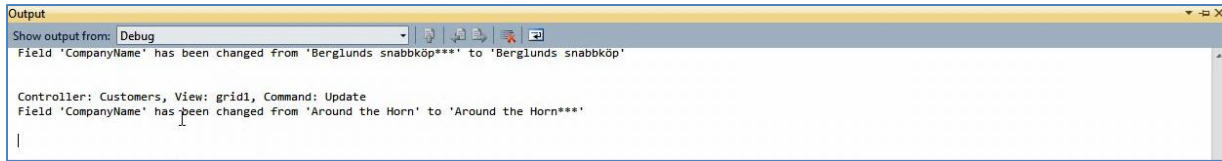
Take a look at the shared business rule that has been generated. Open Visual Studio, and navigate to App_Code/Rules/SharedBusinessRules.cs. You can write some code to implement some global logging. This code will monitor and log all updates. The code is displayed below.

```

namespace MyCompany.Rules
{
    public partial class SharedBusinessRules : MyCompany.Data.BusinessRules
    {
        protected override void AfterSqlAction(ActionArgs args, ActionResult result)
        {
            StringBuilder sb = new StringBuilder();
            sb.AppendLine();
            sb.AppendFormat(@"Controller: {0}, View: {1}, Command: {2}",
                args.Controller, args.View, args.CommandName);
            sb.AppendLine();
            switch (args.CommandName)
            {
                case "Update":
                    foreach (FieldValue v in args.Values)
                        if (v.Modified)
                        {
                            sb.AppendFormat(
                                "Field '{0}' has been changed from '{1}' to '{2}'",
                                v.Name, v.OldValue, v.NewValue);
                            sb.AppendLine();
                        }
                    break;
            }
            System.Diagnostics.Debug.WriteLine(sb.ToString());
        }
    }
}

```

Let's see this code in action. Modify any record in the database application, and look at the Output field. You can see that a log of this change has been added.



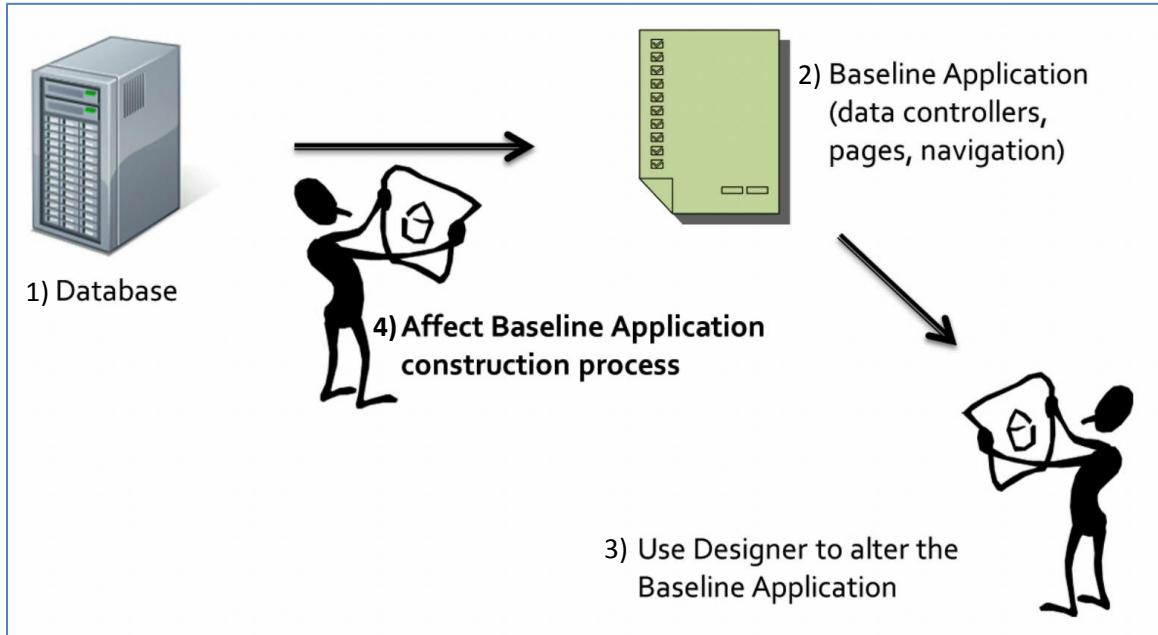
```
Output
Show output from: Debug
Field 'CompanyName' has been changed from 'Berglunds snabbköp***' to 'Berglunds snabbköp'

Controller: Customers, View: grid1, Command: Update
Field 'CompanyName' has been changed from 'Around the Horn' to 'Around the Horn***'
```

Application Construction Process

First, you start off with a database. Specify the connection string to your database, and Code On Time Generator will generate a baseline application, including data controllers, pages, and navigation. From there, you can use the Designer to customize the application to fit your needs.

There is an alternative. You can affect the baseline application construction process, so that you can spend less time designing.



Code On Time Generator creates all of the necessary infrastructure and pages for a baseline application, based on the supplied database. Multiple variables, such as virtual foreign keys and hidden fields, allow a high degree of control over the baseline application construction process.

Affecting the Construction Process

There are many ways that you can alter the baseline application, including the following:

- Declaring virtual foreign keys
- Altering automatically created pages
- Create new pages
- Customize the automatically created navigation menu

- Customize the generated data controllers
- Integrate existing applications into the new application

Settings in the Project Wizard help you perform these alterations.

Discovery Depth

In Code On Time applications, master tables will contribute fields to the detail data controllers. The option *Discovery Depth* will allow you to define how many relationships will be looked into for field contribution. The default value is three levels up.

Business Logic Layer

A business logic layer is a collection of data controllers representing entities of the logical domain model of your application. Business objects represent a [denormalized](#) view of data suitable for display in user interface and coding of business rules. All possible relationships are discovered automatically for each database table through the available foreign keys. Optional discovery depth can limit the number of fields in objects.

Advanced Options:

Generate a shared business rules class to implement [global logging](#) of actions executed by data controllers of your application.

Include database views as read-only data controllers for reporting and customization.

Use custom discovery depth, labeling expressions, field exclusion rules, table keys, and table field mapping to compose business objects.

Discovery Depth:

Relationship discovery will override the automatic discovery depth. Set discovery depth to *zero* to define all relationships manually.

In the Northwind sample database, the *Suppliers* table is two relationships away from *Order Details*. With the default discovery depth of three, several fields from *Suppliers* are contributed to the *Order Details* page, including *Ship Via Company Name*, *Order Customer Company Name*, and *Product Category Name*.

Home > Customers > Order Details

Order Details

Please review order details information below. Click Edit to change this record, click Delete to delete the record, or click Cancel/Close to return back.

[New Order Details](#) Actions Report View: **Review Order Details**

[Edit](#) [Delete](#) [Close](#)

Order Details

These are the fields of the order details record that can be edited.

| | |
|-----------------|------------------------|
| Order Customer# | VINET |
| Product Name | Mozzarella di Giovanni |
| Unit Price | \$34.80 |
| Quantity | 5 |
| Discount | 0 |

Reference Information

Additional details about order details are provided in the reference information section.

| | |
|-------------------------------|---------------------------|
| Order Customer Company Name | Vins et alcools Chevalier |
| Order Employee Last Name | Buchanan |
| Order Ship Via Company Name | Federal Shipping |
| Product Category Name | Dairy Products |
| Product Supplier Company Name | Formaggi Fortini s.r.l. |

[Edit](#) [Delete](#) [Close](#)

If we change the discovery depth to one, then the relationship to *Suppliers* table will not be followed during the generation, and the fields will not be present in the *Order Details* page, as you can see in the picture below.

Home > Customers > Order Details

Order Details

Please review order details information below. Click Edit to change this record, click Delete to delete the record, or click Cancel/Close to return back.

New Order Details Actions Report View: Review Order Details

Edit Delete Close

Order Details
These are the fields of the order details record that can be edited.

| | |
|-----------------|------------------------|
| Order Customer# | VINET |
| Product Name | Mozzarella di Giovanni |
| Unit Price | \$34.80 |
| Quantity | 5 |
| Discount | 0 |

Reference Information
Additional details about order details are provided in the reference information section.

| | |
|-------------------------------|-------------------------|
| Product Supplier Company Name | Formaggi Fortini s.r.l. |
| Product Supplier Contact Name | Elio Rossi |
| Product Supplier Phone | (0544) 60323 |

Edit Delete Close

De-Normalization Field Map

By default, only one field from each master table will be contributed to the child data controller. You have the option of explicitly defining which fields you would like to be present in the child data controller.

Let's specify a few fields to copy from the *Suppliers* table into the *Products* page. These fields will be *ContactName* and *Phone*. The correct text is displayed in the image below.

Discovery Depth: Relationship discovery will override the automatic discovery depth. Set discovery depth to zero to define all relationships manually.

Denormalization Field Map controls inclusion of master fields into the detail objects. Mappings start with the header line. Parent field names that must be included into the child object are listed one field per line following the map header. Use square brackets around the names with spaces.

Format of denormalization field map header line : *schema.ChildTableName => schema.ParentTableName*

Relationship Discovery allows specifying any foreign key relationships between child and parent tables that are not explicitly defined in the database. Use syntax *foreign key schema.table_name(field 1[, fieldN]) references schema.table_name(field 1, [fieldN])* to define the relationships.

Denormalization Field Map: Relationship Discovery:

dbo.Products => dbo.Suppliers
ContactName
Phone

Now, generate the application.

When it finishes, navigate to the *Products* page. You can see that the fields are listed under Reference Information for each record.

Home > Categories > Products

Products

Please review products information below. Click Edit to change this record, click Delete to delete the record, or click Cancel/Close to return back.

New Products Actions Report View: Review Products

Edit Delete Close

Products

These are the fields of the products record that can be edited.

| | |
|-----------------------|---------------------|
| Product Name | Aniseed Syrup |
| Supplier Company Name | Exotic Liquids |
| Category Name | Condiments |
| Quantity Per Unit | 12 - 550 ml bottles |
| Unit Price | \$10.00 |
| Units In Stock | 13 |
| Units On Order | 70 |
| Reorder Level | 25 |
| Discontinued | No |

Reference Information

Additional details about products are provided in the reference information section.

| | |
|-----------------------|------------------|
| Supplier Contact Name | Charlotte Cooper |
| Supplier Phone | (171) 555-2222 |

Edit Delete Close

Relationship Discovery

These may dramatically change the generation of your application.

Let's put in a virtual foreign key into *Products* from the *Suppliers* table. This will insert a reference to the *SupplierID* field in the Products page. The proper text is shown in the picture below.

Discovery Depth: 3 Relationship discovery will override the automatic discovery depth. Set discovery depth to zero to define all relationships manually.

Denormalization Field Map controls inclusion of master fields into the detail objects. Mappings start with the header line. Parent field names that must be included into the child object are listed one field per line following the map header. Use square brackets around the names with spaces.

Format of denormalization field map header line : `schema.ChildTableName => schema.ParentTableName`

Relationship Discovery allows specifying any foreign key relationships between child and parent tables that are not explicitly defined in the database. Use syntax `foreign key schema.table_name(field1[, fieldN]) references schema.table_name(field1[, fieldN])` to define the relationships.

Denormalization Field Map: Relationship Discovery:

```
foreign key dbo.Products(SupplierID)
references dbo.Suppliers(SupplierID)
```

Now, generate the application.

If you navigate to the *Products* table, you can see a foreign key reference to *SupplierID* in each of the products.

Home > Categories > Products

Products

This is a list of products.

| Product Name | Supplier Company Name | Category Name | Quantity Per Unit | Unit Price | Units In Stock | Units On Order | Reorder Level | Discontinued |
|---------------------------------|----------------------------|---------------|---------------------|------------|----------------|----------------|---------------|--------------|
| Chai | Exotic Liquids | Beverages | 10 boxes x 20 bags | \$18.00 | 39 | 0 | 10 | No |
| Chang | Exotic Liquids | Beverages | 24 - 12 oz bottles | \$19.00 | 17 | 40 | 25 | No |
| Aniseed Syrup | Exotic Liquids | Condiments | 12 - 550 ml bottles | \$10.00 | 13 | 70 | 25 | No |
| Chef Anton's Cajun Seasoning | New Orleans Cajun Delights | Condiments | 48 - 6 oz jars | \$22.00 | 53 | 0 | 0 | No |
| Chef Anton's Gumbo Mix | New Orleans Cajun Delights | Condiments | 36 boxes | \$21.35 | 0 | 0 | 0 | Yes |
| Grandma's Boysenberry Spread | Grandma Kelly's Homestead | Condiments | 12 - 8 oz jars | \$25.00 | 120 | 0 | 25 | No |
| Uncle Bob's Organic Dried Pears | Grandma Kelly's Homestead | Produce | 12 - 1 lb pkgs. | \$30.00 | 15 | 0 | 10 | No |
| Northwoods Cranberry Sauce | Grandma Kelly's Homestead | Condiments | 12 - 12 oz jars | \$40.00 | 6 | 0 | 0 | No |
| Mishi Kobe Niku | Tokyo Traders | Meat/Poultry | 18 - 500 g pkgs. | \$97.00 | 29 | 0 | 0 | Yes |
| Ikura | Tokyo Traders | Seafood | 12 - 200 ml jars | \$31.00 | 31 | 0 | 0 | No |

« Previous | Page: 1 2 3 4 5 6 7 8 | Next »

Items per page: 10, 15, 20, 25 | Showing 1-10 of 77 items | Refresh

If the key already exists in the application, then specifying a virtual foreign key will have no effect.

System Fields

System fields are present in the database to help external processes and applications manage and manipulate the data. These fields should not be visible to end users and business logic of the generated application.

When listed under *System Fields*, it will be excluded from the application design.

Discovery Depth:
 Relationship discovery will override the automatic discovery depth. Set discovery depth to zero to define all relationships manually.

Denormalization Field Map controls inclusion of master fields into the detail objects. Mappings start with the header line. Parent field names that must be included into the child object are listed one field per line following the map header. Use square brackets around the names with spaces.

Format of denormalization field map header line : *schema.ChildTableName => schema.ParentTableName*

Relationship Discovery allows specifying any foreign key relationships between child and parent tables that are not explicitly defined in the database. Use syntax *foreign key schema.table_name(field1[, fieldN]) references schema.table_name(field1[, fieldN])* to define the relationships.

Denormalization Field Map: Relationship Discovery:

Specify an optional **regular expression** that will be applied to all automatically generated labels to create user-friendly labels based on combinations of table and/or field names. For example, if your tables start with a prefix then the prefix can be removed by entering `^\w+?(?'\Text'.+)$` expression.

Label Format Expression:

Specify optional lists of table fields that are not generally available to application end-users through user interface forms. Such fields are often referred as *system* and *hidden* and are typically used to log data access operations and conditions. *Hidden* fields travel from the server to the client and back. *System* fields are never retrieved from the database. Provide user-friendly custom labels for physical names of schemas (synonyms), tables and fields.

System Fields (one per line **FieldName**): Hidden Fields (one per line **FieldName**): Custom Labels (one per line **PhysicalName=LabelText**):

rowguid

Hidden Fields

Hidden fields are used to describe data in multiple table rows, such as *Modified By* and *Modified On*. These fields can be hidden from the user interface.

Merely type in the name of the field in the *Hidden Fields* list, and it will not be visible to the end user of the application.

Discovery Depth:
 Relationship discovery will override the automatic discovery depth. Set discovery depth to *zero* to define all relationships manually.

Denormalization Field Map controls inclusion of master fields into the detail objects. Mappings start with the header line. Parent field names that must be included into the child object are listed one field per line following the map header. Use square brackets around the names with spaces.
Format of denormalization field map header line : *schema.ChildTableName => schema.ParentTableName*

Relationship Discovery allows specifying any foreign key relationships between child and parent tables that are not explicitly defined in the database. Use syntax *foreign key schema.table_name(field 1[, fieldN]) references schema.table_name(field 1,[fieldN])* to define the relationships.

Denormalization Field Map: Relationship Discovery:

Specify an optional [regular expression](#) that will be applied to all automatically generated labels to create user-friendly labels based on combinations of table and/or field names. For example, if your tables start with a prefix then the prefix can be removed by entering `^\w+?(?'Text'.+)$` expression.

Label Format Expression:

Specify optional lists of table fields that are not generally available to application end-users through user interface forms. Such fields are often referred as *system* and *hidden* and are typically used to log data access operations and conditions. *Hidden* fields travel from the server to the client and back. *System* fields are never retrieved from the database. Provide user-friendly custom labels for physical names of schemas (synonyms), tables and fields.

System Fields (one per line **FieldName**): Hidden Fields (one per line **FieldName**): Custom Labels (one per line **PhysicalName=LabelText**):

Modified On

Custom Labels

This allows creation of user-friendly labels for tables and fields. These defined custom labels do not affect the physical source code files and object identifiers, which remain the same as defined in the database.

In this example, let's change the fields *TitleOfCourtesy* to *Salutation*, *Employees* to *Workers*, *Reports to Last Name* to *Manager*, and *PhotoPath* to *Path to Image File*.

Specify optional lists of table fields that are not generally available to application end-users through user interface forms. Such fields are often referred as *system* and *hidden* and are typically used to log data access operations and conditions. *Hidden* fields travel from the server to the client and back. *System* fields are never retrieved from the database. Provide user-friendly custom labels for physical names of schemas (synonyms), tables and fields.

System Fields (one per line **FieldName**): Hidden Fields (one per line **FieldName**): Custom Labels (one per line **PhysicalName=LabelText**):

Employees=Workers
TitleOfCourtesy=Salutation
ReportsToLastName=Manager
PhotoPath=Path to Image File

Regenerate the application. When you generate the application again, you can see that *Employees* page is now called *Workers* page. The field *Title Of Courtesy* has been renamed to *Salutation*. *Reports To Last Name* is now *Manager*, and *Photo Path* is now *Path to Image File*.

Home > Workers

Workers


Please review workers information below. Click Edit to change this record, click Delete to delete the record, or click Cancel/Close to return back.

New Workers Actions Report View: Review Workers

Edit Delete Close

Workers

These are the fields of the workers record that can be edited.

| | |
|--------------------|--|
| Last Name | King |
| First Name | Robert |
| Title | Sales Representative |
| Salutation | Mr. |
| Birth Date | 5/29/1960 |
| Hire Date | 1/2/1994 |
| Address | Edgeham Hollow Winchester Way |
| City | London |
| Region | N/A |
| Postal Code | RG1 9SP |
| Country | UK |
| Home Phone | (71) 555-5598 |
| Extension | 465 |
| Photo |  |
| Notes | Robert King served in the Peace Corps and traveled extensively before completing his degree in English at the University of Michigan in 1992, the year he joined the company. After completing a course entitled "Selling in Europe," he was transferred to the London office in March 1993. |
| Manager | Buchanan |
| Path to Image File | http://accweb/emmployees/davolio.bmp |

Edit Delete Close

Membership Page

There are three available membership options.



You can choose to generate with *ASP.NET* membership, giving you an integrated user/role management system. Administrators will be able to access the membership page in the web application.

Windows Authentication uses your *Windows* login and password to access the web application.

The custom authentication option gives you the ability to custom code your own membership management solution.

Below is an example of the *Membership Page*. The first three checkboxes are the available membership options.

Authentication and Membership

Please select authentication and membership options for your application. Some options will require custom coding or not compatible with each other.

Application Membership Features:

- Enable support for [ASP.NET Membership](#) with membership bar and [user manager](#).
- Enable [Windows Authentication](#). Recommended for *Intranet* applications only.
- Enable custom authentication and membership implementation. Requires additional coding.
- Enable a dedicated login page instead of a fly-over login dialog.
- Display "Remember Me" option on the fly-over login dialog.
- Login option "Remember Me" is set by default.
- Display "Password Recovery" link on the fly-over login dialog.
- Display "Sign Up" link on the fly-over login dialog.
- Display "My Account" link on the membership bar.
- Display "Help" link on the membership bar and support page-level help.
- Detect if user is idle for longer than minutes and log the user out of the application.
- Membership will use a [standalone database](#) that already exists.

Specify a valid connection string compatible with the selected data provider if you want to use a standalone membership database.

Data Provider:

Connection String:

- If the connection string is left blank and membership is enabled then ASP.NET will expect that [Microsoft SQL Express](#) is installed on this computer.
- Click [here](#) if you need assistance to build the connection string.

Dedicated Login

You can create a dedicated login page by checking the checkbox. This dedicated login page will appear when you try to open the web application, and is used instead of the flyover login dialog. This option is available for *ASP.NET* membership and custom authentication.

Authentication and Membership

Please select authentication and membership options for your application. Some options will require custom coding or not compatible with each other.

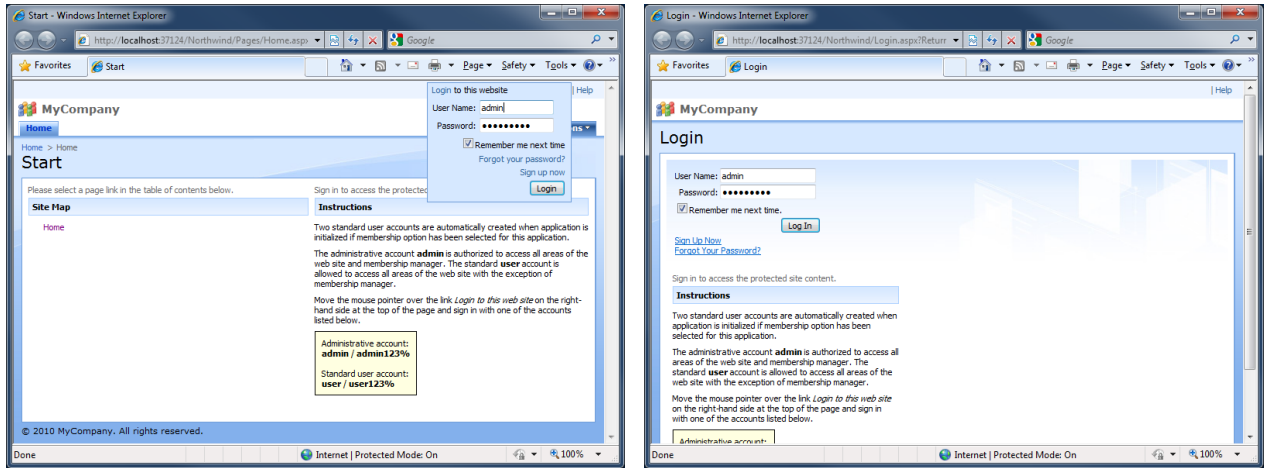
Application Membership Features:

- Enable support for [ASP.NET Membership](#) with membership bar and [user manager](#).
- Enable [Windows Authentication](#). Recommended for *Intranet* applications only.
- Enable custom authentication and membership implementation. Requires additional coding.
- Enable a dedicated login page instead of a fly-over login dialog.

[ASP.NET Membership](#) gives you a built-in way to validate and store user credentials and helps you manage user authentication in your Web sites.

Standard ASP.NET membership features can be enhanced with AJAX-enabled user and role manager. Membership bar component will be displayed at the top of all pages and will provide an attractive AJAX-enabled login window, access to self-registration, password recovery, and user account modification with no code to write.

The standard flyover login dialog is displayed to the left. The dedicated login page is displayed to the right.



Remember Me

You can choose to display a *Remember Me* checkbox on the login dialog. If checked, it will remember the last entered user credentials. You can also choose to have it checked or unchecked by default.

Authentication and Membership

Please select authentication and membership options for your application. Some options will require custom coding or not compatible with each other.

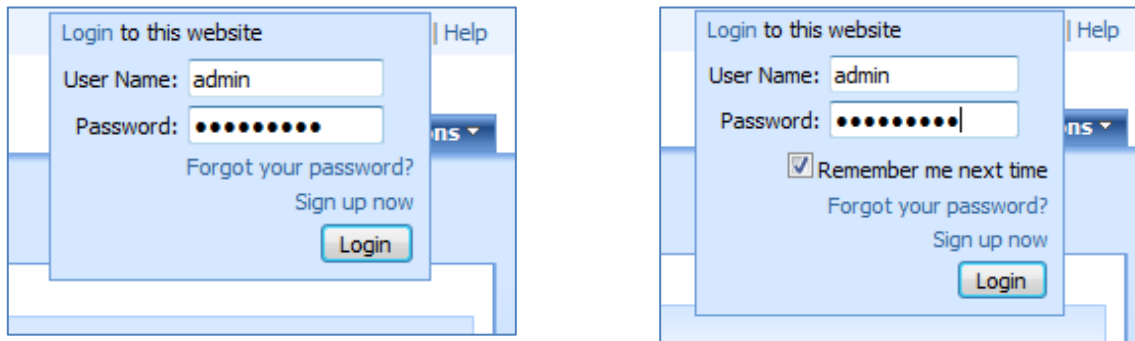
Application Membership Features:

- Enable support for [ASP.NET Membership](#) with membership bar and user manager.
- Enable [Windows Authentication](#). Recommended for *Intranet* applications only.
- Enable custom authentication and membership implementation. Requires additional coding.
- Enable a dedicated login page instead of a fly-over login dialog.
- Display "Remember Me" option on the fly-over login dialog.
- Login option "Remember Me" is set by default.

[ASP.NET Membership](#) gives you a built-in way to validate and store user credentials and helps you manage user authentication in your Web sites.

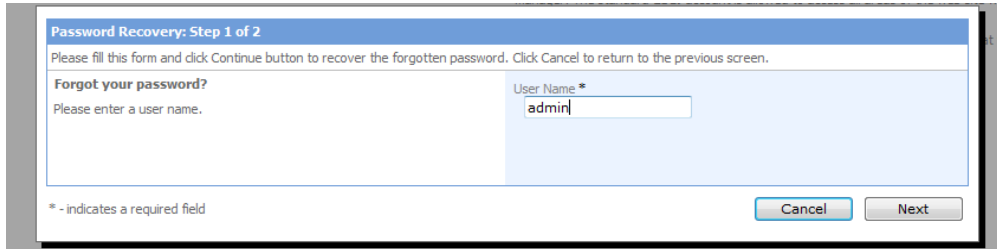
Standard ASP.NET membership features can be enhanced with AJAX-enabled user and role manager. Membership bar component will be displayed at the top of all pages and will provide an attractive AJAX-enabled login window, access to self-registration, password recovery, and user account modification with

On the left, you can see the login dialog without the *Remember Me* option. On the right, that option is enabled.



Password Recovery

You can choose to enable the *Forgot your password?* link. Click on the link on the login dialog to go to the *Password Recovery* screen. First, it will ask you for your username.



Password Recovery: Step 1 of 2
Please fill this form and click Continue button to recover the forgotten password. Click Cancel to return to the previous screen.

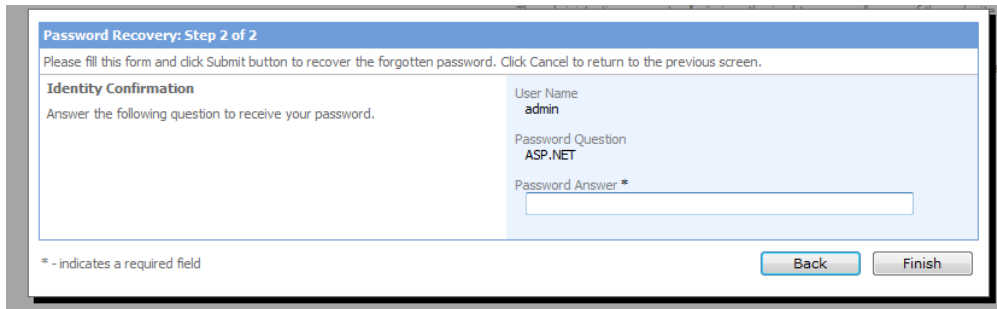
Forgot your password?
Please enter a user name.

User Name *
admin

* - indicates a required field

Cancel Next

Type in the username of the account you would like to recover, and press *Next*. It will ask you for the answer to your security question. When answered, an email will be sent to the address specified in the account.



Password Recovery: Step 2 of 2
Please fill this form and click Submit button to recover the forgotten password. Click Cancel to return to the previous screen.

Identity Confirmation
Answer the following question to receive your password.

User Name
admin

Password Question
ASP.NET

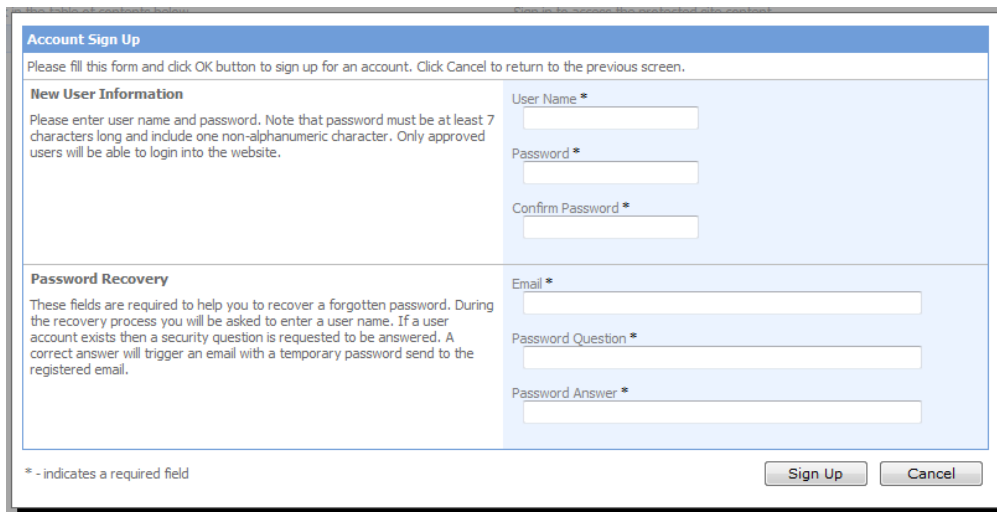
Password Answer *

* - indicates a required field

Back Finish

Sign Up

You can choose to have a *Sign Up Now* link on the login dialog. This will allow users to register themselves in the application. In the screen that appears, specify a user name, password, password question and answer, email, and press *Sign Up*. By default, the account will have standard permissions. You can change this by logging in as administrator and changing the permissions in the *Membership* page.



Account Sign Up
Please fill this form and click OK button to sign up for an account. Click Cancel to return to the previous screen.

New User Information
Please enter user name and password. Note that password must be at least 7 characters long and include one non-alphanumeric character. Only approved users will be able to login into the website.

User Name *

Password *

Confirm Password *

Password Recovery
These fields are required to help you to recover a forgotten password. During the recovery process you will be asked to enter a user name. If a user account exists then a security question is requested to be answered. A correct answer will trigger an email with a temporary password send to the registered email.

Email *

Password Question *

Password Answer *

* - indicates a required field

Sign Up Cancel

My Account

The *My Account* link is available on the membership bar when a user is logged in.

History | Permalink Welcome **admin**, Today is Saturday, September 25, 2010 | [My Account](#) | [Logout](#) | [Help](#)

MyCompany

Home Customers Employees Categories Customer Demographics Region Reports Membership Site Actions

Home > Home

Start

Please select a page link in the table of contents below.

Site Map

- Home
- Customers
 - Orders
 - Customer Demo
 - Order Details
- Employees
 - Employee Territories
- Categories
 - Products
 - Customer Demographics
- Region
 - Territories
 - Shippers
 - Suppliers

Instructions

Sign in to access the protected site content.

Two standard user accounts are automatically created when application is initialized if membership option has been selected for this application.

The administrative account **admin** is authorized to access all areas of the web site and membership manager. The standard **user** account is allowed to access all areas of the web site with the exception of membership manager.

Move the mouse pointer over the link *Login to this web site* on the right-hand side at the top of the page and sign in with one of the accounts listed below.

Administrative account:
admin / admin123%

Standard user account:
user / user123%

It allows the user to change their password, email, and security question and answer.

My Account

Please review your membership information below. Click Update My Account to change this record, or click Cancel to return back.

| | |
|--|--|
| 1. Current Password Please enter your current password to create new password, update your email address, or change password recovery question and answer. | User Name admin Password * |
| 2. New Password (Optional) Please enter new password. Note that password must be at least 7 characters long and include one non-alphanumeric character. | New Password * Confirm New Password * |
| 3. Email & Password Recovery (Optional) During the recovery of a forgotten password you will be asked to enter your user name. If a user account exists then a password question must be answered. A correct answer will trigger an email with a temporary password send to you. | Email * admin2@MyCompany.com Password Question * ASP.NET Password Answer (not displayed for your protection) * |

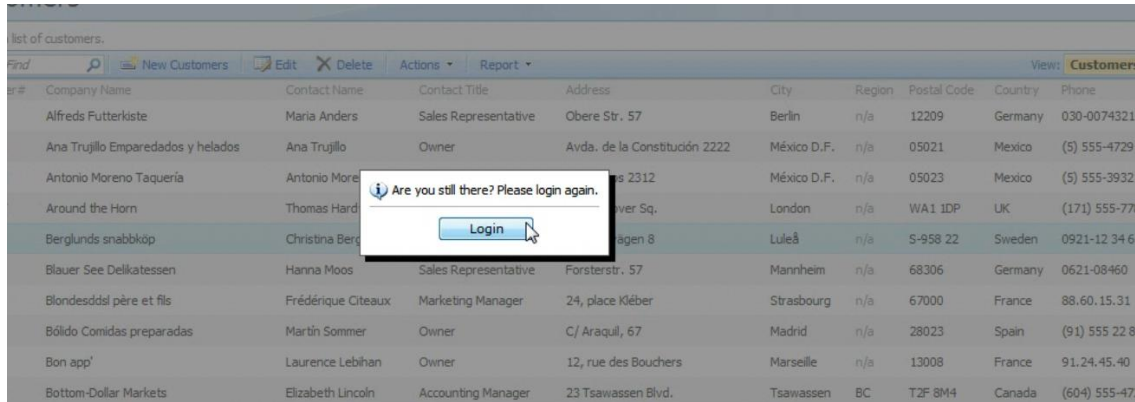
* - indicates a required field

Idle User Detection

You can choose to enable *Idle User Detection*, as well as specify the logout time.

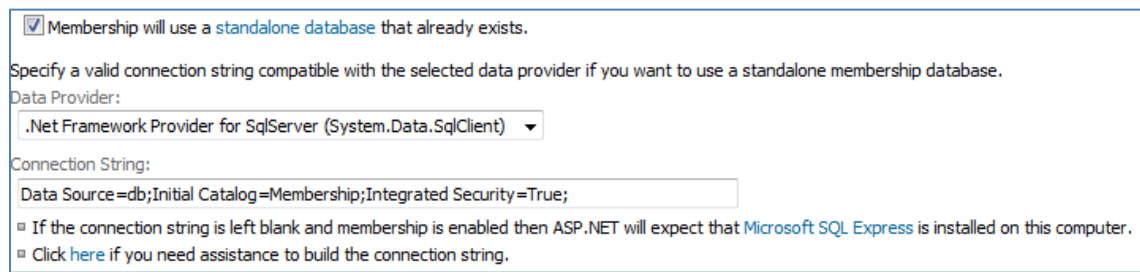
Detect if user is idle for longer than minutes and log the user out of the application.

This feature will detect a lack of activity from the user. When the specified amount of time has passed, a login notification will appear. You will need to login again to access the application.



Standalone Membership Database

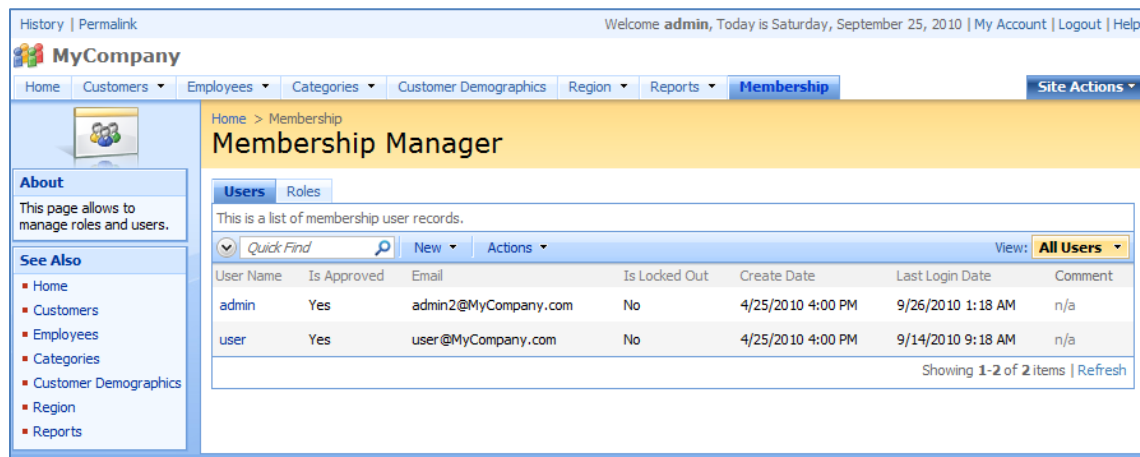
You also have the option of using a standalone membership database for the application. If left unchecked, the membership will be stored in the application.



View the instructions to easily create a new standalone database application at <http://blog.codeontime.com/2010/03/standalone-aspnet-membership-database.html>.

Membership Page

By choosing the ASP.NET Membership option, a membership page will be generated for your application. This page is accessible to administrators by clicking on the last tab at the top of the page.



You can use this page to approve accounts, edit roles, modify account information, and view activity and login statistics.

Home > Membership

Membership Manager

Users Roles

Please review user membership information below. Click Edit to change this record, click Delete to delete the record, or click Cancel/Close to return back.

View: **Review User** ▾

* - indicates a required field OK Cancel

User Information

Please select user roles that most closely match user's responsibilities. Roles control access to the areas of this web site. Please contact system administrator if role access restrictions must be changed.

Enter any additional comments about this user account. Comment is not visible to the user.

User Name
admin

Roles
 Administrators Sales Users
 Customers Shippers

Comment

This user account is approved

Password Recovery

During the recovery of a forgotten password the user will be asked to enter a user name. If a user account exists then a security question is requested to be answered. A correct answer will trigger an email with a temporary password send to the user.

Change locked out flag to 'No' if the user has been locked out after reaching a maximum number of failed login attempts and you want to allow user to login again.

Email *

Password Question
ASP.NET

Is Locked Out *

You can also use the Roles tab modify, delete, and create new roles.

History | Permalink Welcome **admin**, Today is Saturday, September 25, 2010 | My Account | Logout | Help

MyCompany

Home Customers Employees Categories Customer Demographics Region Reports **Membership** Site Actions ▾

Home > Membership

Membership Manager

Users **Roles**

This is a list of membership roles.

Quick Find New Actions ▾ View: **Roles** ▾

| Role Name | Description |
|----------------|-------------|
| Administrators | n/a |
| Customers | n/a |
| Sales | n/a |
| Shippers | n/a |
| Users | n/a |

Showing 1-5 of 5 items | Refresh

This is a list of membership user records that belong to a selected role.

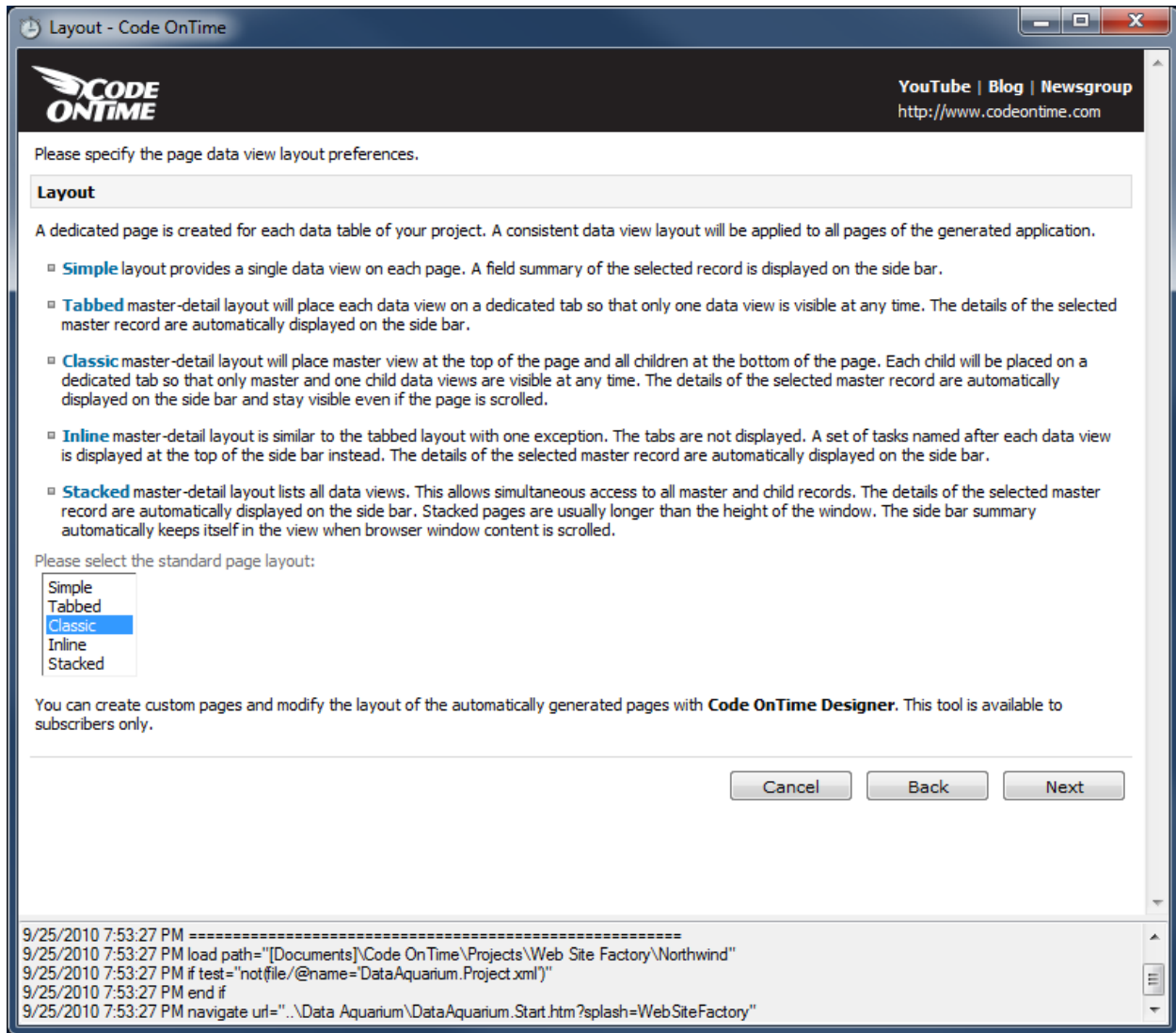
Quick Find New Actions ▾ View: **Users in Role** ▾

| User Name | Is Approved | Email | Is Locked Out | Create Date | Last Login Date | Comment |
|-----------|-------------|----------------------|---------------|-------------------|-------------------|---------|
| admin | Yes | admin2@MyCompany.com | No | 4/25/2010 4:00 PM | 9/26/2010 1:18 AM | n/a |

Showing 1-1 of 1 items | Refresh

Layout Page

This is the Layout Page. Use the list box to select which layout you would like to use in your generated application.



The data in your application can be presented in many different ways. There are two types of layouts that Code On Time generator creates: simple and master-detail layouts. Simple layout only presents a single record list. Master-detail layouts present a master record list and at least one associated child record list. There are different types of master-detail layouts that are available.

Simple

A simple page layout has just one master record list, and you need to navigate to another page to view any dependent record lists. However, all features are available, such as reporting, generating RSS feeds, and more.

You can access related pages using the *See Also* box, underneath the data summary or through the tabs and dropdown options of the main menu of the application.

This is a list of customers.

| Customer # | Company Name | Contact Name | Contact Title | Address | City | Region | Postal Code | Country | Phone |
|------------|------------------------------------|--------------------|----------------------|-------------------------------|--------------|---------|-------------|---------|----------------|
| ALFKI | Alfreds Futterkiste | Maria Anders | Sales Representative | Obere Str. 57 | Berlin | n/a | 12209 | Germany | 030-0074321 |
| ANATR | Ana Trujillo Emparedados y helados | Ana Trujillo | Owner | Avda. de la Constitución 2222 | México D.F. | n/a | 05021 | Mexico | (5) 555-4729 |
| ANTON | Antonio Moreno Taquería | Antonio Moreno | Owner | Mataderos 2312 | México D.F. | n/a | 05023 | Mexico | (5) 555-3932 |
| AROUT | Around the Horn | Thomas Hardy | Sales Representative | 120 Hanover Sq. | London | n/a | WA1 1DP | UK | (171) 555-7788 |
| BERGS | Berglunds snabbköp | Christina Berglund | Order Administrator | Berguvsvägen 8 | Luleå | n/a | S-958 22 | Sweden | 0921-12 34 65 |
| BLAUS | Blauer See Delikatessen | Hanna Moos | Sales Representative | Forsterstr. 57 | Mannheim | n/a | 68306 | Germany | 0621-08460 |
| BLONP | Blondesddd père et fils | Frédérique Citeaux | Marketing Manager | 24, place Kléber | Strasbourg | n/a | 67000 | France | 88.60.15.31 |
| BOLID | Bóldo Comidas preparadas | Martín Sommer | Owner | C/ Araquil, 67 | Madrid | n/a | 28023 | Spain | (91) 555 22 82 |
| BONAP | Bon app' | Laurence Lebihan | Owner | 12, rue des Bouchers | Marseille | n/a | 13008 | France | 91.24.45.40 |
| BOTTM | Bottom-Dollar Markets | Elizabeth Lincoln | Accounting Manager | 23 Tsawassen Blvd. | Tsawassen BC | T2F 8M4 | | Canada | (604) 555-4729 |

« Previous | Page: 1 2 3 4 5 6 7 8 9 10 | Next » Items per page: 10, 15, 20, 25 | Showing 1-10 of 91 items | Refresh

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Tabbed

At first appearances, *Tabbed* layout looks the same as simple layout. The record list is inside of a tab, with the name of the page. Select any record by clicking on the link in the leftmost column, and new child tabs become available inside the page. These tabs allow you to view related record lists, and use the selected record to filter records relevant to that original selected record.

This is a list of customers.

| Customer # | Company Name | Contact Name | Contact Title | Address | City | Region | Postal Code | Country | Phone |
|------------|------------------------------------|--------------------|----------------------|-------------------------------|--------------|---------|-------------|---------|----------------|
| ALFKI | Alfreds Futterkiste | Maria Anders | Sales Representative | Obere Str. 57 | Berlin | n/a | 12209 | Germany | 030-0074321 |
| ANATR | Ana Trujillo Emparedados y helados | Ana Trujillo | Owner | Avda. de la Constitución 2222 | México D.F. | n/a | 05021 | Mexico | (5) 555-4729 |
| ANTON | Antonio Moreno Taquería | Antonio Moreno | Owner | Mataderos 2312 | México D.F. | n/a | 05023 | Mexico | (5) 555-3932 |
| AROUT | Around the Horn | Thomas Hardy | Sales Representative | 120 Hanover Sq. | London | n/a | WA1 1DP | UK | (171) 555-7788 |
| BERGS | Berglunds snabbköp | Christina Berglund | Order Administrator | Berguvsvägen 8 | Luleå | n/a | S-958 22 | Sweden | 0921-12 34 65 |
| BLAUS | Blauer See Delikatessen | Hanna Moos | Sales Representative | Forsterstr. 57 | Mannheim | n/a | 68306 | Germany | 0621-08460 |
| BLONP | Blondesddd père et fils | Frédérique Citeaux | Marketing Manager | 24, place Kléber | Strasbourg | n/a | 67000 | France | 88.60.15.31 |
| BOLID | Bóldo Comidas preparadas | Martín Sommer | Owner | C/ Araquil, 67 | Madrid | n/a | 28023 | Spain | (91) 555 22 82 |
| BONAP | Bon app' | Laurence Lebihan | Owner | 12, rue des Bouchers | Marseille | n/a | 13008 | France | 91.24.45.40 |
| BOTTM | Bottom-Dollar Markets | Elizabeth Lincoln | Accounting Manager | 23 Tsawassen Blvd. | Tsawassen BC | T2F 8M4 | | Canada | (604) 555-4729 |

« Previous | Page: 1 2 3 4 5 6 7 8 9 10 | Next » Items per page: 10, 15, 20, 25 | Showing 1-10 of 91 items | Refresh

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The picture to the left shows a list of customers without a selection. You can see the *Customers* tab above the list.

Click on a record, and more tabs will appear. Using these tabs, you can switch to child record lists. In the

example below, you can see that all of the orders displayed are those from the customer “Bon app”, which was the selected *Customer* record from the original tab, as you can see on the data summary.

History | Permalink Welcome admin, Today is Saturday, October 02, 2010 | My Account | Logout | Help

MyCompany

Home Customers Employees Categories Customer Demographics Region Reports Membership Site Actions

Home > Customers

Customers

Customers Orders Customer Demo Order Details

This is a list of orders.

Quick Find New Orders Actions Report View: Orders

| Employee Last Name | Order Date | Required Date | Shipped Date | Ship Via | Company Name | Freight | Ship Name | Ship Address | Ship City |
|--------------------|------------|---------------|--------------|------------------|--------------|----------|-----------|----------------------|-----------|
| Dodsworth | 10/16/1996 | 11/27/1996 | 10/21/1996 | Speedy Express | | \$10.19 | Bon app' | 12, rue des Bouchers | Marseille |
| Davolio | 10/29/1996 | 11/26/1996 | 11/8/1996 | Federal Shipping | | \$166.31 | Bon app' | 12, rue des Bouchers | Marseille |
| Leverling | 11/25/1996 | 12/23/1996 | 11/28/1996 | Speedy Express | | \$96.04 | Bon app' | 12, rue des Bouchers | Marseille |
| Peacock | 3/11/1997 | 4/8/1997 | 3/14/1997 | United Package | | \$64.56 | Bon app' | 12, rue des Bouchers | Marseille |
| Peacock | 4/18/1997 | 5/16/1997 | 4/21/1997 | Federal Shipping | | \$350.64 | Bon app' | 12, rue des Bouchers | Marseille |
| Davolio | 5/2/1997 | 5/30/1997 | 5/23/1997 | United Package | | \$11.06 | Bon app' | 12, rue des Bouchers | Marseille |
| Fuller | 9/10/1997 | 9/24/1997 | 10/3/1997 | United Package | | \$113.15 | Bon app' | 12, rue des Bouchers | Marseille |
| Leverling | 10/23/1997 | 11/6/1997 | 10/29/1997 | Speedy Express | | \$63.20 | Bon app' | 12, rue des Bouchers | Marseille |
| Buchanan | 11/5/1997 | 12/3/1997 | 11/14/1997 | Speedy Express | | \$20.12 | Bon app' | 12, rue des Bouchers | Marseille |
| Leverling | 11/6/1997 | 12/4/1997 | 11/7/1997 | Speedy Express | | \$16.97 | Bon app' | 12, rue des Bouchers | Marseille |

« Previous | Page: 1 2 | Next » Items per page: 10, 15, 20, 25 | Showing 1-10 of 17 items | Refresh

Tabbed layout is the most compact master-detail layout that may be available in your application.

Classic

Classic page layout is presenting master-detail relationships as well. It shows the main record list at the top of the page. No child records are visible. However, when you select a record from that list, another tabbed group of lists appears underneath, showing related records. You can specify which child record list you want to bring forward by selecting a tab with the list name. With this longer page layout, the data summary is quite useful, as it stays with

History | Permalink Welcome admin, Today is Saturday, October 02, 2010 | My Account | Logout | Help

MyCompany

Home Customers Employees Categories Customer Demographics Region Reports Membership Site Actions

Home > Customers

Customers

This is a list of customers.

Quick Find New Customers Edit Delete Actions Report View: Customers

| Customer # | Company Name | Contact Name | Contact Title | Address | City | Region | Postal Code | Country | Phone |
|------------|------------------------------------|--------------------|----------------------|-------------------------------|--------------|---------|-------------|---------|----------------|
| ALFKI | Alfreds Futterkiste | Maria Anders | Sales Representative | Obere Str. 57 | Berlin | n/a | 12209 | Germany | 030-0074321 |
| ANATR | Ana Trujillo Emparedados y helados | Ana Trujillo | Owner | Avda. de la Constitución 2222 | México D.F. | n/a | 05021 | Mexico | (5) 555-4729 |
| ANTON | Antonio Moreno Taquería | Antonio Moreno | Owner | Mataderos 2312 | México D.F. | n/a | 05023 | Mexico | (5) 555-3932 |
| AROUT | Around the Horn | Thomas Hardy | Sales Representative | 120 Hanover Sq. | London | n/a | WA1 1DP | UK | (171) 555-7788 |
| BERGS | Berglunds snabbköp | Christina Berglund | Order Administrator | Bergsvägen 8 | Luleå | n/a | S-958 22 | Sweden | 0921-12 34 65 |
| BLAUS | Blauer See Delikatessen | Hanna Moos | Sales Representative | Forsterstr. 57 | Mannheim | n/a | 68306 | Germany | 0621-08460 |
| BLONP | Blondesdill père et fils | Frédérique Citeaux | Marketing Manager | 24, place Kléber | Strasbourg | n/a | 67000 | France | 88.60.15.31 |
| BOLID | Bólido Comidas preparadas | Martín Sommer | Owner | C/ Araquil, 67 | Madrid | n/a | 28023 | Spain | (91) 555 22 82 |
| BONAP | Bon app' | Laurence Lebihan | Owner | 12, rue des Bouchers | Marseille | n/a | 13008 | France | 91.24.45.40 |
| BOTTOM | Bottom-Dollar Markets | Elizabeth Lincoln | Accounting Manager | 23 Tsawassen Blvd. | Tsawassen BC | T2F 8M4 | | Canada | (604) 555-4729 |

« Previous | Page: 1 2 3 4 5 6 7 8 9 10 | Next » Items per page: 10, 15, 20, 25 | Showing 1-10 of 91 items | Refresh

Orders Customer Demo Order Details

This is a list of orders.

Quick Find New Orders Actions Report View: Orders

| Employee Last Name | Order Date | Required Date | Shipped Date | Ship Via | Company Name | Freight | Ship Name | Ship Address | Ship City |
|--------------------|------------|---------------|--------------|------------------|--------------|----------|-----------|----------------------|-----------|
| Dodsworth | 10/16/1996 | 11/27/1996 | 10/21/1996 | Speedy Express | | \$10.19 | Bon app' | 12, rue des Bouchers | Marseille |
| Davolio | 10/29/1996 | 11/26/1996 | 11/8/1996 | Federal Shipping | | \$166.31 | Bon app' | 12, rue des Bouchers | Marseille |
| Leverling | 11/25/1996 | 12/23/1996 | 11/28/1996 | Speedy Express | | \$96.04 | Bon app' | 12, rue des Bouchers | Marseille |
| Peacock | 3/11/1997 | 4/8/1997 | 3/14/1997 | United Package | | \$64.56 | Bon app' | 12, rue des Bouchers | Marseille |
| Peacock | 4/18/1997 | 5/16/1997 | 4/21/1997 | Federal Shipping | | \$350.64 | Bon app' | 12, rue des Bouchers | Marseille |

« Previous | Page: 1 2 3 4 | Next » Items per page: 5, 10, 15, 20, 25 | Showing 1-5 of 17 items | Refresh

you if you scroll down the page.

The advantage of the classic layout is that you can see a list of master records simultaneously with a list of one of the child record sets. Click on any master row without selecting a row link, and the row will become highlighted, its details will be presented on the data summary, and the visible child list will automatically refresh according to the selection.

Inline

Inline layout is similar to *Tabbed* layout, except that there is a *Tasks* box on the side bar instead of tabs in the main area of the page. When you select a record, you can use the *Tasks* box, above the data summary, to view relevant record lists. The selected master record will be used to filter the child lists. An example can be seen below, with the *Tasks* box to the upper left on the side bar.

The screenshot shows a web application interface for 'MyCompany'. The main content area displays a list of customers. The interface includes a navigation menu at the top, a 'Tasks' box on the left, and a table of customer records. The 'AROUT' record is selected and highlighted.

| Customer # | Company Name | Contact Name | Contact Title | Address | City | Region | Postal Code | Country | Phone |
|------------|------------------------------------|--------------------|----------------------|-------------------------------|--------------|---------|-------------|---------|----------------|
| ALFKI | Alfreds Futterkiste | Maria Anders | Sales Representative | Obere Str. 57 | Berlin | n/a | 12209 | Germany | 030-0074321 |
| ANATR | Ana Trujillo Emparedados y helados | Ana Trujillo | Owner | Avda. de la Constitución 2222 | México D.F. | n/a | 05021 | Mexico | (5) 555-4729 |
| ANTON | Antonio Moreno Taquería | Antonio Moreno | Owner | Mataderos 2312 | México D.F. | n/a | 05023 | Mexico | (5) 555-3932 |
| AROUT | Around the Horn | Thomas Hardy | Sales Representative | 120 Hanover Sq. | London | n/a | WA1 1DP | UK | (171) 555-7788 |
| BERGS | Berglunds snabbköp | Christina Berglund | Order Administrator | Berguvsvägen 8 | Luleå | n/a | S-958 22 | Sweden | 0921-12 34 65 |
| BLAUS | Blauer See Delikatessen | Hanna Moos | Sales Representative | Forsterstr. 57 | Mannheim | n/a | 68306 | Germany | 0621-08460 |
| BLONP | Blondesdsdls père et fils | Frédérique Citeaux | Marketing Manager | 24, place Kléber | Strasbourg | n/a | 67000 | France | 88.60.15.31 |
| BOLID | Bólido Comidas preparadas | Martín Sommer | Owner | C/ Araquil, 67 | Madrid | n/a | 28023 | Spain | (91) 555 22 82 |
| BONAP | Bon app' | Laurence Lebihan | Owner | 12, rue des Bouchers | Marseille | n/a | 13008 | France | 91.24.45.40 |
| BOTTM | Bottom-Dollar Markets | Elizabeth Lincoln | Accounting Manager | 23 Tsawassen Blvd. | Tsawassen BC | T2F 8M4 | | Canada | (604) 555-4729 |

Stacked

Stacked layout (shown to the right) is similar to classic layout, except that all child record lists are displayed at the same time. This layout generally has the longest pages, as all relevant record lists are displayed as soon as a master record is selected. When you scroll down, the data summary will stay in the upper left corner of your screen.

If no master record is selected then the page will contract and will look very much like a page with a *Simple* layout. Detail records will only be requested from the server and displayed when a master record is selected.

When you create a new master record or delete an existing one on a page with *Stacked* layout, the child record lists will disappear. This layout also features a *Tasks* box, and it can be used to automatically jump up or down to the selected list to quickly bring it into focus.

The picture below displays the entire page – note that the child record lists are filtered to match the selected parent record.

History | Permalink Welcome admin, Today is Saturday, October 02, 2010 | My Account | Logout | Help

MyCompany

Home > Customers > Employees > Categories > Customer Demographics > Region > Reports > Membership **Site Actions**

Home > Customers

Customers

This is a list of customers.

Quick Find New Customers Edit Delete Actions Report View: Customers

| Customer # | Company Name | Contact Name | Contact Title | Address | City | Region | Postal Code | Country | Phone |
|------------|------------------------------------|--------------------|----------------------|-------------------------------|--------------|---------|-------------|---------|----------------|
| ALFKI | Alfreds Futterkiste | Maria Anders | Sales Representative | Obere Str. 57 | Berlin | n/a | 12209 | Germany | 030-0074321 |
| ANATR | Ana Trujillo Emparedados y helados | Ana Trujillo | Owner | Avda. de la Constitución 2222 | México D.F. | n/a | 05021 | Mexico | (5) 555-4729 |
| ANTON | Antonio Moreno Taquería | Antonio Moreno | Owner | Mataderos 2312 | México D.F. | n/a | 05023 | Mexico | (5) 555-3932 |
| AROUT | Around the Horn | Thomas Hardy | Sales Representative | 120 Hanover Sq. | London | n/a | WA1 1DP | UK | (171) 555-7788 |
| BERGS | Berglunds snabbköp | Christina Berglund | Order Administrator | Berguvsvägen 8 | Luleå | n/a | S-958 22 | Sweden | 0921-12 34 65 |
| BLAUS | Blauer See Delikatessen | Hanna Moos | Sales Representative | Forsterstr. 57 | Mannheim | n/a | 68306 | Germany | 0621-08460 |
| BLONP | Blondesddsl père et fils | Frédérique Citeaux | Marketing Manager | 24, place Kléber | Strasbourg | n/a | 67000 | France | 88.60.15.31 |
| BOLID | Bólido Comidas preparadas | Martin Sommer | Owner | C/ Araquil, 67 | Madrid | n/a | 28023 | Spain | (91) 555 22 82 |
| BONAP | Bon app' | Laurence Lebihan | Owner | 12, rue des Bouchers | Marseille | n/a | 13008 | France | 91.24.45.40 |
| BOTTM | Bottom-Dollar Markets | Elizabeth Lincoln | Accounting Manager | 23 Tsawassen Blvd. | Tsawassen BC | T2F 8M4 | Canada | | (604) 555-4729 |

« Previous | Page: 1 2 3 4 5 6 7 8 9 10 | Next » Items per page: 10, 15, 20, 25 | Showing 1-10 of 91 items | Refresh

This is a list of orders.

Quick Find New Orders Actions Report View: Orders

| Employee Last Name | Order Date | Required Date | Shipped Date | Ship Via | Company Name | Freight | Ship Name | Ship Address | Ship City |
|--------------------|------------|---------------|--------------|------------------|--------------|----------|-----------|----------------------|-----------|
| Dodsworth | 10/16/1996 | 11/27/1996 | 10/21/1996 | Speedy Express | Bon app' | \$10.19 | Bon app' | 12, rue des Bouchers | Marseille |
| Davolio | 10/29/1996 | 11/26/1996 | 11/8/1996 | Federal Shipping | Bon app' | \$166.31 | Bon app' | 12, rue des Bouchers | Marseille |
| Leverling | 11/25/1996 | 12/23/1996 | 11/28/1996 | Speedy Express | Bon app' | \$96.04 | Bon app' | 12, rue des Bouchers | Marseille |
| Peacock | 3/11/1997 | 4/8/1997 | 3/14/1997 | United Package | Bon app' | \$64.56 | Bon app' | 12, rue des Bouchers | Marseille |
| Peacock | 4/18/1997 | 5/16/1997 | 4/21/1997 | Federal Shipping | Bon app' | \$350.64 | Bon app' | 12, rue des Bouchers | Marseille |

« Previous | Page: 1 2 3 4 | Next » Items per page: 5, 10, 15, 20, 25 | Showing 1-5 of 17 items | Refresh

This is a list of customer demo.

Quick Find New Customer Demo Actions Report View: Customer Demo

Customer Type Customer Desc

No records found.

Refresh

This is a list of order details.

Quick Find New Order Details Actions Report View: Order Details

| Order Customer # | Product Name | Unit Price | Quantity | Discount | Order Customer Company Name | Order Employee Last Name | Order Ship Via | Product Category Name | Product Supplier Company Name |
|------------------|---------------------------------|------------|----------|----------|-----------------------------|--------------------------|------------------|-----------------------|-------------------------------|
| BONAP | Tourtière | \$5.90 | 15 | 0 | Bon app' | Dodsworth | Speedy Express | Meat/Poultry | Ma Maison |
| BONAP | Camaron Tigers | \$50.00 | 20 | 0.05 | Bon app' | Davolio | Federal Shipping | Seafood | Pavlova, Ltd. |
| BONAP | Jack's New England Clam Chowder | \$7.70 | 12 | 0.05 | Bon app' | Davolio | Federal Shipping | Seafood | New England Seafood Cannery |
| BONAP | Ipoih Coffee | \$36.80 | 40 | 0.05 | Bon app' | Davolio | Federal Shipping | Beverages | Leka Trading |
| BONAP | NuNuCa Nuß-Nougat-Creme | \$11.20 | 50 | 0 | Bon app' | Leverling | Speedy Express | Confections | Hell Süßwaren GmbH & Co. KG |

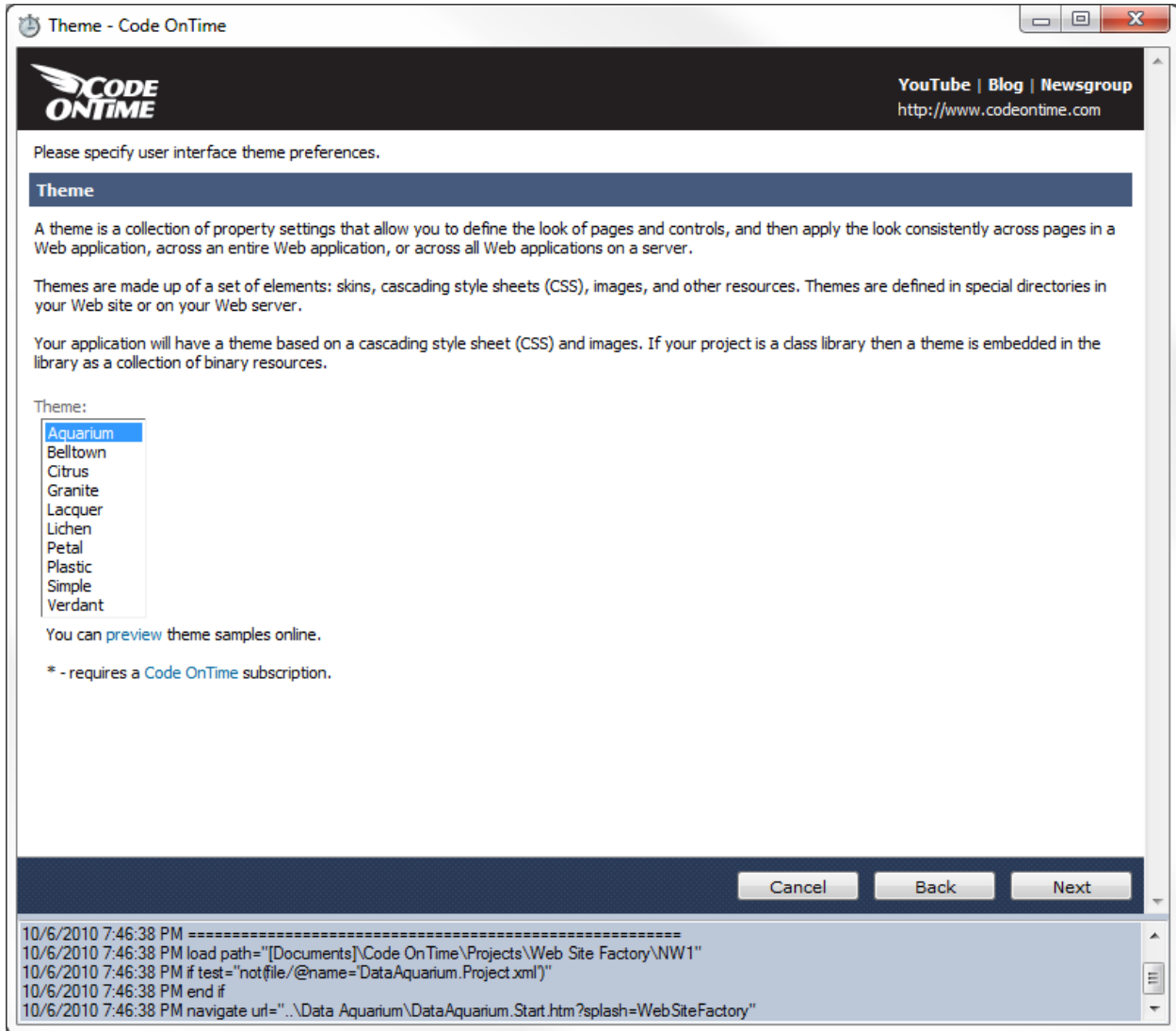
« Previous | Page: 1 2 3 4 5 6 7 8 9 | Next » Items per page: 5, 10, 15, 20, 25 | Showing 1-5 of 44 items | Refresh

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The advantage of a *Stacked* layout is that a lot more information can be presented simultaneously.

Themes Page

There are 10 professional themes available in Code On Time Generator. They are each composed of a skin, a cascading style sheet (CSS), images, and other resources. Select which theme you would like to use by using the list box on the Themes Page in the Project Wizard.



See examples for all of the themes in the next few pages.

Citrus

History | Permalink Welcome admin, Today is Wednesday, October 06, 2010 | My Account | Logout | Help

MyCompany

Home Customers Employees Categories Customer Demographics Region Reports Membership Site Actions

Home > Customers

Customers

This is a list of customers.

New Customers Edit Delete Actions Report View: Customers

Customer # equals Company Name equals Contact Name equals Search Reset

| Customer # | Company Name | Contact Name | Contact Title | Address | City | Region | Postal Code | Country | Phone |
|------------|------------------------------------|--------------------|----------------------|-------------------------------|--------------|---------|-------------|---------|----------------|
| ALFKI | Alfreds Futterkiste | Maria Anders | Sales Representative | Obere Str. 57 | Berlin | n/a | 12209 | Germany | 030-0074321 |
| | Ana Trujillo Emparedados y helados | Ana Trujillo | Owner | Avda. de la Constitución 2222 | México D.F. | n/a | 05021 | Mexico | (5) 555-4729 |
| | Antonio Moreno Taquería | Antonio Moreno | Owner | Mataderos 2312 | México D.F. | n/a | 05023 | Mexico | (5) 555-3932 |
| | Around the Horn | Thomas Hardy | Sales Representative | 120 Hanover Sq. | London | n/a | WA1 1DP | UK | (171) 555-7788 |
| BERGS | Berglunds snabbköp | Christina Berglund | Order Administrator | Berguvsvägen 8 | Luleå | n/a | S-958 22 | Sweden | 0921-12 34 65 |
| BLAUS | Blauer See Delikatessen | Hanna Moos | Sales Representative | Forsterstr. 57 | Mannheim | n/a | 68306 | Germany | 0621-08460 |
| BLONP | Blondesdssl père et fils | Frédérique Citeaux | Marketing Manager | 24, place Kléber | Strasbourg | n/a | 67000 | France | 88.60.15.31 |
| BOLID | Bólido Comidas preparadas | Martín Sommer | Owner | C/ Araquil, 67 | Madrid | n/a | 28023 | Spain | (91) 555 22 82 |
| BONAP | Bon app' | Laurence Lebihan | Owner | 12, rue des Bouchers | Marseille | n/a | 13008 | France | 91.24.45.40 |
| BOTTM | Bottom-Dollar Markets | Elizabeth Lincoln | Accounting Manager | 23 Tsawassen Blvd. | Tsawassen BC | T2F 8M4 | | Canada | (604) 555-4729 |

Summary
Customer #
BERGS
Company Name
Berglunds snabbköp
Contact Name
Christina Berglund
Contact Title
Order Administrator
Address
Berguvsvägen 8
About
This page allows customers management
See Also
Orders
Customer Demo
Order Details

Granite

History | Permalink Welcome admin, Today is Wednesday, October 06, 2010 | My Account | Logout | Help

MyCompany

Home Customers Employees Categories Customer Demographics Region Reports Membership Site Actions

Home > Customers

Customers

This is a list of customers.

Quick Find New Customers Edit Delete Actions Report View: Customers

| Customer # | Company Name | Contact Name | Contact Title | Address | City | Region | Postal Code | Country | Phone |
|------------|------------------------------------|--------------------|---------------|---------------------------|--------------|---------|-------------|---------|----------------|
| ALFKI | Alfreds Futterkiste | Maria Anders | | Smallest on Top | Berlin | n/a | 12209 | Germany | 030-0074321 |
| ANATR | Ana Trujillo Emparedados y helados | Ana Trujillo | | Largest on Top | México D.F. | n/a | 05021 | Mexico | (5) 555-4729 |
| ANTON | Antonio Moreno Taquería | Antonio Moreno | | Clear Filter from Address | México D.F. | n/a | 05023 | Mexico | (5) 555-3932 |
| AROUT | Around the Horn | Thomas Hardy | | Text Filters | London | n/a | WA1 1DP | UK | (171) 555-7788 |
| BERGS | Berglunds snabbköp | Christina Berglund | | Custom Filter... | Luleå | n/a | S-958 22 | Sweden | 0921-12 34 65 |
| BLAUS | Blauer See Delikatessen | Hanna Moos | | 1 rue Alsace-Lorraine | Mannheim | n/a | 68306 | Germany | 0621-08460 |
| BLONP | Blondesdssl père et fils | Frédérique Citeaux | | 12 Orchestra Terrace | Strasbourg | n/a | 67000 | France | 88.60.15.31 |
| BOLID | Bólido Comidas preparadas | Martín Sommer | | 12, rue des Bouchers | Madrid | n/a | 28023 | Spain | (91) 555 22 82 |
| BONAP | Bon app' | Laurence Lebihan | | 120 Hanover Sq. | Marseille | n/a | 13008 | France | 91.24.45.40 |
| BOTTM | Bottom-Dollar Markets | Elizabeth Lincoln | | 184, chaussée de Tournai | Tsawassen BC | T2F 8M4 | | Canada | (604) 555-4729 |
| | | | | 187 Suffolk Ln. | | | | | |
| | | | | 1900 Oak St. | | | | | |
| | | | | 2, rue du Commerce | | | | | |
| | | | | 23 Tsawassen Blvd. | | | | | |
| | | | | 24, place Kléber | | | | | |
| | | | | 25, rue Lauriston | | | | | |

Summary
Customer #
BLAUS
Company Name
Blauer See Delikatessen
Contact Name
Hanna Moos
Contact Title
Sales Representative
Address
Forsterstr. 57
About
This page allows customers management.
See Also
Orders
Customer Demo
Order Details

« Previous | Page: 1 2 3 4 5 6 7 8 9 10 | Page: 10, 15, 20, 25 | Showing 1-10 of 91 items | Refresh

Lacquer

History | Permalink Welcome admin, Today is Wednesday, October 06, 2010 | My Account | Logout | Help

MyCompany

Home Customers Employees **Categories** Customer Demographics Region Reports Membership Site Actions

Home > Categories > Products

Products

This is a list of products.

View: **Products**

Product Name equals
 Supplier Company Name equals
 Category Name equals

| Product Name | Supplier Company Name | Initial Price | Units In Stock | Units On Order | Reorder Level | Discontinued |
|---------------------------------|----------------------------|---------------|----------------|----------------|---------------|--------------|
| Chai | Exotic Liquids | 00 | 39 | 0 | 10 | No |
| Chang | Exotic Liquids | 00 | 17 | 40 | 25 | No |
| Aniseed Syrup | Exotic Liquids | 00 | 13 | 70 | 25 | No |
| Chef Anton's Cajun Seasoning | New Orleans Cajun Delights | 08 | 53 | 0 | 0 | No |
| Chef Anton's Gumbo Mix | New Orleans Cajun Delights | 36 | 0 | 0 | 0 | Yes |
| Grandma's Boysenberry Spread | Grandma Kelly's Homestead | 00 | 120 | 0 | 25 | No |
| Uncle Bob's Organic Dried Pears | Grandma Kelly's Homestead | 05 | 15 | 0 | 10 | No |
| Northwoods Cranberry Sauce | Grandma Kelly's Homestead | 00 | 6 | 0 | 0 | No |
| Mishi Kobe Niku | Tokyo Traders | 00 | 29 | 0 | 0 | Yes |
| Ikura | Tokyo Traders | 00 | 31 | 0 | 0 | No |

< Previous | Page: 1 2 3 4 5 6 7 8 9 | Next >
 page: 10, 15, 20, 25 | Showing 1-10 of 81 items | Refresh

Lichen

History | Permalink Welcome admin, Today is Wednesday, October 06, 2010 | My Account | Logout | Help

MyCompany

Home Customers Employees **Employees** Categories Customer Demographics Region Reports Membership Site Actions

Home > Employees

Employees

This is a list of employees.

View: **Employees**

| Last Name | First Name | Title | Title Of Courtesy | Birth Date | Hire Date | Address | City | Region | Postal Code |
|-----------|------------|--------------------------|-------------------|------------|------------|-------------------------------|----------|--------|-------------|
| Davolio | Neeraj | Smallest on Top | Ms. | 12/8/1948 | 5/1/1992 | 507 - 20th Ave. E, Apt. 2A | Seattle | WA | 98122 |
| Fuller | Andrew | Largest on Top | Dr. | 2/19/1952 | 8/14/1992 | 908 W. Capital Way | Tacoma | WA | 98401 |
| Leverling | Jane | Clear Filter from Title | Ms. | 8/30/1963 | 4/1/1992 | 722 Moss Bay Blvd. | Kirkland | WA | 98033 |
| Peacock | Marissa | Text Filters | Mrs. | 9/19/1937 | 5/3/1993 | 4110 Old Redmond Rd. | Redmond | WA | 98052 |
| Buchanan | Stacy | Custom Filter... | Mr. | 3/4/1955 | 10/17/1993 | 14 Garrett Hill | London | n/a | SW1 8JR |
| Suyama | Mitsuko | Inside Sales Coordinator | Mr. | 7/2/1963 | 10/17/1993 | Coventry House Miner Rd. | London | n/a | EC2 7JR |
| King | Robert | Sales Manager | Mr. | 5/29/1960 | 1/2/1994 | Edgeham Hollow Winchester Way | London | n/a | RG1 9SP |
| Callahan | Larry | Sales Representative | Ms. | 1/9/1958 | 3/5/1994 | 4726 - 11th Ave. N.E. | Seattle | WA | 98105 |
| Dodsworth | Anne | Vice President, Sales | Ms. | 1/27/1966 | 11/15/1994 | 7 Houndstooth Rd. | London | n/a | WG2 7LT |

Showing 1-9 of 9 items | Refresh

Petal

History | Permalink Welcome admin, Today is Wednesday, October 06, 2010 | My Account | Logout | Help

MyCompany

Home Customers Employees Categories Customer Demographics Region Reports Membership Site Actions

Home > Customers

Customers

This is a list of customers.

Quick Find New Customers Edit Delete Actions Report View: Customers

| Customer # | Company Name | Contact Name | Contact Title | Address | City | Region | Postal Code | Country | Phone |
|------------|--------------|--------------------|----------------------|-------------------------------|--------------|---------|-------------|---------|----------------|
| | | Maria Anders | Sales Representative | Obere Str. 57 | Berlin | n/a | 12209 | Germany | 030-0074321 |
| | | Ana Trujillo | Owner | Ayda. de la Constitución 2222 | México D.F. | n/a | 05021 | Mexico | (5) 555-4729 |
| | | Antonio Moreno | Owner | Mataderos 2312 | México D.F. | n/a | 05023 | Mexico | (5) 555-3932 |
| | | Thomas Hardy | Sales Representative | 120 Hanover Sq. | London | n/a | WA1 1DP | UK | (171) 555-7788 |
| | | Christina Berglund | Order Administrator | Berguvsvägen 8 | Luleå | n/a | S-958 22 | Sweden | 0921-12 34 65 |
| | | Hanna Moos | Sales Representative | Forsterstr. 57 | Mannheim | n/a | 68306 | Germany | 0621-08460 |
| | | Frédérique Citeaux | Marketing Manager | 24, place Kléber | Strasbourg | n/a | 67000 | France | 88.60.15.31 |
| | | Martin Sommer | Owner | C/ Araquil, 67 | Madrid | n/a | 28023 | Spain | (91) 555 22 82 |
| | | Laurence Leblan | Owner | 12, rue des Bouchers | Marseille | n/a | 13008 | France | 91.24.45.40 |
| | | Elizabeth Lincoln | Accounting Manager | 23 Tsawassen Blvd. | Tsawassen BC | T2F 8M4 | Canada | | (604) 555-4729 |

10 | Next > Items per page: 10, 15, 20, 25 | Showing 1-10 of 91 items | Refresh

Summary

Customer #

BLONP

Company Name

Blondesdsl père et fils

Contact Name

Frédérique Citeaux

Contact Title

Marketing Manager

Address

24, place Kléber

About

This page allows customers management.

See Also

- Orders
- Customer Demo
- Order Details

Smallest on Top

Largest on Top

Clear Filter from Company Name

Text Filters

Custom Filter...

Alfreds Futterkiste

Ana Trujillo Emparedados y helados

Antonio Moreno Taquería

Around the Horn

Berglunds snabbköp

Blauer See Delikatessen

Blondesdsl père et fils

Bólido Comidas preparadas

Bon app'

Bottom-Dollar Markets

B's Beverages

Plastic

History | Permalink Welcome admin, Today is Wednesday, October 06, 2010 | My Account | Logout | Help

MyCompany

Home Customers Employees Categories Customer Demographics Region Reports Membership Site Actions

Home > Categories > Products

Products

This is a list of products.

New Products Edit Delete Actions Report View: Products

Product Name equals Search

Supplier Company Name equals Reset

Category Name equals

| Product Name | Supplier Company Name | Category Name | Quantity Per Unit | Unit Price | Units In Stock | Units On Order | Reorder Level | Discontinued |
|---------------------------------|----------------------------|---------------|---------------------|------------|----------------|----------------|---------------|--------------|
| Chai | Exotic Liquids | Beverages | 10 boxes x 20 bags | \$18.00 | 39 | 0 | 10 | No |
| Chang | Exotic Liquids | Beverages | 24 - 12 oz bottles | \$19.00 | 17 | 40 | 25 | No |
| Aniseed S | Exotic Liquids | Condiments | 12 - 550 ml bottles | \$10.00 | 13 | 70 | 25 | No |
| Chef Anto Seasoning | New Orleans Cajun Delights | Condiments | 48 - 6 oz jars | \$22.08 | 53 | 0 | 0 | No |
| Chef Anton's Gumbo Mix | New Orleans Cajun Delights | Condiments | 36 boxes | \$21.36 | 0 | 0 | 0 | Yes |
| Grandma's Boysenberry Spread | Grandma Kelly's Homestead | Condiments | 12 - 8 oz jars | \$25.00 | 120 | 0 | 25 | No |
| Uncle Bob's Organic Dried Pears | Grandma Kelly's Homestead | Produce | 12 - 1 lb pkgs. | \$30.05 | 15 | 0 | 10 | No |
| Northwoods Cranberry Sauce | Grandma Kelly's Homestead | Condiments | 12 - 12 oz jars | \$40.00 | 6 | 0 | 0 | No |
| Mishi Kobe Niku | Tokyo Traders | Meat/Poultry | 18 - 500 g pkgs. | \$97.00 | 29 | 0 | 0 | Yes |
| Ikura | Tokyo Traders | Seafood | 12 - 200 ml jars | \$31.00 | 31 | 0 | 0 | No |

< Previous | Page: 1 2 3 4 5 6 7 8 9 | Next > Items per page: 10, 15, 20, 25 | Showing 1-10 of 81 items | Refresh

Summary

Product Name

Uncle Bob's Organic Dried Pears

Supplier Company Name

Grandma Kelly's Homestead

Category Name

Produce

Quantity Per Unit

12 - 1 lb pkgs.

Unit Price

\$30.05

About

This page allows products management.

See Also

- Home
- Customers
- Employees
- Customer Demographics
- Region
- Reports
- Membership

Select

Edit

Delete

Duplicate

New

Simple

History | Permalink Welcome admin, Today is Wednesday, October 06, 2010 | My Account | Logout | Help

MyCompany

Home **Customers** Employees Categories Customer Demographics Region Reports Membership Site Actions

Home > Customers > Orders

Orders

This is a list of orders.

Quick Find Record View: **Orders**

| Customer Company Name | Employee Last Name | Order Date | Required Date | Shipped Date | Ship Via Company Name | Freight | Ship Name | Ship Address | Ship City |
|---------------------------|--------------------|------------|---------------|--------------|-----------------------|----------|---------------------------|--|----------------|
| Vins et alcools Chevalier | Buchanan | 7/4/1996 | | | | \$32.38 | Vins et alcools Chevalier | 59 rue de l'Abbaye | Reims |
| Toms Spezialitäten | Suyama | 7/5/1996 | | | | \$11.61 | Toms Spezialitäten | Luisenstr. 48 | Münster |
| Hanari Carnes | Peacock | 7/8/1996 | | | | \$65.83 | Hanari Carnes | Rua do Paço, 67 | Rio de Janeiro |
| Victuailles en stock | Leverling | 7/8/1996 | | | | \$41.34 | Victuailles en stock | 2, rue du Commerce | Lyon |
| Suprêmes délices | Peacock | 7/9/1996 | 8/6/1996 | 7/11/1996 | United Package | \$51.30 | Suprêmes délices | Boulevard Tirou, 255 | Charleroi |
| Hanari Carnes | Leverling | 7/10/1996 | 7/24/1996 | 7/16/1996 | United Package | \$58.17 | Hanari Carnes | Rua do Paço, 67 | Rio de Janeiro |
| Chop-suey Chinese | Buchanan | 7/11/1996 | 8/8/1996 | 7/23/1996 | United Package | \$22.98 | Chop-suey Chinese | Hauptstr. 31 | Bern |
| Richter Supermarkt | Dodsworth | 7/12/1996 | 8/9/1996 | 7/15/1996 | Federal Shipping | \$148.33 | Richter Supermarkt | Starenweg 5 | Genève |
| Wellington Importadora | Leverling | 7/15/1996 | 8/12/1996 | 7/17/1996 | United Package | \$13.97 | Wellington Importadora | Rua do Mercado, 12 | Resende |
| HILARION-Abastos | Peacock | 7/16/1996 | 8/13/1996 | 7/22/1996 | Federal Shipping | \$81.91 | HILARION-Abastos | Carrera 22 con Ave. Carlos Soublette #8-35 | San Cristóbal |

Summary

Customer Company Name: Hanari Carnes

Employee Last Name: Peacock

Order Date: 7/8/1996

Required Date: 8/5/1996

Shipped Date: 7/12/1996

About

This page allows orders management.

See Also

- Customer Demo
- Order Details

Verdant

History | Permalink Welcome admin, Today is Wednesday, October 06, 2010 | My Account | Logout | Help

MyCompany

Home **Customers** Employees Categories Customer Demographics Region Reports Membership Site Actions

Home > Customers > Orders

Orders

This is a list of orders.

New Orders Edit Delete Actions Report View: **Orders**

Customer Company Name equals Search

Employee Last Name equals Reset

Order Date equals

| Customer Company Name | Employee Last Name | Order Date | Required Date | Shipped Date | Ship Via Company Name | Freight | Ship Name | Ship Address | Ship City |
|---------------------------|--------------------|------------|---------------|--------------|-----------------------|----------|---------------------------|----------------------|----------------|
| Vins et alcools Chevalier | Buchanan | 7/4/1996 | 8/1/1996 | 7/16/1996 | Federal Shipping | \$32.38 | Vins et alcools Chevalier | 59 rue de l'Abbaye | Reims |
| Toms Spezialitäten | Suyama | 7/5/1996 | 8/16/1996 | 7/10/1996 | Speedy Express | \$11.61 | Toms Spezialitäten | Luisenstr. 48 | Münster |
| Hanari Carnes | Peacock | 7/8/1996 | 8/5/1996 | 7/12/1996 | United Package | \$65.83 | Hanari Carnes | Rua do Paço, 67 | Rio de Janeiro |
| Victuailles en stock | Leverling | 7/8/1996 | 8/5/1996 | 7/15/1996 | Speedy Express | \$41.34 | Victuailles en stock | 2, rue du Commerce | Lyon |
| Suprêmes délices | Peacock | 7/9/1996 | 8/6/1996 | 7/11/1996 | United Package | \$51.30 | Suprêmes délices | Boulevard Tirou, 255 | Charleroi |
| Hanari Carnes | Leverling | 7/10/1996 | 7/24/1996 | 7/16/1996 | United Package | \$58.17 | Hanari Carnes | Rua do Paço, 67 | Rio de Janeiro |
| | Buchanan | 7/11/1996 | 8/8/1996 | 7/23/1996 | United Package | \$22.98 | Chop-suey Chinese | Hauptstr. 31 | Bern |
| | Dodsworth | 7/12/1996 | 8/9/1996 | 7/15/1996 | Federal Shipping | \$148.33 | Richter Supermarkt | Starenweg 5 | Genève |
| | Leverling | 7/15/1996 | 8/12/1996 | 7/17/1996 | United Package | \$13.97 | Wellington Importadora | Rua do Mercado, 12 | Resende |

Summary

Customer Company Name: Hanari Carnes

Employee Last Name: Leverling

Order Date: 7/10/1996

Required Date: 7/24/1996

Shipped Date: 7/16/1996

About

This page allows orders management.

See Also

- Customer Demo
- Order Details

Using the Designer

Modifying User Interface with CSS

Code On Time applications rely exclusively on Cascading Style Sheets (CSS) to provide all presentation elements of generated web applications with colors, fonts, backgrounds, borders, paddings, margins, and other embellishments.

Here is a typical screen that you will find in an application generated with the default theme.

The screenshot shows a web application interface for 'MyCompany'. The top navigation bar includes links for Home, Customers, Employees, Categories, Customer Demographics, Region, Reports, Membership, and Site Actions. The main content area displays a list of products with columns for Product Name, Supplier Company Name, Category Name, Quantity Per Unit, Unit Price, Units In Stock, Units On Order, Reorder Level, and Discontinued. The table lists products such as Chai, Chang, Aniseed Syrup, Chef Anton's Cajun Seasoning, Chef Anton's Gumbo Mix, Grandma's Boysenberry Spread, and Uncle Bob's Organic Dried Pears.

| Product Name | Supplier Company Name | Category Name | Quantity Per Unit | Unit Price | Units In Stock | Units On Order | Reorder Level | Discontinued |
|---------------------------------|-------------------------------|---------------|---------------------|------------|----------------|----------------|---------------|--------------|
| Chai | Exotic Liquids | Beverages | 10 boxes x 20 bags | \$18.00 | 39 | 0 | 10 | No |
| Chang | Exotic Liquids | Beverages | 24 - 12 oz bottles | \$19.00 | 17 | 40 | 25 | No |
| Aniseed Syrup | Exotic Liquids | Condiments | 12 - 550 ml bottles | \$10.00 | 13 | 70 | 25 | No |
| Chef Anton's Cajun Seasoning | New Orleans Cajun Delights*** | Condiments | 48 - 6 oz jars | \$22.00 | 53 | 0 | 0 | No |
| Chef Anton's Gumbo Mix | Tokyo Traders | Confections | 36 boxes | \$21.35 | 0 | 0 | 0 | Yes |
| Grandma's Boysenberry Spread | Grandma Kelly's Homestead | Condiments | 12 - 8 oz jars | \$25.00 | 120 | 0 | 25 | No |
| Uncle Bob's Organic Dried Pears | Grandma Kelly's Homestead | Produce | 12 - 1 lb pkgs. | \$30.00 | 15 | 0 | 10 | No |

If you load your application in *Internet Explorer* browser, press F12 to bring up the *Developer Toolbar* and select *Disable / CSS* option on the toolbar then the page will look similar to the following screen shot.

The screenshot shows the same web application interface as above, but with the Developer Toolbar visible. The toolbar is at the top, showing the URL and various tools. The main content area is rendered in a plain, unformatted style, showing the underlying HTML structure. The table of products is visible, but the styling is removed, showing the raw HTML tags and attributes.

| <u>Product Name</u> | <u>Supplier Company Name</u> | <u>Category Name</u> | <u>Quantity Per Unit</u> | <u>Unit Price</u> | <u>Units In Stock</u> | <u>Units On Order</u> | <u>Reorder Level</u> | <u>Discontinued</u> |
|---------------------------|------------------------------|----------------------|--------------------------|-------------------|-----------------------|-----------------------|----------------------|---------------------|
| <u>Chai</u> | Exotic Liquids | Beverages | 10 boxes x 20 bags | \$18.00 | 39 | 0 | 10 | No |
| <u>Chang</u> | Exotic Liquids | Beverages | 24 - 12 oz bottles | \$19.00 | 17 | 40 | 25 | No |
| <u>Aniseed Syrup</u> | Exotic Liquids | Condiments | 12 - 550 ml bottles | \$10.00 | 13 | 70 | 25 | No |
| <u>Chef Anton's Cajun</u> | New Orleans Cajun | | | | | | | |

As you can see the page is “black on white” with a few blue links and lacks any style. This allows for total customization of the user interface. You may choose to follow the route of complete user interface customization from scratch or add incremental enhancements to the existing themes provided by Code On Time.

Here is how you can proceed with minor enhancements.

Activate *Developer Toolbar* window and select *Disable/CSS* one more time to enable the stylesheets in the browser window.

Click on the “arrow” icon of the Developer Toolbar and inspect any column in a data row of the grid view. If the selection rectangle does not show up when you move the mouse pointer over the page then click the “arrow” again to turn the selection mode off and hit “refresh” icon. Try selecting the UI element on the page again. This is needed if you have activated the toolbar and then interacted with the page in the browser. The toolbar will not be aware of the changes produced by AJAX scripts.

The screen shot shows a thin blue box around the cell in the first row of the *Products* grid in *Category Name* column. The *Developer Toolbar* on top of the browser shows the HTML corresponding to the selection. Three CSS classes *Cell*, *CategoryID*, and *StringType* are assigned to the table cell.

The screenshot displays a web browser window showing a "Products" page. The page features a navigation menu with options like "Home", "Customers", "Employees", "Categories", "Customer Demographics", "Region", "Reports", and "Membership". The main content area displays a table of products. The "Developer Tools" window is open, showing the HTML structure of the selected cell in the "Products" table. The HTML shows the following structure:

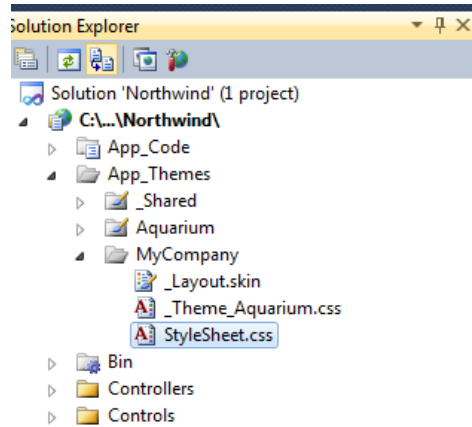
```
<table border="1">
| Product Name | Supplier Company Name | Category Name | Quantity Per Unit | Unit Price | Units In Stock | Units On Order | Reorder Level | Discontinued |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chai | Exotic Liquids | Beverages | 10 boxes x 20 bags | $18.00 | 39 | 0 | 10 | No |
| Chang | Exotic Liquids | Beverages | 24 - 12 oz bottles | $19.00 | 17 | 40 | 25 | No |

```

The "Developer Tools" window also shows the CSS styles applied to the selected cell, including "Cell", "CategoryID", and "StringType".

We will change the presentation of *CategoryID* field column to occupy 200 pixels horizontally.

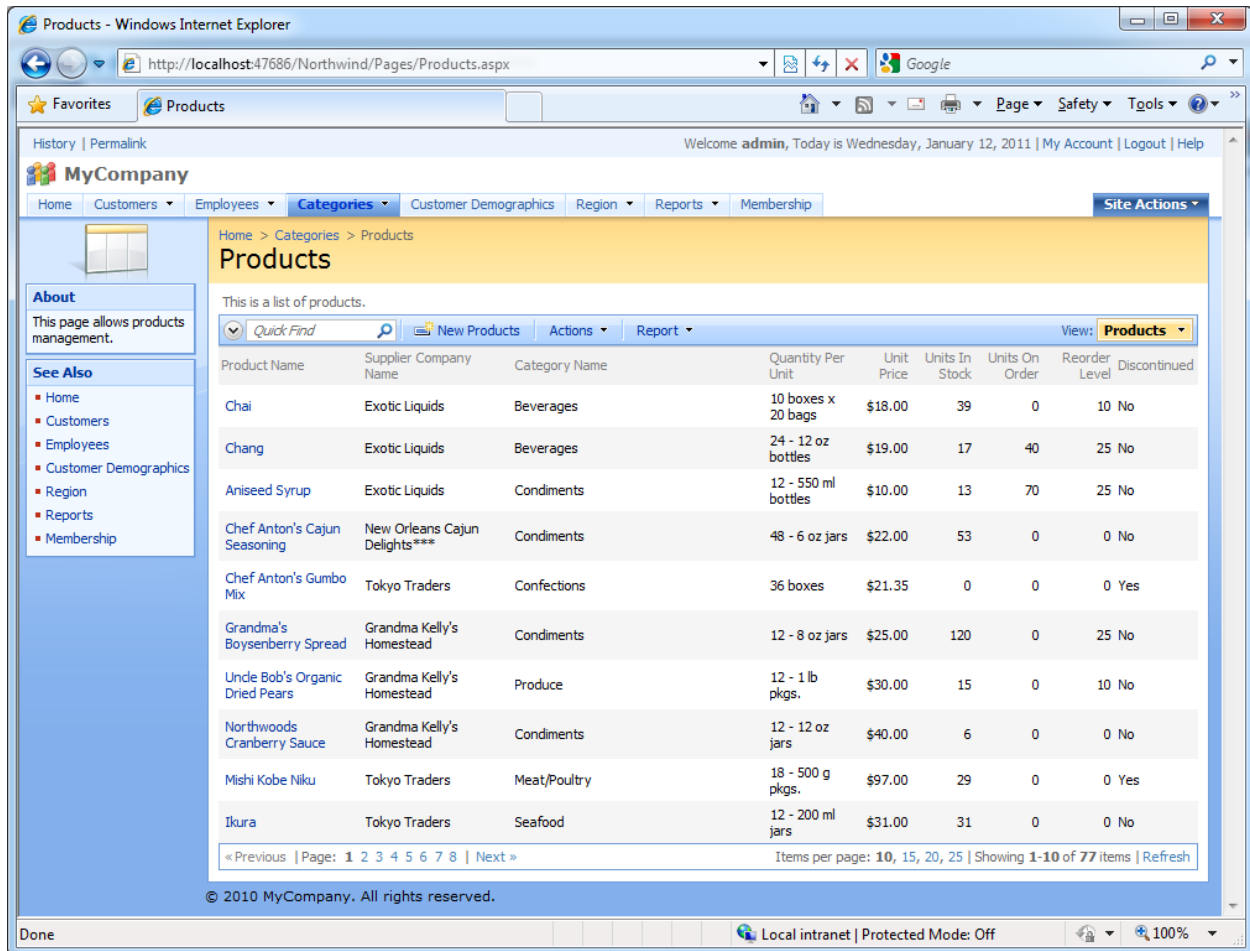
Open your project in Visual Studio or Visual Web Developer. Select the folder `~/App_Themes/MyCompany` and add the new CSS stylesheet item to your project. “MyCompany” is the default namespace of Code On Time projects. If you have changed the namespace of your project then choose the corresponding folder in the *Solution Explorer*.



Enter the following CSS rule into the stylesheet.

```
.Cell.CategoryID
{
    width: 200px;
}
```

Run the project and refresh the contents of the browser window. The third column *Category Name* of the grid view is now substantially wider.



Use similar techniques to alter other elements of the user interface in your Code On Time applications.

Notice that sometimes your own CSS rules will come into conflict with the rules of core theme. Use the word “!important” right after the value of the CSS property as shown in the following example.

```
.Cell.CategoryID  
{  
    width: 200px !important;  
}
```

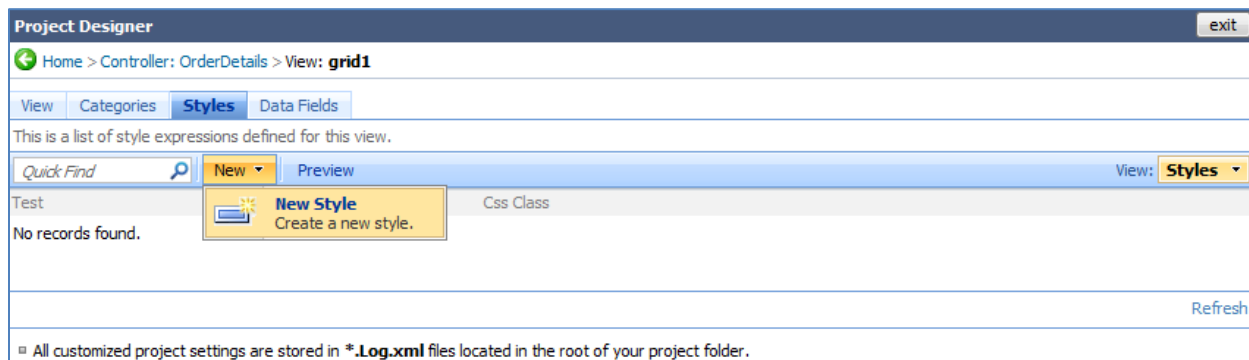
Conditional CSS Styling

Suppose that you need to highlight all *Order Details* rows with *UnitPrice* above \$30 and indicate those rows with *Discount* greater than or equal to 15%, such as in the picture below.

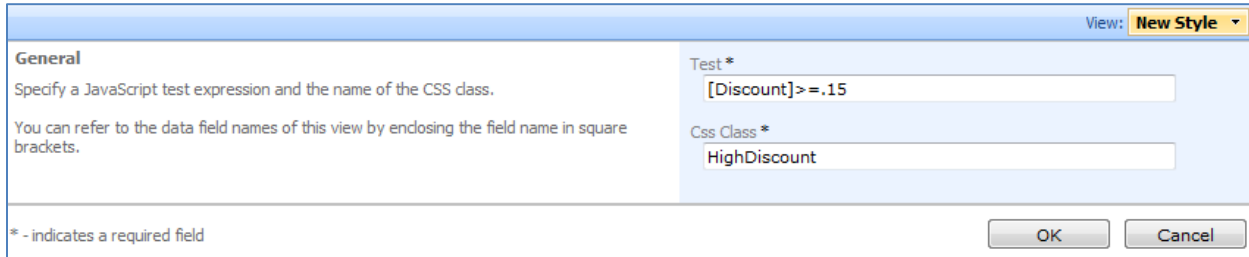
| Order Customer # | Product Name | Unit Price | Quantity | Discount | Order Customer Company Name | Order Employee Last Name | Order Ship Via Company Name | Product Category Name | Product Supplier Company Name |
|------------------|----------------------------------|------------|----------|----------|-----------------------------|--------------------------|-----------------------------|-----------------------|------------------------------------|
| VINET | Queso Cabrales | \$14.00 | 12 | 0 | Vins et alcools Chevalier | Buchanan | Federal Shipping | Dairy Products | Cooperativa de Quesos 'Las Cabras' |
| VINET | Singaporean Hokkien Fried Mee | \$9.80 | 10 | 0 | Vins et alcools Chevalier | Buchanan | Federal Shipping | Grains/Cereals | Leka Trading |
| VINET | Mozzarella di Giovanni | \$34.80 | 5 | 0 | Vins et alcools Chevalier | Buchanan | Federal Shipping | Dairy Products | Formaggi Fortini s.r.l. |
| TOMSP | Tofu | \$18.60 | 9 | 0 | Toms Spezialitäten | Suyama | Speedy Express | Produce | Mayum's |
| TOMSP | Manjimup Dried Apples | \$42.40 | 40 | 0 | Toms Spezialitäten | Suyama | Speedy Express | Produce | G'day, Mate |
| HANAR | Jack's New England Clam Chowder | \$7.70 | 10 | 0 | Hanari Carnes | Peacock | United Package | Seafood | New England Seafood Cannery |
| HANAR | Manjimup Dried Apples | \$42.40 | 35 | 0.15 | Hanari Carnes | Peacock | United Package | Produce | G'day, Mate |
| HANAR | Louisiana Fiery Hot Pepper Sauce | \$16.80 | 15 | 0.15 | Hanari Carnes | Peacock | United Package | Condiments | New Orleans Cajun Delights |
| VICTE | Gustaf's Knäckebröd | \$16.80 | 6 | 0.05 | Victualles en stock | Leverling | Speedy Express | Grains/Cereals | PB Knäckebröd AB |
| VICTE | Ravioli Angelo | \$15.60 | 15 | 0.05 | Victualles en stock | Leverling | Speedy Express | Grains/Cereals | Pasta Buttini s.r.l. |

A newly generated *Web Site Factory* application will have all rows uniformly displayed in the default style. We will need to use *Code On Time Designer* to modify the application, so click on *Code On Time Generator* link on your desktop. Click on the project name, and press the *Design* button.

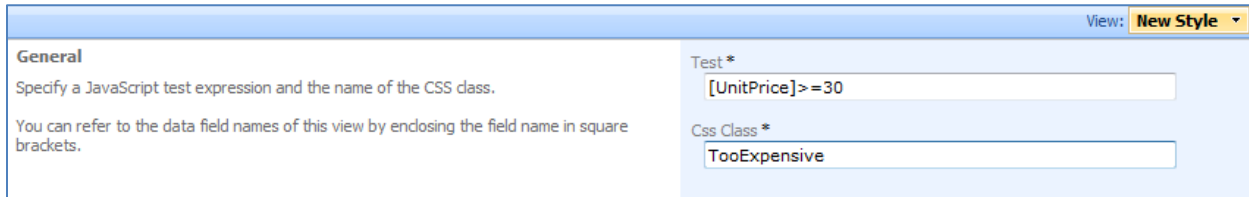
Select the *OrderDetails* controller from the *All Controllers* list. Switch to the *Views* tab, click on *grid1*, and go to the *Styles* tab. We will need to create two new styles for the application. On the action bar, press *New | New Style*.



For the first style, we need to test *Discount* field to see if it is greater than or equal to 15%. If true, the *Css Class* of “HighDiscount” will be applied. Set *Test* to “[Discount]>=.15”, *Css Class* to “HighDiscount”, and save by pressing *OK*.

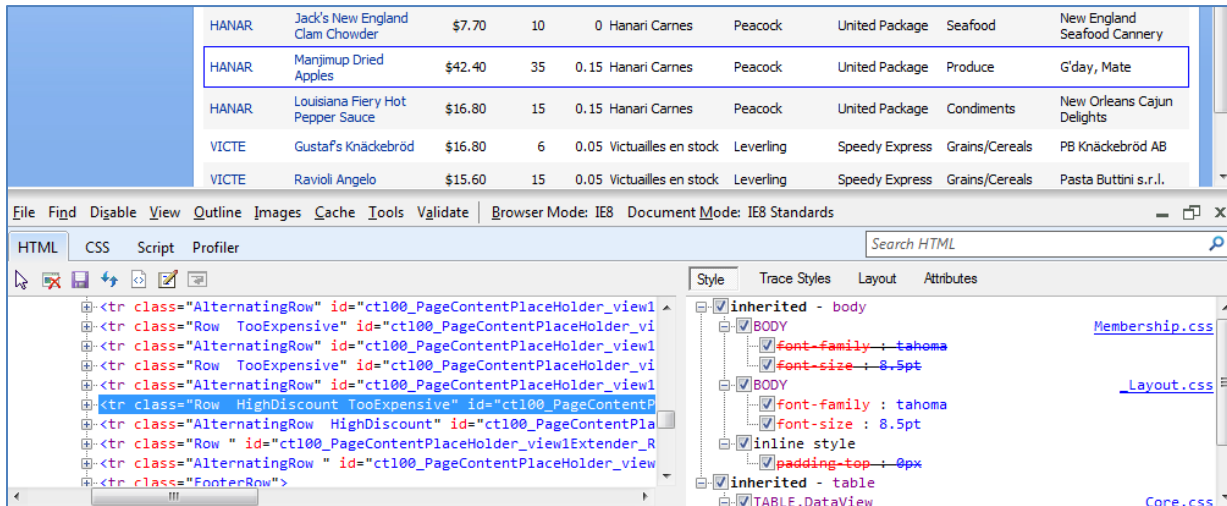


The second style will see if *UnitPrice* is equal to or above \$30. If true, the *Css Class* of *TooExpensive* will be applied. Set *Test* to “[UnitPrice]>=30”, *Css Class* to “TooExpensive”, and save.



Close the *Designer* by clicking on the exit link in the top right corner of the screen, press the *Next* button, and then *Generate*. When generation finishes, a web page will appear with the modified application. Navigate to the *Order Details* page.

No custom styling has been applied yet, so the changes will not be visible to casual users. However, we can detect the changes by using *Developer Tools* in *Internet Explorer 8*. Open it by pressing *F12*, and on the menu, press *Find | Select Element by Click*. Select a row that has *Discount* greater than 15%, and you can see in the HTML that the styles have been applied to the relevant rows. The selected row in the picture below has the classes of *Row*, *HighDiscount*, and *TooExpensive*.



We will need to create custom styling for the *HighDiscount* and *TooExpensive* classes by using *Microsoft Visual Studio* or *Visual Web Developer*. From the menu, select *File | Open Website*, navigate to the location of your website project, and select the folder. In the *Solution Explorer*, expand *App_Themes/MyCompany* folder (or the folder with the *_Layout.skin* file, if you have a non-default namespace for your project). Right-click on the *MyCompany* folder and press *Add New Item*. Select *Style Sheet* from the list and press *Add*.

Create the style definitions for *HighDiscount* and *TooExpensive* by typing the code below into the stylesheet. Make sure to append the *!important* suffix right after the style attribute value, so that the style overrides any other styles defined elsewhere in the application.

```
tr.HighDiscount td.Discount
{
    color: white !important;
    font-weight: bold !important;
    background-color: red !important;
}
tr.TooExpensive td
{
    background-color: orange !important;
    color: yellow !important;
}
```

Save the stylesheet, and refresh the web page.

| Order Customer # | Product Name | Unit Price | Quantity | Discount | Order Customer Company Name | Order Employee Last Name | Order Ship Via Company Name | Product Category Name | Product Supplier Company Name |
|------------------|----------------------------------|------------|----------|----------|-----------------------------|--------------------------|-----------------------------|-----------------------|------------------------------------|
| VINET | Queso Cabrales | \$14.00 | 12 | 0 | Vins et alcools Chevalier | Buchanan | Federal Shipping | Dairy Products | Cooperativa de Quesos 'Las Cabras' |
| VINET | Singaporean Hokkien Fried Mee | \$9.80 | 10 | 0 | Vins et alcools Chevalier | Buchanan | Federal Shipping | Grains/Cereals | Leka Trading |
| VINET | Mozzarella di Giovanni | \$34.80 | 5 | 0 | Vins et alcools Chevalier | Buchanan | Federal Shipping | Dairy Products | Formaggi Fortini s.r.l. |
| TOMSP | Tofu | \$18.60 | 9 | 0 | Toms Spezialitäten | Suyama | Speedy Express | Produce | Mayumi's |
| TOMSP | Manjimup Dried Apples | \$42.40 | 40 | 0 | Toms Spezialitäten | Suyama | Speedy Express | Produce | G'day, Mate |
| HANAR | Jack's New England Clam Chowder | \$7.70 | 10 | 0 | Hanari Carnes | Peacock | United Package | Seafood | New England Seafood Cannery |
| HANAR | Manjimup Dried Apples | \$42.40 | 35 | 0.15 | Hanari Carnes | Peacock | United Package | Produce | G'day, Mate |
| HANAR | Louisiana Fiery Hot Pepper Sauce | \$16.80 | 15 | 0.15 | Hanari Carnes | Peacock | United Package | Condiments | New Orleans Cajun Delights |
| VICTE | Gustaf's Knäckebröd | \$16.80 | 6 | 0.05 | Victualles en stock | Leverling | Speedy Express | Grains/Cereals | PB Knäckebröd AB |
| VICTE | Ravioli Angelo | \$15.60 | 15 | 0.05 | Victualles en stock | Leverling | Speedy Express | Grains/Cereals | Pasta Buttini s.r.l. |

Now we have conditional styling. Rows with class *HighDiscount* have the *Discount* cell highlighted in red, with white font. Rows with class *TooExpensive* are highlighted orange, with yellow font. This styling is also applicable when viewing *Order Details* inside of the *Customers* page.

Conversion and Validation of User Input

Code On Time applications offer powerful methods of converting and validating field values entered by users. The unique business rules model allows elegant abstraction of the business logic required to validate and convert user values from the user interface elements responsible for presentation.

Conversion

Let's consider a simple conversion scenario that requires automatic conversion of a customer contact name to upper case as soon as the user has finished typing. We will use *Northwind* database for this sample.

Generate your project, activate the *Designer*, and select *All Controllers* tab. Select *Customers* data controller, switch to *Fields* tab, and select the *ContactName* field. Edit the field, and enable the check box "The value of the field is calculated by a business rule expression".

Enter the following Code Formula if your programming language is C#:

```
!String.IsNullOrEmpty(contactName) ? contactName.ToUpper() : String.Empty
```

Visual Basic programmers should use the following instead:

```
IF (Not (String.IsNullOrEmpty(contactName))), contactName.ToUpper(),  
String.Empty)
```

The screenshot shows the Project Designer window with the 'Field' tab selected for the 'ContactName' field. The 'Code Formula' property is set to '!String.IsNullOrEmpty(contactName) ? contactName.ToUpper() : String.Empty'. The 'Allow null values' checkbox is checked, and the 'The value of the field is calculated by a business rule expression' checkbox is also checked. The 'Context Fields' property is set to 'ContactName'.

Next, scroll down and enter "ContactName" in the *Context Fields* property. This very important step will ensure that the business rules formula is executed as soon as user leaves the field.

The screenshot shows the 'Dynamic Properties' section with the 'Context Fields' property set to 'ContactName'.

Save the field, generate the application, and go to the Customers page. Type in a *Contact Name* and the name will be converted to upper case as soon as you switch to the next field.

The screenshot shows a web application interface for 'MyCompany'. The main content area is titled 'Customers' and contains a 'New Customers' form. The form has a header that says 'Please fill this form and click OK button to create a new customers record. Click Cancel to return to the previous screen.' Below this, there are several input fields: 'Customer #' (with value 'ABCDE'), 'Company Name' (with value 'My Company'), 'Contact Name' (with value 'JOHN DOE'), 'Contact Title', 'Address', 'City', 'Region', 'Postal Code', 'Country', 'Phone', and 'Fax'. The 'Contact Name' field is highlighted, indicating it is the active field. There are 'OK' and 'Cancel' buttons at the bottom right of the form. The left sidebar contains navigation links like 'Home', 'Customers', 'Employees', etc., and an 'About' section.

This works in all views without any effort on your part. Change the model, and all views will automatically engage the business rules.

Here is the actual file that is automatically produced to implement this calculation. The code is placed in *~/App_Code/Rules/Customers.Generated.cs*:

```
using System;
using System.Data;
using System.Collections.Generic;
using System.Linq;
using System.Text.RegularExpressions;
using System.Web;
using MyCompany.Data;

namespace MyCompany.Rules
{
    public partial class CustomersBusinessRules :
        MyCompany.Data.BusinessRules
    {
        [ControllerAction("Customers", "Calculate", "ContactName")]
        public void CalculateCustomers(string customerID,
            string companyName, string contactName, string contactTitle,
            string address, string city, string region,
            string postalCode, string country, string phone, string fax)
        {
            UpdateFieldValue("ContactName",
                !String.IsNullOrEmpty(contactName) ?
                    contactName.ToUpper() :
                    String.Empty);
        }
    }
}
```

Note that the class is partial. You can implement your own class with the same name and offer a method that performs a more complex conversion using database or other resources required for successful

conversion calculation. Make sure not to change the file directly since the changes will be lost during next code generation. Instead, use *Designer* to change the *Code Formula* of the corresponding field.

Here is the Visual Basic version of the same automatically generated method:

```
Imports MyCompany.Data
Imports System
Imports System.Collections.Generic
Imports System.Data
Imports System.Linq
Imports System.Text.RegularExpressions
Imports System.Web

Namespace MyCompany.Rules

    Partial Public Class CustomersBusinessRules
        Inherits MyCompany.Data.BusinessRules

        <ControllerAction("Customers", "Calculate", "ContactName")> _
        Public Sub CalculateCustomers(ByVal customerID As String, _
            ByVal companyName As String, _
            ByVal contactName As String, _
            ByVal contactTitle As String, _
            ByVal address As String, _
            ByVal city As String, _
            ByVal region As String, _
            ByVal postalCode As String, _
            ByVal country As String, _
            ByVal phone As String, _
            ByVal fax As String)
            UpdateFieldValue("ContactName", _
                IIf(Not (String.IsNullOrEmpty(contactName)), _
                    contactName.ToUpper(), _
                    String.Empty))
        End Sub
    End Class
End Namespace
```

Accessing Field Values

Many scenarios of validation may be narrowed to perform a silent conversion using the method described above. The business rules methods offer every field of the field dictionary of the data controller. You can use the value of any field to perform the conversion.

You can also use methods *SelectFieldValue* and *SelectFieldValueObject* and retrieve a field value required for conversion/validation.

The first method will return the untyped object representing the value of the field or external URL parameter. It is your responsibility to convert the value to use it in a calculation. For example:

```
Convert.ToString(SelectFieldValue("ContactName")).ToUpper()
```

The second method returns only the value objects that correspond to the fields of the data controller. The advantage of using *SelectFieldValueObject* is the ability to access the “Old” and “New” values and the availability of *Modified* property that tells if the field value has changed.

```
Convert.ToString(SelectFieldValueObject("ContactName").NewValue).ToUpper()
```

Validation

Validation is usually performed just before the standard logic of *Code On Time* application is about to be executed. User has completed input and initiated a command that will result in *INSERT*, *UPDATE*, or *DELETE* statement execution.

Let's consider another example. Let's prevent posting of invalid values to the *Order Details* table.

Select your project on the start page of the code generator, activate the *Designer*. Select the *Order Details* data controller from the list of *All Controllers*, and edit the controller to have "OrderDetailsBusinessRules" as business rules *Handler*.

The screenshot shows the 'Project Designer' window with the 'Controller: OrderDetails' selected. The interface includes a navigation bar with tabs for 'Controller', 'Commands', 'Fields', 'Views', 'Categories', 'Data Fields', 'Action Groups', and 'Actions'. Below the navigation bar, there is a message: 'Please review data controller information below. Click Edit to change this record, click Delete to delete the record, or click Cancel/Close to return back.' A 'Record' dropdown menu is set to 'Controller'. The main area is divided into three sections: 'General', 'Miscellaneous', and 'Business Rules'. In the 'General' section, the 'Controller Name' is 'OrderDetails' and 'Include in code generation' is checked. In the 'Miscellaneous' section, 'Conflict Detection' is set to 'Overwrite Changes'. In the 'Business Rules' section, the 'Handler' is 'OrderDetailsBusinessRules'.

| Section | Field | Value |
|----------------|----------------------------|--|
| General | Controller Name * | OrderDetails |
| | Include in code generation | <input checked="" type="checkbox"/> |
| Miscellaneous | Conflict Detection * | <input checked="" type="radio"/> Overwrite Changes <input type="radio"/> Compare All Values |
| | Connection String Name | |
| Business Rules | Handler | OrderDetailsBusinessRules |

Save changes, exit the designer, and generate the application.

Open the project in *Visual Studio* using *File | Open Web Site* and double click the `~/App_Code/Rules/OrderDetailsBusinessRules.cs` file to open it in the editor.

Enter the following method if your project language is C#.

```
using System;
using System.Data;
using System.Collections.Generic;
using System.Linq;
using MyCompany.Data;

namespace MyCompany.Rules
{
    public partial class OrderDetailsBusinessRules : MyCompany.Data.BusinessRules
    {
        [ControllerAction("OrderDetails", "Update", ActionPhase.Before)]
        [ControllerAction("OrderDetails", "Insert", ActionPhase.Before)]
        public void ValidateInput(float? discount, short? quantity, decimal? price)
        {
            if (quantity.HasValue && quantity > 10)
                if (!Controller.UserIsInRole("Administrators"))
                    throw new Exception("You are not authorized to sell more than 10 items.");
            if (discount.HasValue && discount.Value > 0.15)
                throw new Exception("The discount cannot be more than 15%.");
            if (!price.HasValue || price.Value == 0.0m)
            {
                Result.Focus("UnitPrice", "The price must be greater than zero.");
                throw new Exception("Please validate the entered unit price.");
            }
        }
    }
}
```

Here is the Visual Basic version:

```
Imports MyCompany.Data
Imports System
Imports System.Collections.Generic
Imports System.Data
Imports System.Linq

Namespace MyCompany.Rules

    Partial Public Class OrderDetailsBusinessRules
        Inherits MyCompany.Data.BusinessRules

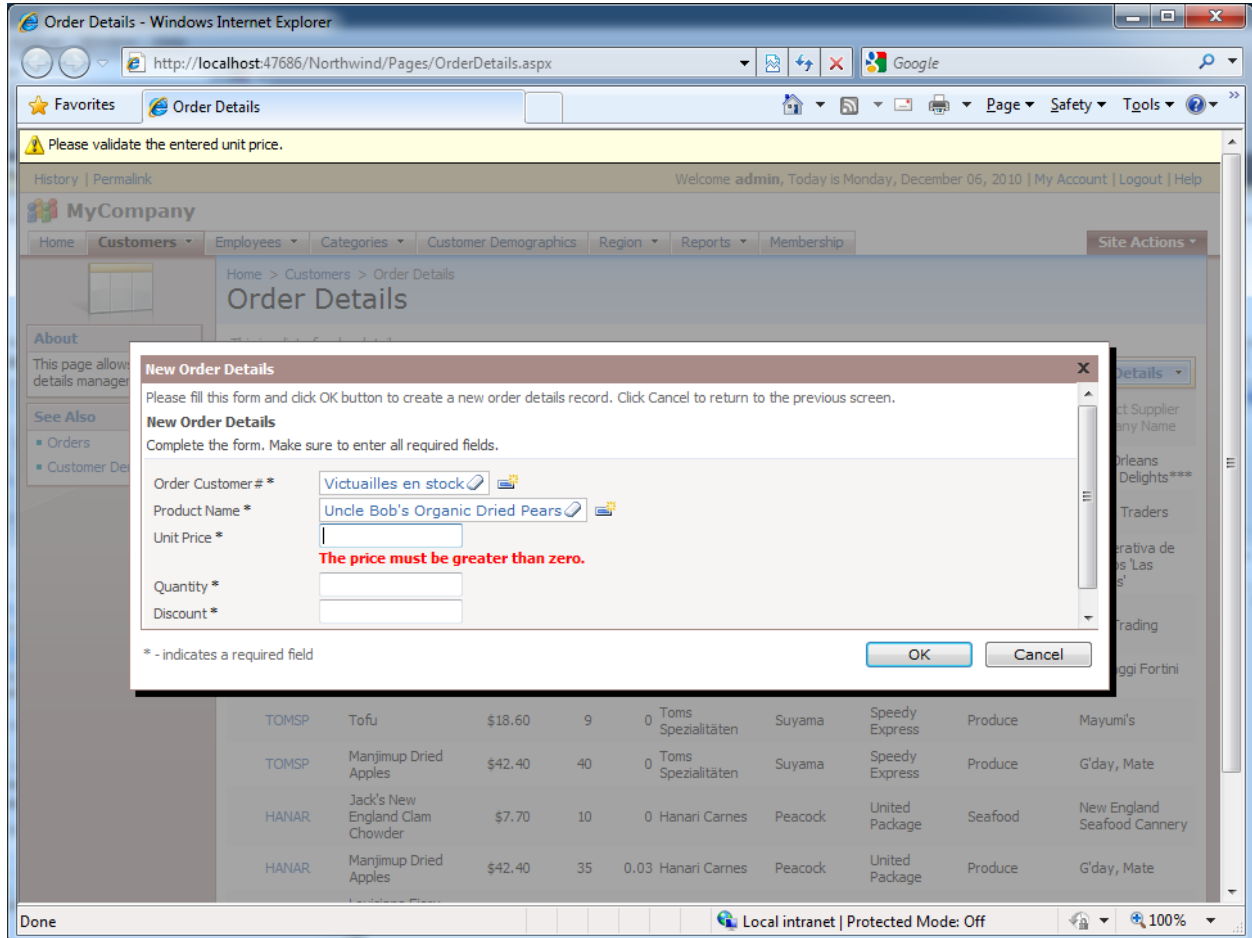
        <ControllerAction("OrderDetails", "Update", ActionPhase.Before)> _
        <ControllerAction("OrderDetails", "Insert", ActionPhase.Before)> _
        Public Sub ValidateInput(ByVal discount As Nullable(Of Single), _
                                ByVal quantity As Nullable(Of Short), _
                                ByVal unitPrice As Nullable(Of Decimal))
            If (quantity.HasValue AndAlso quantity > 10) Then
                If (Not Controller.UserIsInRole("Administrators")) Then
                    Throw New Exception("You are not authorized to sell more then 10 items.")
                End If
            End If
            If (discount.HasValue AndAlso discount.Value > 0.15) Then
                Throw New Exception("The discount cannot be more than 15%.")
            End If
            If (Not (unitPrice.HasValue) Or (unitPrice.HasValue AndAlso unitPrice.Value = 0))
                Result.Focus("UnitPrice", "The price must be greater than zero.")
                Throw New Exception("Please validate the entered unit price.")
            End If
        End Sub

    End Class

End Namespace
```

Notice that the order of the arguments in the validation method is absolutely irrelevant. The same method is handling both *Insert* and *Update* actions. You can implement a dedicated method to handle each situation differently. You can use a *Shared Business Rules* method to create a handler for multiple data controllers.

Run the program, select *Customers | Order Details* page, and try entering the order details records while leaving *Discount*, *Unit Price*, and *Quantity* fields blank. The *Unit Price* validation will detect the problem and will throw an error, as indicated by the message bar at the top. The inline error message, displayed on the next page, explains the problem with more details.



Tall and Wide Pages

Here is the standard page layout of a *Web Site Factory* application. A typical page features a membership bar at the top of the page, a page header with a logo, a bar with the application menu system, a page title, and a page path. There is also a side bar on the left side of the page.

The screenshot shows a web application interface for 'MyCompany'. At the top, there is a membership bar with 'Welcome admin, Today is Sunday, December 19, 2010 | My Account | Logout | Help'. Below this is a navigation bar with 'Home', 'Customers', 'Employees', 'Categories', 'Customer Demographics', 'Region', 'Reports', 'Membership', and 'Site Actions'. The main content area is titled 'Employees' and contains a table of employee data. A left sidebar has an 'About' section and a 'See Also' section with 'Employee Territories'. The footer shows '© 2010 MyCompany. All rights reserved.'

| Last Name | First Name | Title | Title Of Courtesy | Birth Date | Hire Date | Address | City | Region | Postal Code |
|-----------|------------|--------------------------|-------------------|------------|------------|-------------------------------|----------|--------|-------------|
| Davolio | Nancy | Sales Representative | Ms. | 12/8/1948 | 5/1/1992 | 507 - 20th Ave. E. Apt. 2A | Seattle | WA | 98122 |
| Fuller | Andrew | Vice President, Sales | Dr. | 2/19/1952 | 8/14/1992 | 908 W. Capital Way | Tacoma | WA | 98401 |
| Leverling | Janet | Sales Representative | Ms. | 8/30/1963 | 4/1/1992 | 722 Moss Bay Blvd. | Kirkland | WA | 98033 |
| Peacock | Margaret | Sales Representative | Mrs. | 9/19/1937 | 5/3/1993 | 4110 Old Redmond Rd. | Redmond | WA | 98052 |
| Buchanan | Steven | Sales Manager | Mr. | 3/4/1955 | 10/17/1993 | 14 Garrett Hill | London | n/a | SW1 8JR |
| Suyama | Michael | Sales Representative | Mr. | 7/2/1963 | 10/17/1993 | Coventry House Miner Rd. | London | n/a | EC2 7JR |
| King | Robert | Sales Representative | Mr. | 5/29/1960 | 1/2/1994 | Edgeham Hollow Winchester Way | London | n/a | RG1 9SP |
| Callahan | Laura | Inside Sales Coordinator | Ms. | 1/9/1958 | 3/5/1994 | 4726 - 11th Ave. N.E. | Seattle | WA | 98105 |
| Dodsworth | Anne | Sales Representative | Ms. | 1/27/1966 | 11/15/1994 | 7 Houndstooth Rd. | London | n/a | WG2 7LT |

What if you want to maximize the real estate of the page and eliminate some of the standard page elements?

Make a Page Tall and Wide

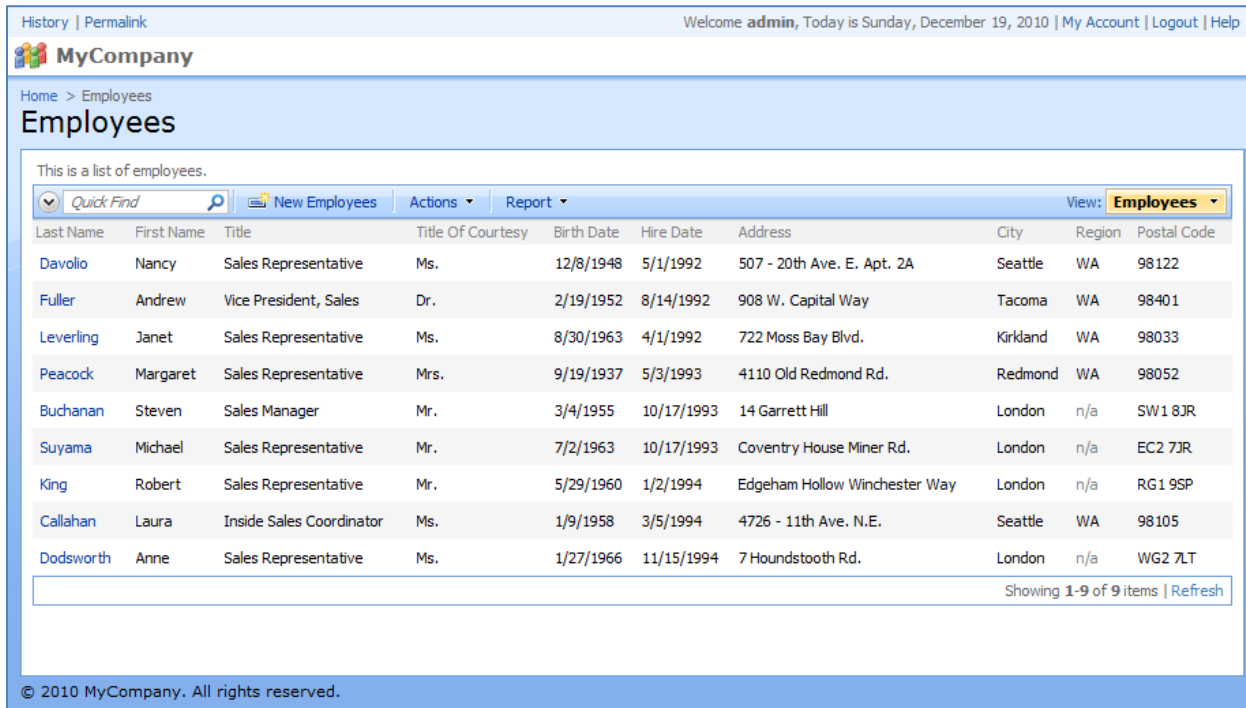
Run *Code On Time Generator*, select your project, and press *Design*. Select the *All Pages* tab. Click and edit the page you wish to modify. In this case, we will use *Employees* page. Simply enter the names of the predefined CSS classes "Tall" and "Wide" in the *Custom Style* field. You may also optionally complement them with another standard CSS class *HomePage*. Make sure to separate the class names with spaces.

The screenshot shows the 'Presentation' configuration panel for the 'Employees' page. It includes the following fields and values:

- Title ***: Employees
- Path**: Employees
- Description**: View Employees
- Style ***: Generic
- Custom Style**: Tall Wide HomePage

Additional text in the panel includes instructions on how to use symbols in the page path, how to handle blank paths, and how to use custom styles to eliminate the side bar.

Generate the application and see the page layout change as follows. Class *Tall* hides the menu bar at the top of the page. Class *Wide* hides the side bar. Class *HomePage* replaces the yellow background with the standard home page background.



History | Permalink Welcome **admin**, Today is Sunday, December 19, 2010 | My Account | Logout | Help

MyCompany

Home > Employees

Employees

This is a list of employees.

Quick Find Actions Report View: **Employees**

| Last Name | First Name | Title | Title Of Courtesy | Birth Date | Hire Date | Address | City | Region | Postal Code |
|-----------|------------|--------------------------|-------------------|------------|------------|-------------------------------|----------|--------|-------------|
| Davolio | Nancy | Sales Representative | Ms. | 12/8/1948 | 5/1/1992 | 507 - 20th Ave. E. Apt. 2A | Seattle | WA | 98122 |
| Fuller | Andrew | Vice President, Sales | Dr. | 2/19/1952 | 8/14/1992 | 908 W. Capital Way | Tacoma | WA | 98401 |
| Leverling | Janet | Sales Representative | Ms. | 8/30/1963 | 4/1/1992 | 722 Moss Bay Blvd. | Kirkland | WA | 98033 |
| Peacock | Margaret | Sales Representative | Mrs. | 9/19/1937 | 5/3/1993 | 4110 Old Redmond Rd. | Redmond | WA | 98052 |
| Buchanan | Steven | Sales Manager | Mr. | 3/4/1955 | 10/17/1993 | 14 Garrett Hill | London | n/a | SW1 8JR |
| Suyama | Michael | Sales Representative | Mr. | 7/2/1963 | 10/17/1993 | Coventry House Miner Rd. | London | n/a | EC2 7JR |
| King | Robert | Sales Representative | Mr. | 5/29/1960 | 1/2/1994 | Edgeham Hollow Winchester Way | London | n/a | RG1 9SP |
| Callahan | Laura | Inside Sales Coordinator | Ms. | 1/9/1958 | 3/5/1994 | 4726 - 11th Ave. N.E. | Seattle | WA | 98105 |
| Dodsworth | Anne | Sales Representative | Ms. | 1/27/1966 | 11/15/1994 | 7 Houndstooth Rd. | London | n/a | WG2 7LT |

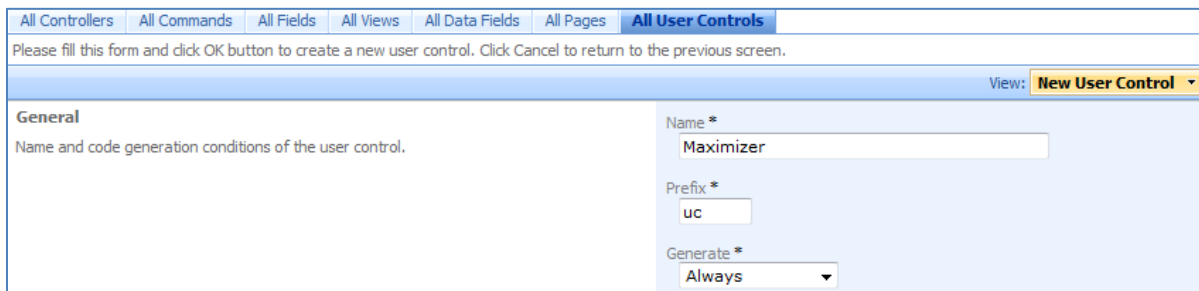
Showing 1-9 of 9 items | Refresh

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Maximize Real Estate of the Page

Even a *Tall* and *Wide* page may not be enough – here is how you can make your pages even more efficient.

In the *Designer*, select the *All User Controls* tab. On the action bar, press *New / New User Control*. It will have the *Name* of “Maximizer” and *Generate* of “Always”.



All Controllers All Commands All Fields All Views All Data Fields All Pages **All User Controls**

Please fill this form and click OK button to create a new user control. Click Cancel to return to the previous screen.

View: **New User Control**

General
Name and code generation conditions of the user control.

Name *
Maximizer

Prefix *
uc

Generate *
Always

In the *Markup* field that appears, paste in the following code. The inline server script of the control is written in C#. This code will work in Visual Basic.NET projects as well, since no code-behind class will be generated for a control that has sequence of characters “<%@” in its markup.

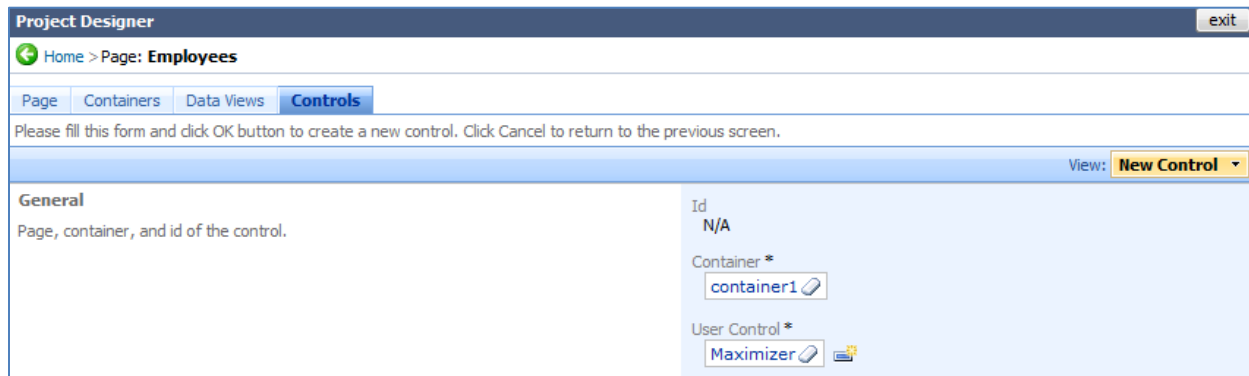
```
<script type="text/C#" runat="server">
    protected void Page_Init(object sender, EventArgs e)
    {
```

```

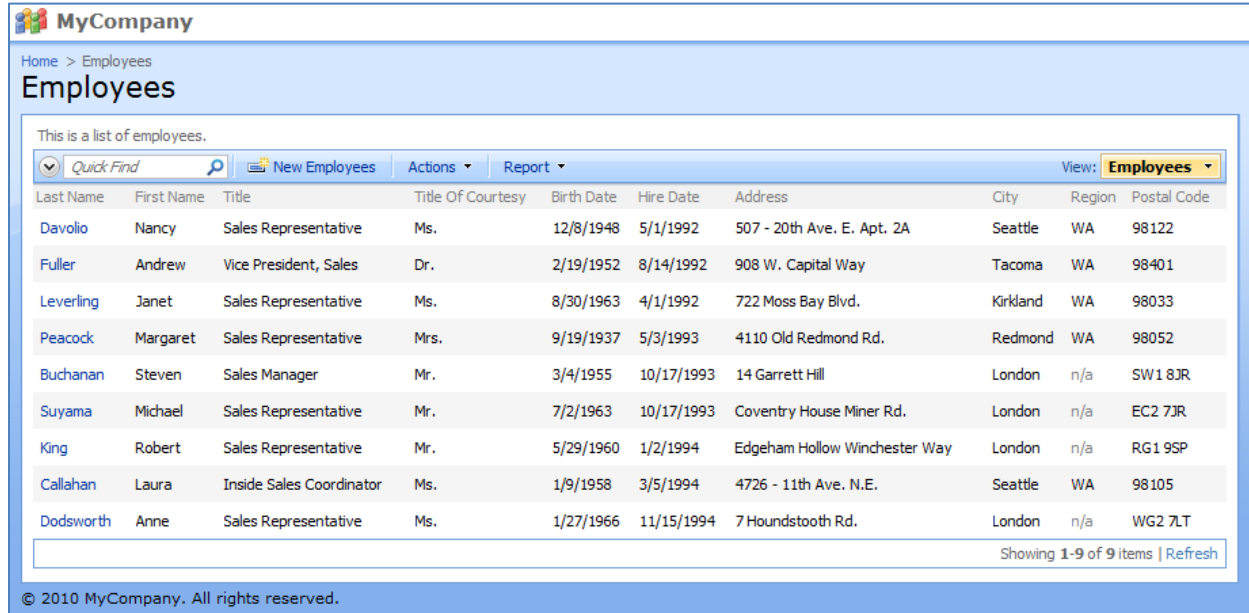
Page.Header.Controls.Add(new LiteralControl(
    "<style type='text/css'" +
    // hide the membership bar
    "body {padding:0px!important;}" +
    "div.MembershipBar, div.MembershipBarPlaceholder {display:none!important;}" +
    "</style>"));
}
</script>

```

Save, and return to the *All Pages* list in the *Designer*. Select the page that was made *Tall* and *Wide* in the previous step (in our case, *Employees* page). Switch to the *Controls* tab, and on the action bar, press *New | New Control*. The *Container* will be “container1”, and *User Control* will be “Maximizer”.



Generate the project, and observe how the membership bar disappears from the page layout.



If you use the definition below for *Maximizer* control, then the page header and logo will be removed from the layout as well.

```

<script type="text/C#" runat="server">
    protected void Page_Init(object sender, EventArgs e)
    {
        Page.Header.Controls.Add(new LiteralControl(

```

```

    "<style type=\"text/css\">" +
    // hide the membership bar
    "body {padding:0px!important;}" +
    "div.MembershipBar, div.MembershipBarPlaceholder {display:none!important;}" +
    // hide the page header and logo
    "div#PageHeader{display:none!important;}" +
    "</style>"));
}
</script>

```

Home > Employees

Employees

This is a list of employees.

Quick Find New Employees Actions Report View: **Employees**

| Last Name | First Name | Title | Title Of Courtesy | Birth Date | Hire Date | Address | City | Region | Postal Code |
|-----------|------------|--------------------------|-------------------|------------|------------|-------------------------------|----------|--------|-------------|
| Davolio | Nancy | Sales Representative | Ms. | 12/8/1948 | 5/1/1992 | 507 - 20th Ave. E. Apt. 2A | Seattle | WA | 98122 |
| Fuller | Andrew | Vice President, Sales | Dr. | 2/19/1952 | 8/14/1992 | 908 W. Capital Way | Tacoma | WA | 98401 |
| Leverling | Janet | Sales Representative | Ms. | 8/30/1963 | 4/1/1992 | 722 Moss Bay Blvd. | Kirkland | WA | 98033 |
| Peacock | Margaret | Sales Representative | Mrs. | 9/19/1937 | 5/3/1993 | 4110 Old Redmond Rd. | Redmond | WA | 98052 |
| Buchanan | Steven | Sales Manager | Mr. | 3/4/1955 | 10/17/1993 | 14 Garrett Hill | London | n/a | SW1 8JR |
| Suyama | Michael | Sales Representative | Mr. | 7/2/1963 | 10/17/1993 | Coventry House Miner Rd. | London | n/a | EC2 7JR |
| King | Robert | Sales Representative | Mr. | 5/29/1960 | 1/2/1994 | Edgeham Hollow Winchester Way | London | n/a | RG1 9SP |
| Callahan | Laura | Inside Sales Coordinator | Ms. | 1/9/1958 | 3/5/1994 | 4726 - 11th Ave. N.E. | Seattle | WA | 98105 |
| Dodsworth | Anne | Sales Representative | Ms. | 1/27/1966 | 11/15/1994 | 7 Houndstooth Rd. | London | n/a | WG2 7LT |

Showing 1-9 of 9 items | Refresh

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This version of the *Maximizer* control will get rid of the page title.

```

<script type="text/C#" runat="server">
    protected void Page_Init(object sender, EventArgs e)
    {
        Page.Header.Controls.Add(new LiteralControl(
            "<style type=\"text/css\">" +
            // hide the membership bar
            "body {padding:0px!important;}" +
            "div.MembershipBar, div.MembershipBarPlaceholder {display:none!important;}" +
            // hide the page header and logo
            "div#PageHeader{display:none!important;}" +
            // hide the page title
            "#PageHeaderLeftSide, #PageHeaderContent, #PageHeaderRightSide{background-
            image:none!important}" +
            "#PageHeaderContent div.Title {display:none!important;}" +
            "</style>"));
    }
</script>

```

An example is on the next page.

Home > Employees

This is a list of employees.

Quick Find New Employees Actions Report View: **Employees**

| Last Name | First Name | Title | Title Of Courtesy | Birth Date | Hire Date | Address | City | Region | Postal Code |
|-----------|------------|--------------------------|-------------------|------------|------------|-------------------------------|----------|--------|-------------|
| Davolio | Nancy | Sales Representative | Ms. | 12/8/1948 | 5/1/1992 | 507 - 20th Ave. E. Apt. 2A | Seattle | WA | 98122 |
| Fuller | Andrew | Vice President, Sales | Dr. | 2/19/1952 | 8/14/1992 | 908 W. Capital Way | Tacoma | WA | 98401 |
| Leverling | Janet | Sales Representative | Ms. | 8/30/1963 | 4/1/1992 | 722 Moss Bay Blvd. | Kirkland | WA | 98033 |
| Peacock | Margaret | Sales Representative | Mrs. | 9/19/1937 | 5/3/1993 | 4110 Old Redmond Rd. | Redmond | WA | 98052 |
| Buchanan | Steven | Sales Manager | Mr. | 3/4/1955 | 10/17/1993 | 14 Garrett Hill | London | n/a | SW1 8JR |
| Suyama | Michael | Sales Representative | Mr. | 7/2/1963 | 10/17/1993 | Coventry House Miner Rd. | London | n/a | EC2 7JR |
| King | Robert | Sales Representative | Mr. | 5/29/1960 | 1/2/1994 | Edgeham Hollow Winchester Way | London | n/a | RG1 9SP |
| Callahan | Laura | Inside Sales Coordinator | Ms. | 1/9/1958 | 3/5/1994 | 4726 - 11th Ave. N.E. | Seattle | WA | 98105 |
| Dodsworth | Anne | Sales Representative | Ms. | 1/27/1966 | 11/15/1994 | 7 Houndstooth Rd. | London | n/a | WG2 7LT |

Showing 1-9 of 9 items | Refresh

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Finally, the path will be removed with the version of *Maximizer* below.

```
<script type="text/C#" runat="server">
    protected void Page_Init(object sender, EventArgs e)
    {
        Page.Header.Controls.Add(new LiteralControl(
            "<style type=\"text/css\"> +
            // hide the membership bar
            \"body {padding:0px!important;}\" +
            \"div.MembershipBar, div.MembershipBarPlaceholder {display:none!important;}\" +
            // hide the page header and logo
            \"div#PageHeader{display:none!important;}\" +
            // hide the page title
            \"#PageHeaderLeftSide,#PageHeaderContent,#PageHeaderRightSide{background-
            image:none!important}\" +
            \"#PageHeaderContent div.Title {display:none!important;}\" +
            // hide the page path
            \"#PageHeaderContent .SiteMapPath {display:none!important;}\" +
            \"</style>\"));
    }
</script>
```

This is a list of employees.

Quick Find New Employees Actions Report View: **Employees**

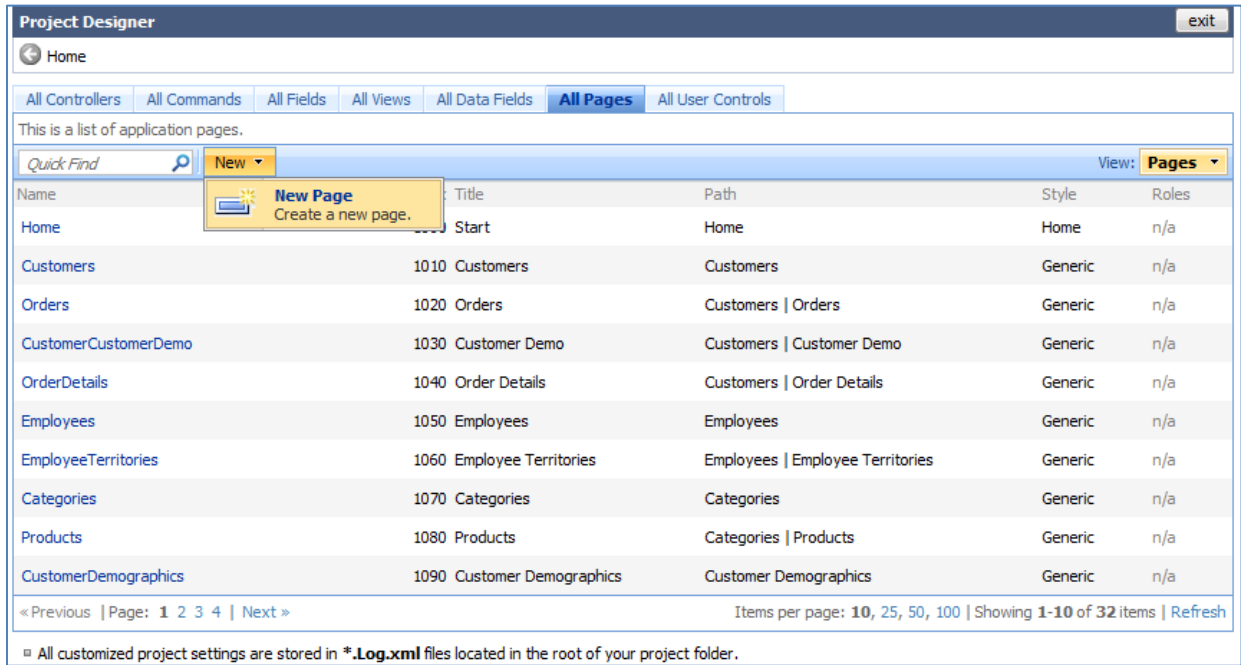
| Last Name | First Name | Title | Title Of Courtesy | Birth Date | Hire Date | Address | City | Region | Postal Code |
|-----------|------------|--------------------------|-------------------|------------|------------|-------------------------------|----------|--------|-------------|
| Davolio | Nancy | Sales Representative | Ms. | 12/8/1948 | 5/1/1992 | 507 - 20th Ave. E. Apt. 2A | Seattle | WA | 98122 |
| Fuller | Andrew | Vice President, Sales | Dr. | 2/19/1952 | 8/14/1992 | 908 W. Capital Way | Tacoma | WA | 98401 |
| Leverling | Janet | Sales Representative | Ms. | 8/30/1963 | 4/1/1992 | 722 Moss Bay Blvd. | Kirkland | WA | 98033 |
| Peacock | Margaret | Sales Representative | Mrs. | 9/19/1937 | 5/3/1993 | 4110 Old Redmond Rd. | Redmond | WA | 98052 |
| Buchanan | Steven | Sales Manager | Mr. | 3/4/1955 | 10/17/1993 | 14 Garrett Hill | London | n/a | SW1 8JR |
| Suyama | Michael | Sales Representative | Mr. | 7/2/1963 | 10/17/1993 | Coventry House Miner Rd. | London | n/a | EC2 7JR |
| King | Robert | Sales Representative | Mr. | 5/29/1960 | 1/2/1994 | Edgeham Hollow Winchester Way | London | n/a | RG1 9SP |
| Callahan | Laura | Inside Sales Coordinator | Ms. | 1/9/1958 | 3/5/1994 | 4726 - 11th Ave. N.E. | Seattle | WA | 98105 |
| Dodsworth | Anne | Sales Representative | Ms. | 1/27/1966 | 11/15/1994 | 7 Houndstooth Rd. | London | n/a | WG2 7LT |

Showing 1-9 of 9 items | Refresh

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User Controls

Let's add a custom page to our *Web Site Factory* application. Open *Code On Time Generator*, click on the project name, and press *Design*. Switch to the *All Pages* tab. On the action bar, press *New | New Page*.



Project Designer

Home

All Controllers All Commands All Fields All Views All Data Fields **All Pages** All User Controls

This is a list of application pages.

Quick Find View: Pages

| Name | Title | Path | Style | Roles |
|----------------------|----------------------------|----------------------------------|---------|-------|
| Home | Start | Home | Home | n/a |
| Customers | 1010 Customers | Customers | Generic | n/a |
| Orders | 1020 Orders | Customers Orders | Generic | n/a |
| CustomerCustomerDemo | 1030 Customer Demo | Customers Customer Demo | Generic | n/a |
| OrderDetails | 1040 Order Details | Customers Order Details | Generic | n/a |
| Employees | 1050 Employees | Employees | Generic | n/a |
| EmployeeTerritories | 1060 Employee Territories | Employees Employee Territories | Generic | n/a |
| Categories | 1070 Categories | Categories | Generic | n/a |
| Products | 1080 Products | Categories Products | Generic | n/a |
| CustomerDemographics | 1090 Customer Demographics | Customer Demographics | Generic | n/a |

« Previous | Page: 1 2 3 4 | Next » Items per page: 10, 25, 50, 100 | Showing 1-10 of 32 items | Refresh

All customized project settings are stored in *.Log.xml files located in the root of your project folder.

The *Name*, *Title*, and *Path* properties will be “Test”. *Description* will be “This is a test page”. *Style* will be “Categories”, and *About This Page* will be “This page will host several user controls.”

| | |
|---|---|
| <p>General</p> <p>Name and index of the page. The address of the generated ASP.NET page is <code>~/Pages/Name.aspx</code> where Name is the specified name.</p> <p>Use <i>External Url</i> to create a menu link to an external web site. No physical application page is generate if <i>External Url</i> is not blank.</p> <p>If <i>External Url</i> is equal to <code>about:blank</code> then a site map node without a Url is created.</p> | <p>Name *</p> <input type="text" value="Test"/> <p>Index</p> <input type="text"/> <p>External Url</p> <input type="text"/> |
| <p>Presentation</p> <p>Page title is displayed in the title of the browser window.</p> <p>Use symbol “ ” in the page path to define a multi-level menu option that selects the page. Make sure that any segment of the path is matched to a path of an existing page that has an index less then the index of this page.</p> <p>If <i>Path</i> is left blank then there will be no menu option to access the page.</p> <p>Page description is displayed as a tool tip of the corresponding menu option.</p> <p>Custom style is one or more CSS classes. Use <i>Wide</i> as custom style to eliminate the side bar on the page.</p> <p>The page will feature <i>About</i> box on the side bar if specified.</p> | <p>Title *</p> <input type="text" value="Test"/> <p>Path</p> <input type="text" value="Test"/> <p>Description</p> <input type="text" value="This is a test page"/> <p>Style *</p> <input type="text" value="Categories"/> <p>Custom Style</p> <input type="text"/> <p>About This Page</p> <input type="text" value="This page will hose several user controls."/> |

This page shows up at the top of the list of pages, because no *Index* was set for the page. Edit the record in-place and change *Index* to “1005”. When saved, the page will move to second place in the list.

| All Controllers All Commands All Fields All Views All Data Fields All Pages All User Controls | | | | | |
|--|-------|----------------------|----------------------------------|------------|----------------------|
| This is a list of application pages. | | | | | |
| Quick Find <input type="text"/> New ▾ | | | | | View: Pages ▾ |
| Name | Index | Title | Path | Style | Roles |
| Home | 1000 | Start | Home | Home | n/a |
| Test | 1005 | Test | Test | Categories | * |
| Customers | 1010 | Customers | Customers | Generic | n/a |
| Orders | 1020 | Orders | Customers Orders | Generic | n/a |
| CustomerCustomerDemo | 1030 | Customer Demo | Customers Customer Demo | Generic | n/a |
| OrderDetails | 1040 | Order Details | Customers Order Details | Generic | n/a |
| Employees | 1050 | Employees | Employees | Generic | n/a |
| EmployeeTerritories | 1060 | Employee Territories | Employees Employee Territories | Generic | n/a |
| Categories | 1070 | Categories | Categories | Generic | n/a |
| Products | 1080 | Products | Categories Products | Generic | n/a |

« Previous | Page: 1 2 3 4 | Next » Items per page: 10, 25, 50, 100 | Showing 1-10 of 33 items | Refresh

Select the *Test* page from the list and switch to the *Containers* tab. Let us add several containers to the page. Containers are placeholders for user controls in your application. Create a new container by pressing *New | New Container*. Give this container a *Width* of “33%”.

Project Designer
exit

Home > Page: Test

Page Containers Data Views Controls

Please fill this form and click OK button to create a new container record. Click Cancel to return to the previous screen.

View: **New Container** ▾

General

A container can host multiple data views and user controls. At least one container must be declared for each page.

Specify container flow rule and optional width.

Optional container width must be expressed as a percent of the total page width or as an exact width in pixels. The examples of width are *40%* and *300px*.

Id
N/A

Flow *
New Row ▾

Width
33%

CSS Class Name

CSS Style Properties

* - indicates a required field

Create another container, with *Flow* of “New Column”, with *Width* of “200px”.

General

A container can host multiple data views and user controls. At least one container must be declared for each page.

Specify container flow rule and optional width.

Optional container width must be expressed as a percent of the total page width or as an exact width in pixels. The examples of width are *40%* and *300px*.

Id
N/A

Flow *
New Column ▾

Width
200px

The next container will have *Flow* of “New Column” and an empty *Width*. This way, the container will take up any space not used by the other two containers.

| | |
|--|--|
| General A container can host multiple data views and user controls. At least one container must be declared for each page. Specify container flow rule and optional width. Optional container width must be expressed as a percent of the total page width or as an exact width in pixels. The examples of width are <i>40%</i> and <i>300px</i> . | Id N/A Flow * New Column Width <input type="text"/> |
|--|--|

The last container, with *Flow* of “New Row”, will create another row below the previous containers.

| | |
|--|---|
| General A container can host multiple data views and user controls. At least one container must be declared for each page. Specify container flow rule and optional width. Optional container width must be expressed as a percent of the total page width or as an exact width in pixels. The examples of width are <i>40%</i> and <i>300px</i> . | Id N/A Flow * New Row Width <input type="text"/> |
|--|---|

Now, switch to the *Controls* tab. Controls bind user controls to specific containers. On the action bar, press *New / New Control*. We will also need to make some new user controls, so press the *New User Control* icon next to the *User Control* field. This will have *Name* of “TopLeft”, and *Generate* of “First Time Only”. Press *Ok* to insert the new user control into the field.

| | |
|--|--|
| General Name and code generation conditions of the user control. | Name * TopLeft Prefix * uc Generate * First Time Only |
|--|--|

For the control, specify *Container* as “c100”, and save.

| | |
|---|---|
| General Page, container, and id of the control. | Id N/A Container * c100 User Control * TopLeft |
|---|---|

Now create a new control. Press the *New User Control* icon next to the *User Control* field again. Give this new user control the *Name* of “TopCenter”, and press *Ok* to insert into the field.

The screenshot shows a dialog box titled "New User Control" with a close button (X) in the top right corner. Below the title bar, there is a message: "Please fill this form and click OK button to create a new user control. Click Cancel to return to the previous screen." The dialog is divided into two main sections. The left section is titled "General" and contains the text "Name and code generation conditions of the user control." The right section contains three fields: "Name *" with the value "TopCenter", "Prefix *" with the value "uc", and "Generate *" with a dropdown menu set to "First Time Only". At the bottom left, there is a note: "* - indicates a required field". At the bottom right, there are two buttons: "OK" and "Cancel".

Specify *Container* as “c101” and save.

The screenshot shows the "Controls" tab in the application. At the top, there are tabs for "Page", "Containers", "Data Views", and "Controls". Below the tabs, there is a message: "Please fill this form and click OK button to create a new control. Click Cancel to return to the previous screen." The "View:" dropdown is set to "New Control". The "General" section contains the text "Page, container, and id of the control." The "Id" field is set to "N/A". The "Container *" field is set to "c101" with a selection icon. The "User Control *" field is set to "TopCenter" with a selection icon.

Create a new control, and press the *New User Control* icon. This user control will have the *Name* of “TopRight”. Press *Ok* to insert.

The screenshot shows a dialog box titled "New User Control" with a close button (X) in the top right corner. Below the title bar, there is a message: "Please fill this form and click OK button to create a new user control. Click Cancel to return to the previous screen." The dialog is divided into two main sections. The left section is titled "General" and contains the text "Name and code generation conditions of the user control." The right section contains three fields: "Name *" with the value "TopRight", "Prefix *" with the value "uc", and "Generate *" with a dropdown menu set to "First Time Only". At the bottom left, there is a note: "* - indicates a required field". At the bottom right, there are two buttons: "OK" and "Cancel".

The control will have *Container* of “c102” .

The screenshot shows the "Controls" tab in the application. At the top, there are tabs for "Page", "Containers", "Data Views", and "Controls". Below the tabs, there is a message: "Please fill this form and click OK button to create a new control. Click Cancel to return to the previous screen." The "View:" dropdown is set to "New Control". The "General" section contains the text "Page, container, and id of the control." The "Id" field is set to "N/A". The "Container *" field is set to "c102" with a selection icon. The "User Control *" field is set to "TopRight" with a selection icon.

Create one last control, and press the *New User Control* icon again. This *User Control* will have the name of “CustomerList”. Press *Ok* to insert.

New User Control

Please fill this form and click OK button to create a new user control. Click Cancel to return to the previous screen.

General
Name and code generation conditions of the user control.

Name *
CustomerList

Prefix *
uc

Generate *
First Time Only

* - indicates a required field

OK Cancel

For the control, specify *Container* of “c103”, and save.

General
Page, container, and id of the control.

Id
N/A

Container *
c103

User Control *
CustomerList

Exit the *Designer*, and regenerate the application. When generation finishes, a web page will open with the modified application. Navigate to the *Test* page. You will see a logo in the top left, corresponding to the *Categories* style that was selected for the page. The *About* box contains text that was specified during the creation of the page. In the center of the page, you can see two rows of containers, with the respective user controls in each container.

History | Permalink Welcome admin, Today is Thursday, January 06, 2011 | My Account | Logout | Help

MyCompany

Home Test Customers Employees Categories Customer Demographics Region Reports Membership Site Actions

Home > Test

Test

uc:TopLeft uc:TopCenter uc:TopRight

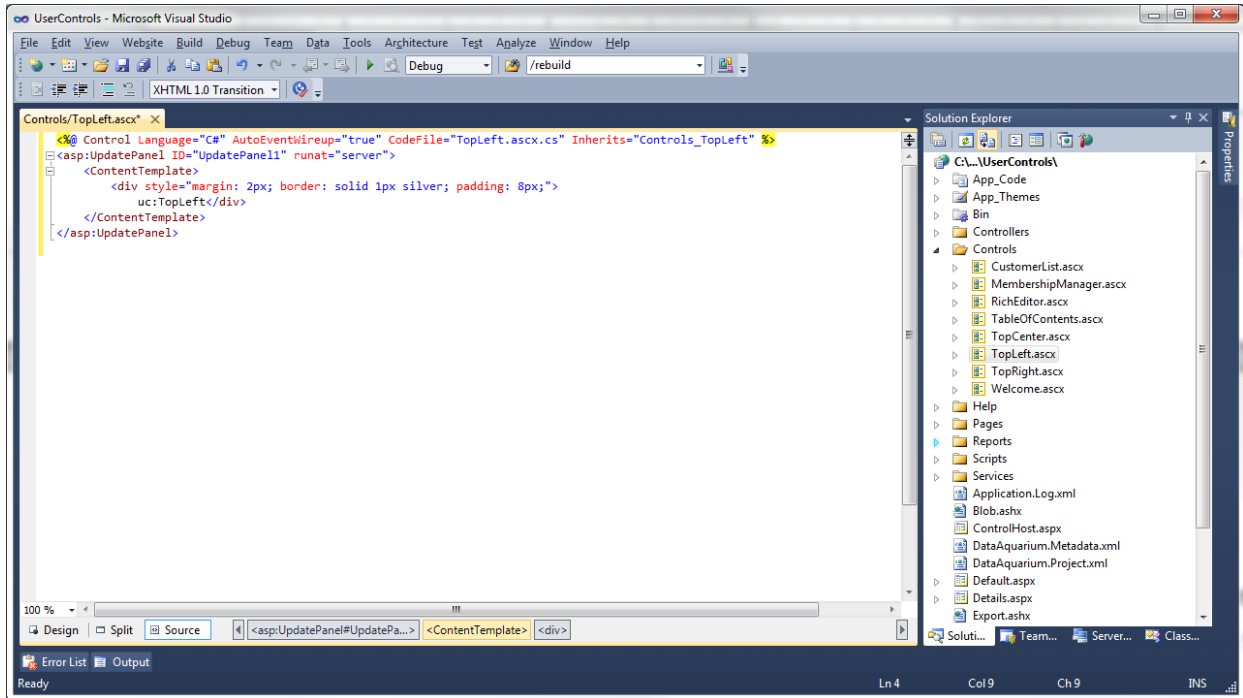
uc:CustomerList

About
This page will have several user controls.

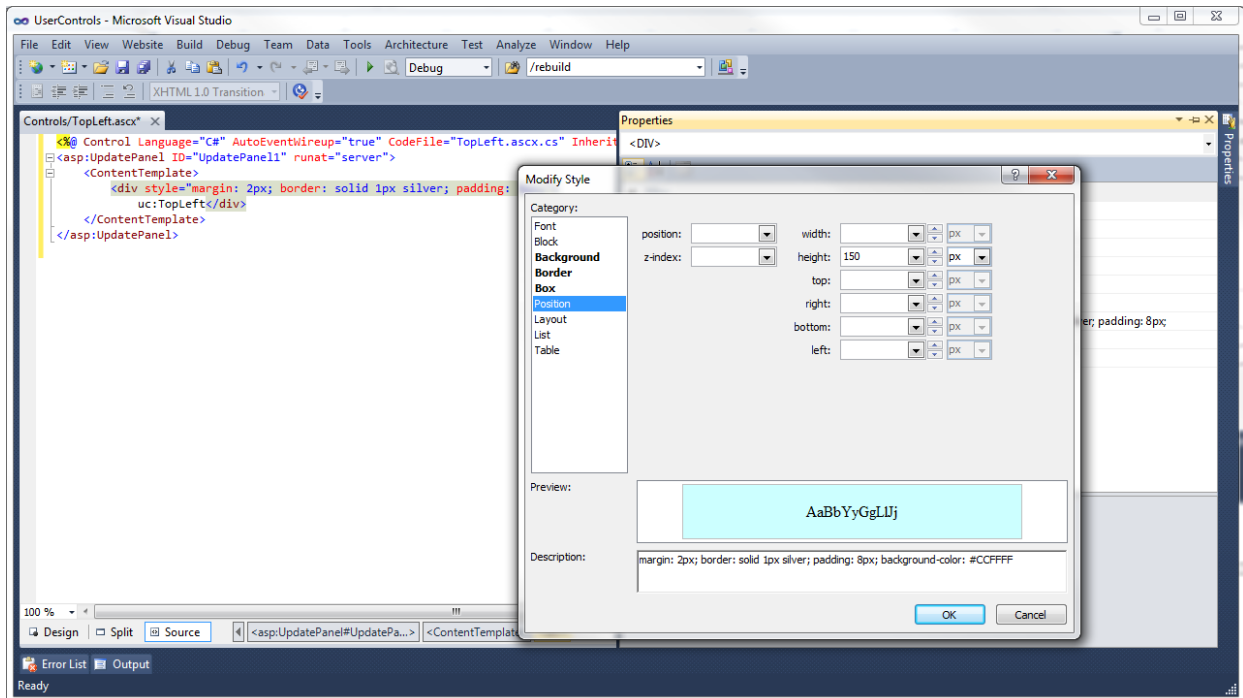
See Also

- Home
- Customers
- Employees
- Categories
- Customer Demographics
- Region
- Reports

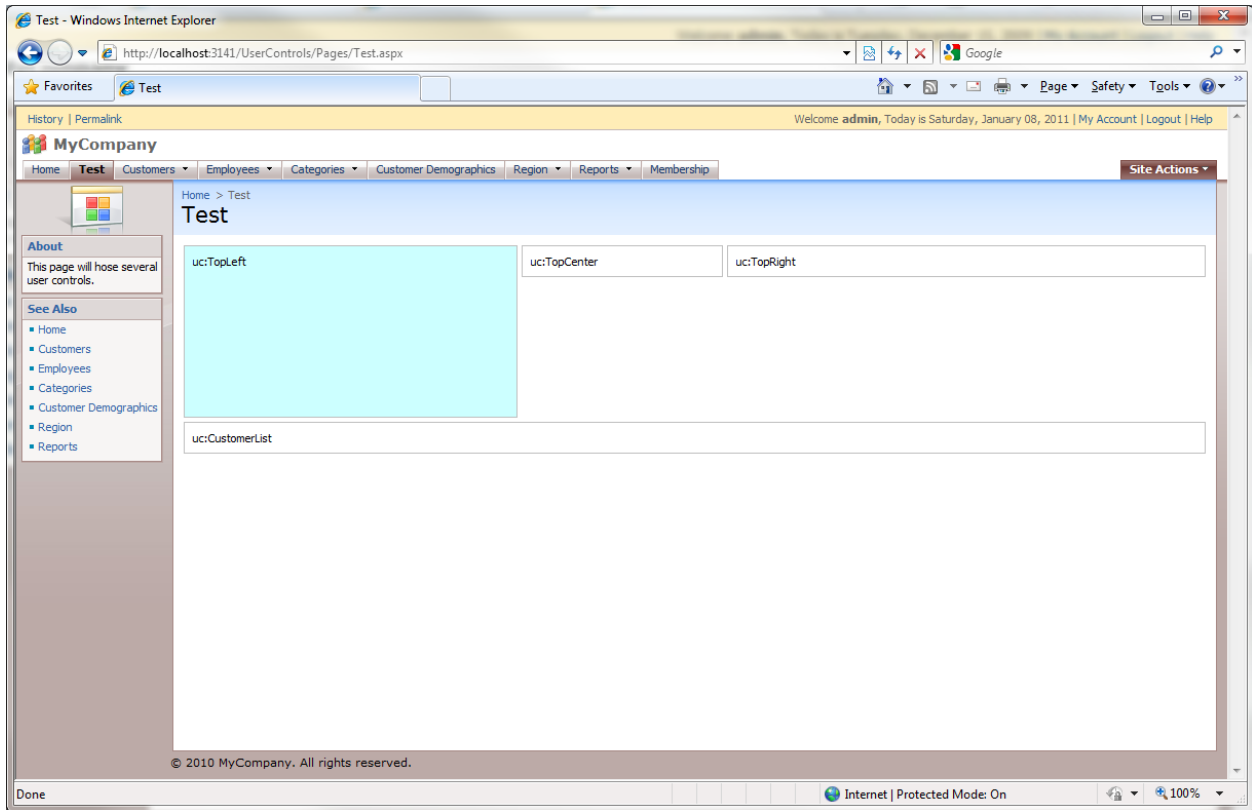
Let's make some changes to these user controls. Open the project in *Visual Studio* and navigate to *Controls/TopLeft.ascx*. If you format the document, you can see that there is a *div* with some styling.



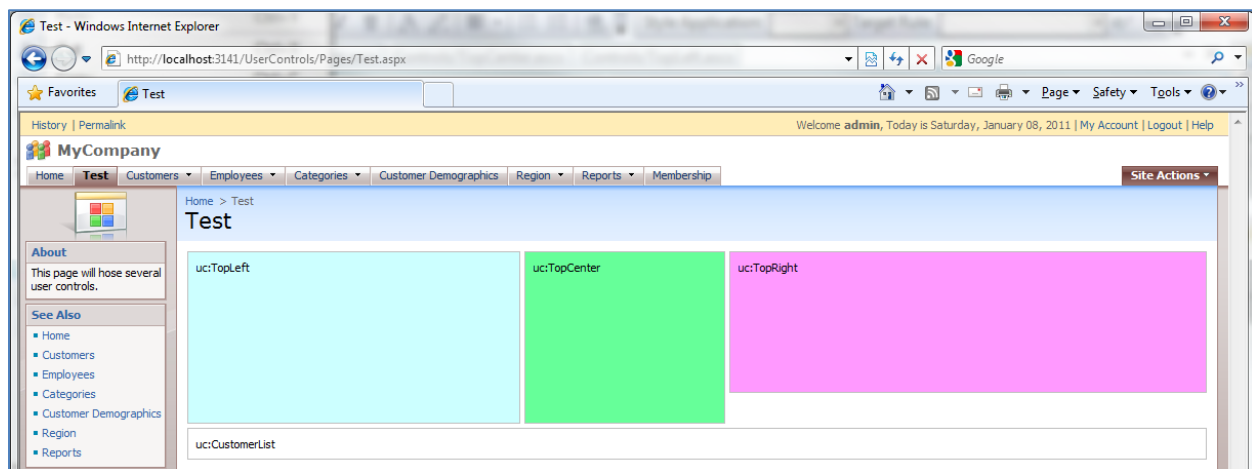
View the *Properties*, and edit the style. Change background color to light blue. Under *Position*, specify a height of "150px".



Save the file, and refresh the web page. You can see the background color is now different, and the height is now the specified 150px.



Now, change the background colors for *TopCenter.ascx* and *TopRight.ascx*. This can be anything you like. Specify *Height* as "150px" for *TopCenter.ascx* and "120px" for *TopRight.ascx*. Save the files, and refresh the application. The result is displayed below.

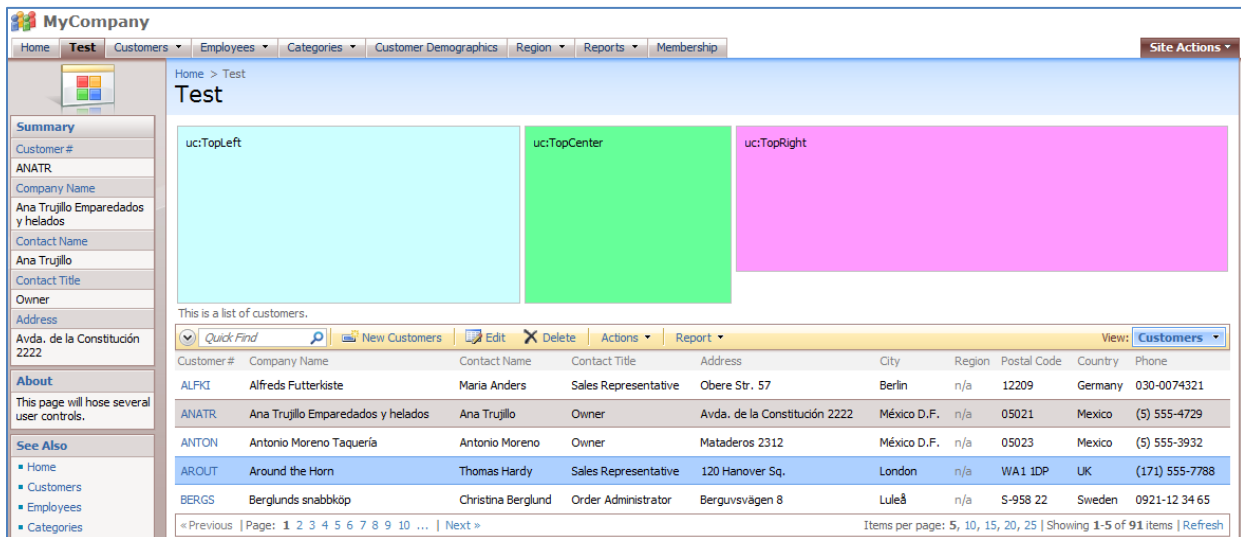


You can populate these controls with any content that you want, from text, to standard or commercial ASP.NET controls. The last control, *CustomerList.ascx*, will host a list of customers. Open the control in

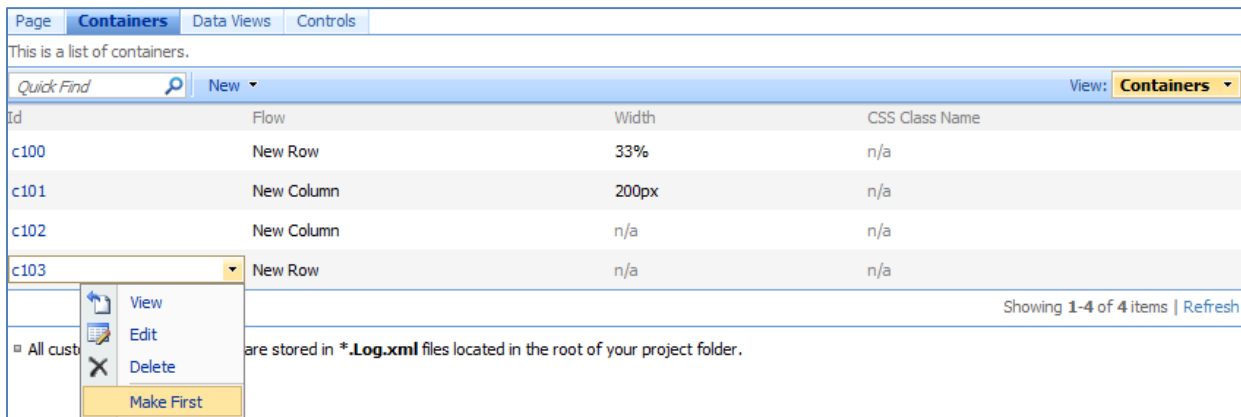
Visual Studio, format, and delete the *div* that is present. Type in the code presented below, which will describe *div* with *id* of "Customers", and a *DataViewExtender* that displays *Customers* grid.

```
<asp:UpdatePanel ID="UpdatePanel1" runat="server">
  <ContentTemplate>
    <div id="Customers" runat="server">
    </div>
    <aquarium:DataViewExtender ID="dve1" runat="server" Controller="Customers"
      TargetControlID="Customers" PageSize="5" ShowInSummary="true" />
  </ContentTemplate>
</asp:UpdatePanel>
```

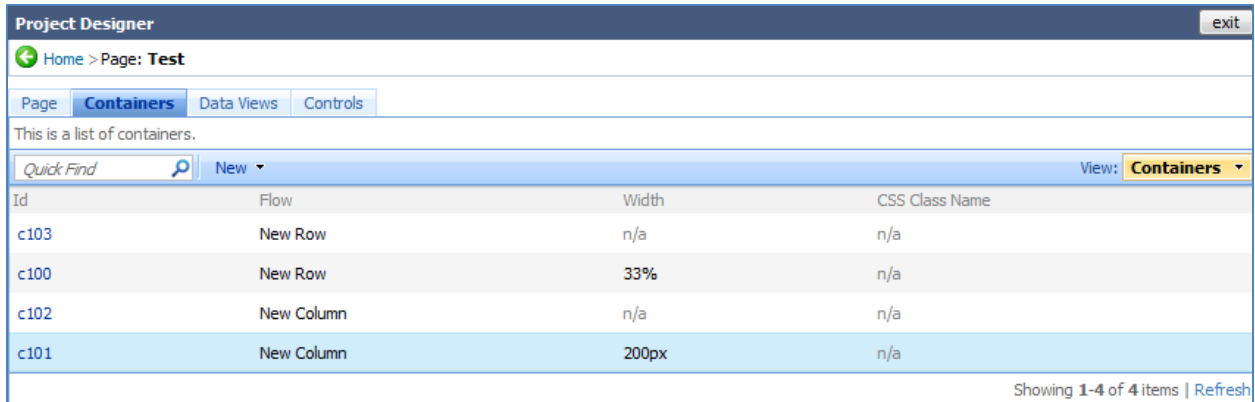
Save the file, and refresh the web page. You can see that now we have a list of customers at the bottom of the page. If you click on a record, the summary will display the selected record. When you click on the record, the details of the record will be displayed. If you scroll down the page, the summary will stay fixed in the top left corner.



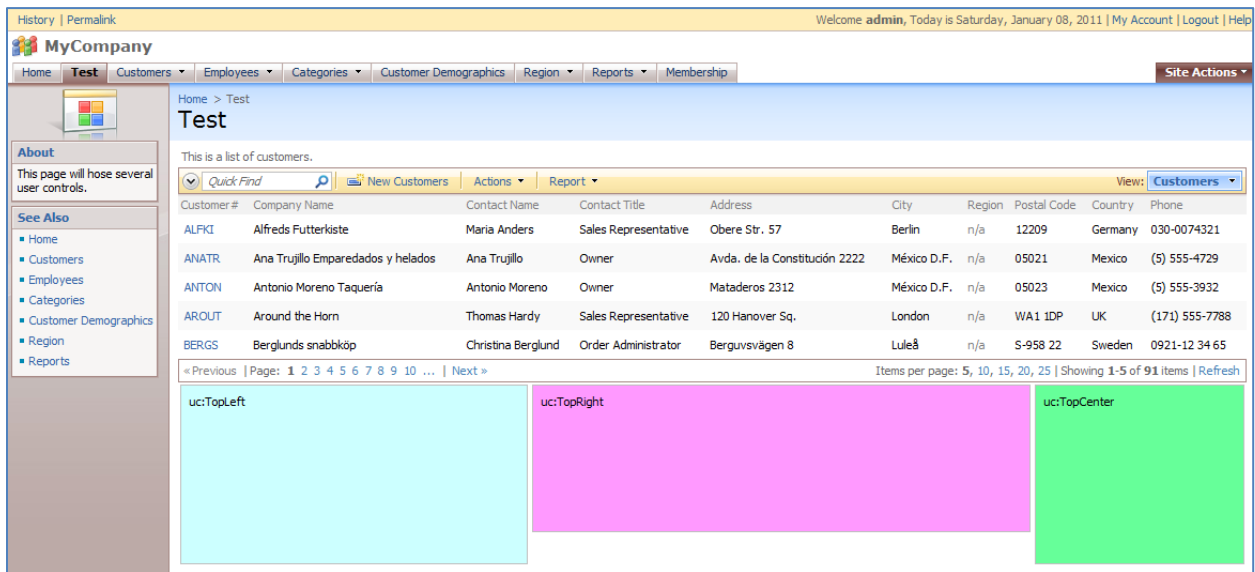
Now, let's customize the page layout. We will move the customer list to the top, and switch the green and pink containers. Go back to the designer, switch to *All Pages*, select the *Test* page, and switch to the *Containers* tab. Using the dropdown menu next to *c103*, select *Make First*.



Now, use the dropdown list next to *c101* and press *Make Last*. This will properly rearrange the items on the page.



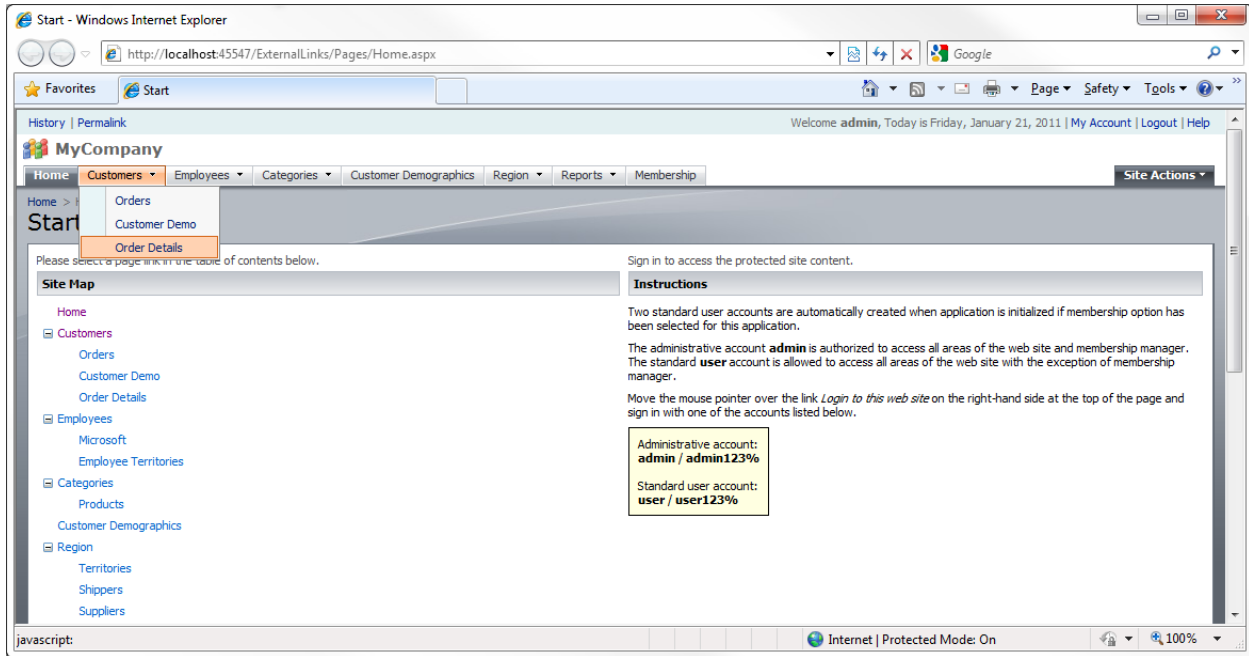
Close the *Designer* and regenerate the application. When the page opens, navigate to *Test* page, and you will see the proper results.



If you resize the page, the containers will continue to take up the available space, per the settings specified earlier.

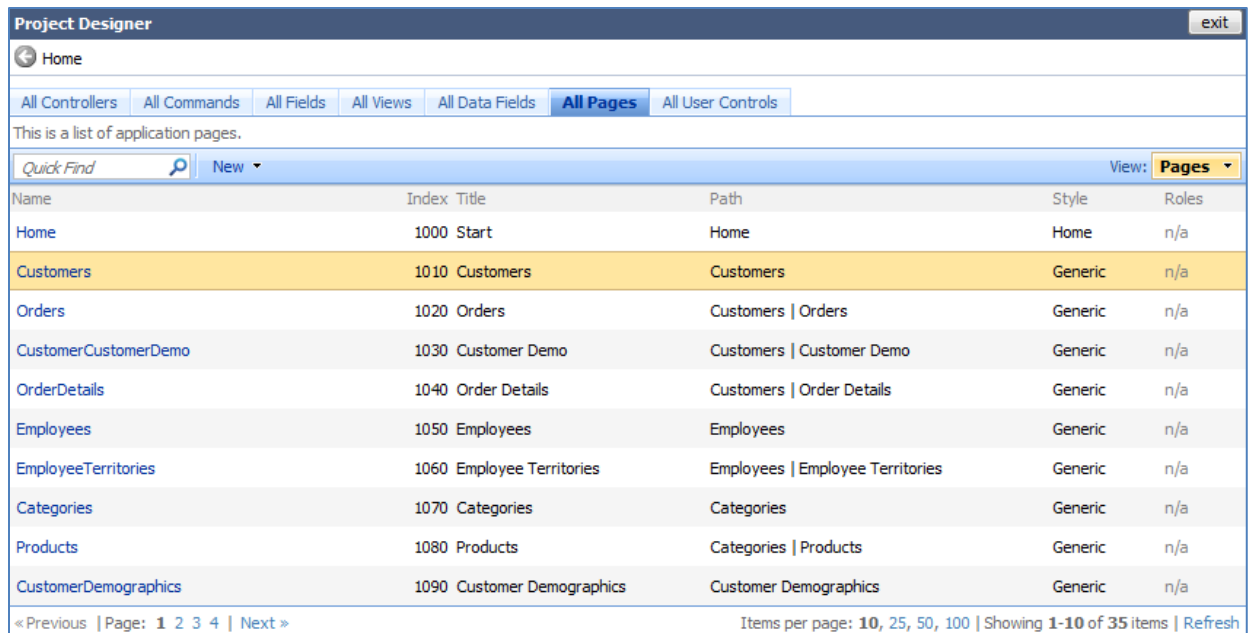
Adding External Links

Let's add a few links to our *Web Site Factory* application. The menu *Customers* displays three options: *Orders*, *Customer Demo*, and *Order Details*.



In order to modify the menu system, we will need to use *Code On Time Designer*. Open *Code On Time Generator*, select the project name, and press *Design*. Switch to the *All Pages* tab.

You can see that there are four options that contain the path "Customers".



The path specifies the location of the menu option. The *Index* field specifies the order of the menu options. For example, let's add a link to <http://www.microsoft.com> underneath the *Order Details* option. On the action bar, press *New | New Page*. Give it *Name* of "microsoft_com", with *Index* "1043", and *External Url* of "http://microsoft.com". *Title* will be "Microsoft", *Path* will be "Customers | Microsoft", with *Description* of "Visit microsoft.com".

Project Designer exit

Home

All Controllers All Commands All Fields All Views All Data Fields **All Pages** All User Controls

Please fill this form and click OK button to create a new page record. Click Cancel to return to the previous screen.

View: **New Controller** ▾

* - indicates a required field OK Cancel

General

Name and index of the page. The address of the generated ASP.NET page is `~/Pages/Name.aspx` where **Name** is the specified name.

Use *External Url* to create a menu link to an external web site. No physical application page is generate if *External Url* is not blank.

If *External Url* is equal to `about:blank` then a site map node without a Url is created.

Name *

Index

External Url

Presentation

Page title is displayed in the title of the browser window.

Use symbol "|" in the page path to define a multi-level menu option that selects the page. Make sure that any segment of the path is matched to a path of an existing page that has an index less then the index of this page.

If *Path* is left blank then there will be no menu option to access the page.

Page description is displayed as a tool tip of the corresponding menu option.

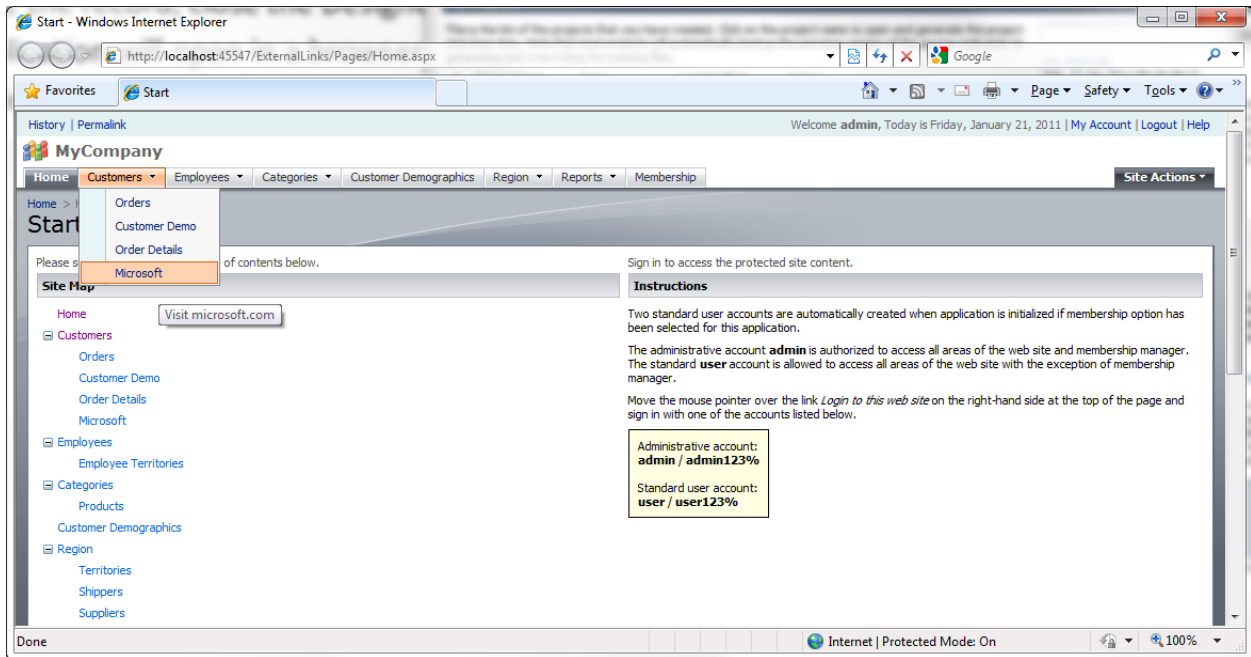
Custom style is one or more CSS classes. Use *Wide* as custom style to eliminate the side bar on the page.

Title *

Path

Description

Save the record, close the *Designer*, and generate the application. When the generation is complete, the application will open in a browser window. Under the *Customers* menu option, you can see our new option. By clicking on it, you will navigate to the *Microsoft* website.



Next, we will add another option under *Customers* menu, with the name *External Links*. *Microsoft* option will be moved under *External Links*, making a three level menu. Finally, we will add an *Oracle* menu option that will link to the *Oracle* website.

Go back to the *Designer*, and create a new page. Give this page the *Name* of “ExternalLinks” with *Index* “1041”. *External Url* will be “about:blank”, so that the code generator does not attempt to create a physical ASP.NET page. *Title* will be “External Links”, *Path* will be “Customers | External Links”, and save.

The screenshot shows the 'Project Designer' interface with the 'New Controller' dialog box open. The dialog has tabs for 'All Controllers', 'All Commands', 'All Fields', 'All Views', 'All Data Fields', 'All Pages', and 'All User Controls'. The 'All Pages' tab is selected. The dialog contains the following fields and values:

- Name ***: ExternalLinks
- Index**: 1041
- External Url**: about:blank
- Title ***: External Links
- Path**: Customers | External Links

There are 'OK' and 'Cancel' buttons at the bottom right of the dialog. A note at the top says: 'Please fill this form and click OK button to create a new page record. Click Cancel to return to the previous screen.'

Now edit the *microsoft_com* option, and change *Path* to “Customers | External Links | Microsoft”.

Project Designer exit

Home

All Controllers | All Commands | All Fields | All Views | All Data Fields | **All Pages** | All User Controls

This is a list of application pages.

Quick Find Record View: **Pages**

| Name | Index | Title | Path | Style | Roles |
|----------------------|-------|----------------------|--|---------|-------|
| Home | 1000 | Start | Home | Home | n/a |
| Customers | 1010 | Customers | Customers | Generic | n/a |
| Orders | 1020 | Orders | Customers Orders | Generic | n/a |
| CustomerCustomerDemo | 1030 | Customer Demo | Customers Customer Demo | Generic | n/a |
| OrderDetails | 1040 | Order Details | Customers Order Details | Generic | n/a |
| ExternalLinks | 1041 | External Links | Customers External Links | Generic | * |
| microsoft_com | 1043 | Microsoft | Customers External Links Microsoft | Generic | * |
| Employees | 1050 | Employees | Employees | Generic | n/a |
| EmployeeTerritories | 1060 | Employee Territories | Employees Employee Territories | Generic | n/a |
| Categories | 1070 | Categories | Categories | Generic | n/a |

Save Cancel

« Previous | Page: 1 2 3 4 | Next » Items per page: 10, 25, 50, 100 | Showing 1-10 of 37 items | Refresh

Let's create one more page. Give it the *Name* of "oracle_com", with *Index* "1045", and *External Url* of "http://oracle.com". *Title* will be "Oracle", *Path* will be "Customers | External Links | Oracle", and *Description* will be "Visit oracle.com". We also want this link to open in a new window, so include a target for the link in *External Url*, so that it reads "_blank:http://oracle.com".

Project Designer exit

Home

All Controllers | All Commands | All Fields | All Views | All Data Fields | **All Pages** | All User Controls

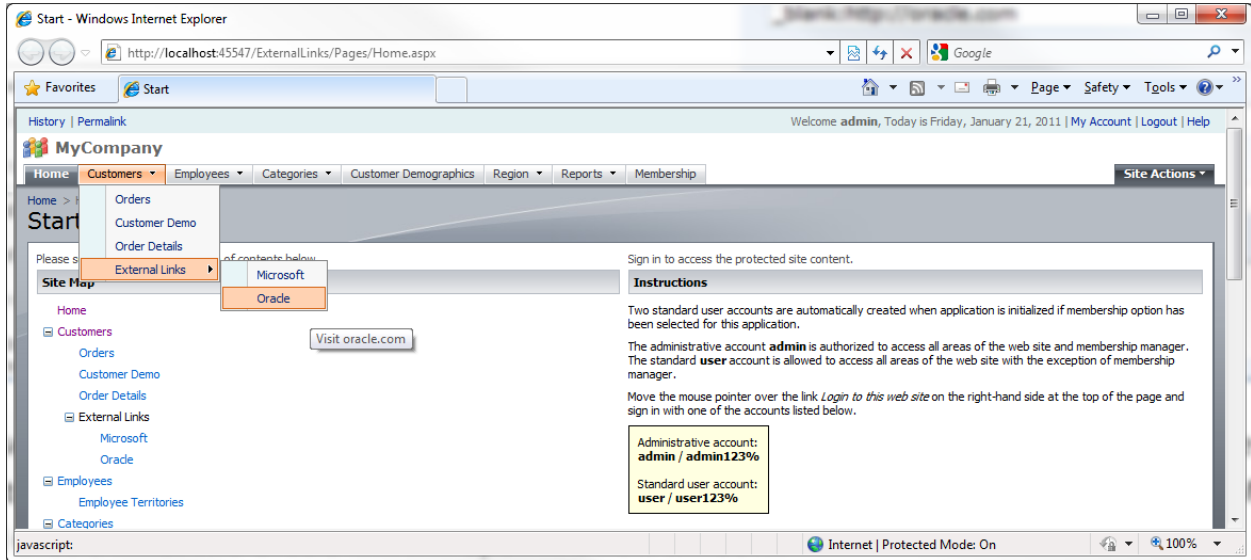
Please fill this form and click OK button to create a new page record. Click Cancel to return to the previous screen.

View: **New Controller**

* - indicates a required field OK Cancel

| | |
|---|--|
| <p>General</p> <p>Name and index of the page. The address of the generated ASP.NET page is ~/Pages/Name.aspx where Name is the specified name.</p> <p>Use <i>External Url</i> to create a menu link to an external web site. No physical application page is generate if <i>External Url</i> is not blank.</p> <p>If <i>External Url</i> is equal to <i>about:blank</i> then a site map node without a Url is created.</p> | <p>Name *</p> <input type="text" value="oracle_com"/> <p>Index</p> <input type="text" value="1045"/> <p>External Url</p> <input type="text" value="_blank:http://oracle.com"/> |
| <p>Presentation</p> <p>Page title is displayed in the title of the browser window.</p> <p>Use symbol "]" in the page path to define a multi-level menu option that selects the page. Make sure that any segment of the path is matched to a path of an existing page that has an index less then the index of this page.</p> <p>If <i>Path</i> is left blank then there will be no menu option to access the page.</p> <p>Page description is displayed as a tool tip of the corresponding menu option.</p> <p>Custom style is one or more CSS classes. Use <i>Wide</i> as custom style to eliminate the side bar on the page.</p> | <p>Title *</p> <input type="text" value="Oracle"/> <p>Path</p> <input type="text" value="Customers External Links Oracle"/> <p>Description</p> <input type="text" value="Visit oracle.com"/> |

Close the *Designer*, and generate the application. When the web page opens, mouse over the *Customers* menu option and you will see the *External Links* option. In *External Links* will be *Microsoft* and *Oracle* links. The *Oracle* link will open in a new window. You can also see the new menu options under the site map.



Making Database Views Updatable

Database views in *Code On Time* web applications are, by default, not editable. You can see the *Northwind* view *Alphabetical list of products* below. The records will highlight when you mouse over them, but nothing happens when you click on them. With the right modifications in *Code On Time Designer*, this view can be made updatable.

History | Permalink Welcome admin, Today is Thursday, February 03, 2011 | My Account | Logout | Help

MyCompany

Home Customers Employees Categories Customer Demographics Region Reports Membership Site Actions

Home > Reports > Alphabetical list of products

Alphabetical list of products

This is a list of alphabetical list of products.

Quick Find Actions Report View: **Alphabetical list of products**

| Product# | Product Name | Supplier# | Category# | Quantity Per Unit | Unit Price | Units In Stock | Units On Order | Reorder Level | Discontinued |
|----------|---------------------------------|-----------|-----------|---------------------|------------|----------------|----------------|---------------|--------------|
| 1 | Chai | 1 | 1 | 10 boxes x 20 bags | \$18.00 | 39 | 0 | 10 | No |
| 2 | Chang | 1 | 1 | 24 - 12 oz bottles | \$19.00 | 17 | 40 | 25 | No |
| 3 | Aniseed Syrup | 1 | 2 | 12 - 550 ml bottles | \$10.00 | 13 | 70 | 25 | No |
| 4 | Chef Anton's Cajun Seasoning | 2 | 2 | 48 - 6 oz jars | \$22.00 | 53 | 0 | 0 | No |
| 6 | Grandma's Boysenberry Spread | 3 | 2 | 12 - 8 oz jars | \$25.00 | 120 | 0 | 25 | No |
| 7 | Uncle Bob's Organic Dried Pears | 3 | 7 | 12 - 1 lb pkgs. | \$30.00 | 15 | 0 | 10 | No |
| 8 | Northwoods Cranberry Sauce | 3 | 2 | 12 - 12 oz jars | \$40.00 | 6 | 0 | 0 | No |
| 10 | Ikura | 4 | 8 | 12 - 200 ml jars | \$31.00 | 31 | 0 | 0 | No |
| 11 | Queso Cabrales | 5 | 4 | 1 kg pkg. | \$21.00 | 22 | 30 | 30 | No |
| 12 | Queso Manchego La Pastora | 5 | 4 | 10 - 500 g pkgs. | \$38.00 | 86 | 0 | 0 | No |

« Previous | Page: 1 2 3 4 5 6 7 | Next » Items per page: 10, 15, 20, 25 | Showing 1-10 of 69 items | Refresh

Open *Code On Time Generator*, select the project name that you would like to modify, and press *Design*. In the list of *All Controllers*, select the *Alphabetical list of products* controller. Switch to the *Fields* tab, and click on the *ProductID* field. Enable the checkbox next to "Is Primary Key".

Project Designer exit

Home > Controller: **Alphabetical list of products**

Controller Commands **Fields** Views Categories Data Fields Action Groups Actions

This is a list of fields.

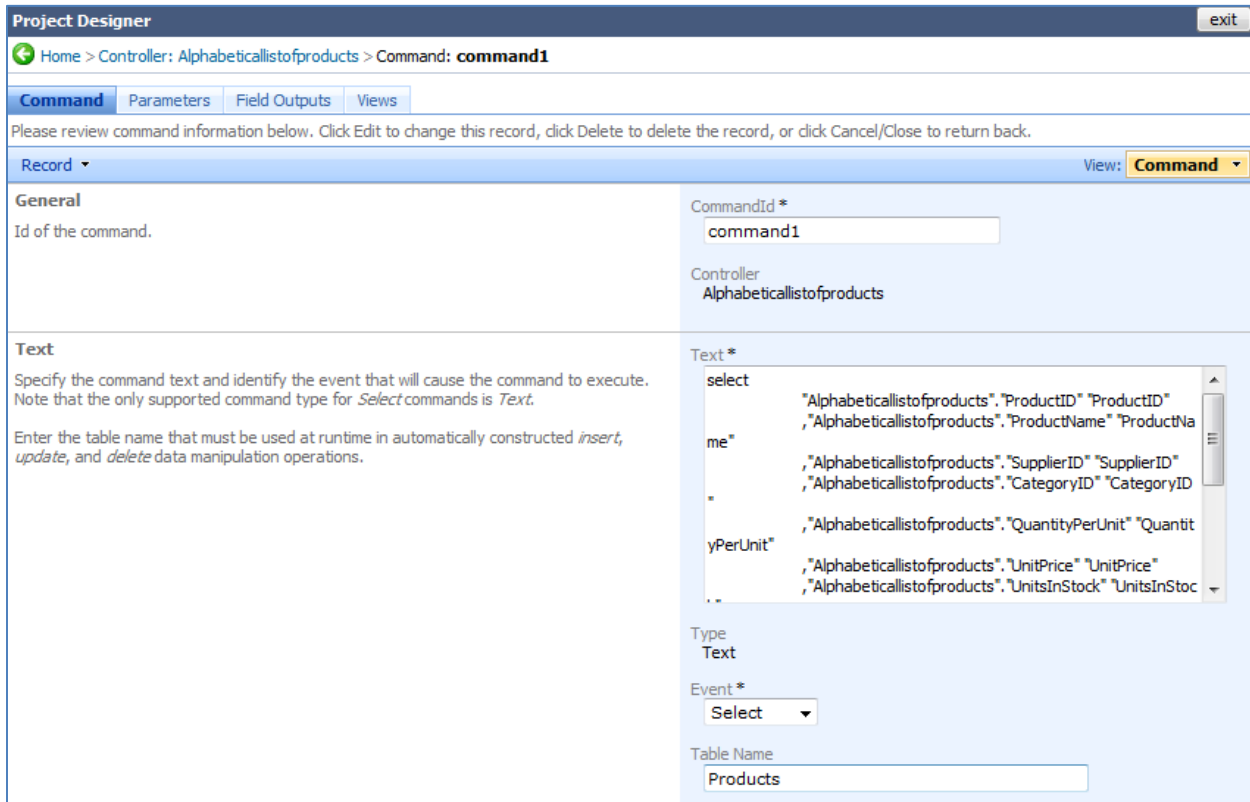
Quick Find Record View: **Fields**

| Name | Index | Type | Allow Nulls | Is Primary Key | Read Only | QBE | Sort | LEV | Label |
|------------------|-------|---------|--------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------|
| ProductID | 1 | Int32 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Product# |
| ProductName | 2 | String | No | No | No | Yes | Yes | No | Product Name |
| SupplierID | 3 | Int32 | Yes | No | No | Yes | Yes | No | Supplier # |
| CategoryID | 4 | Int32 | Yes | No | Yes | Yes | Yes | No | Category # |
| QuantityPerUnit | 5 | String | Yes | No | No | Yes | Yes | No | Quantity Per Unit |
| UnitPrice | 6 | Decimal | Yes | No | No | Yes | Yes | No | Unit Price |
| UnitsInStock | 7 | Int16 | Yes | No | No | Yes | Yes | No | Units In Stock |
| UnitsOnOrder | 8 | Int16 | Yes | No | No | Yes | Yes | No | Units On Order |
| ReorderLevel | 9 | Int16 | Yes | No | No | Yes | Yes | No | Reorder Level |
| Discontinued | 10 | Boolean | No | No | No | Yes | Yes | No | Discontinued |

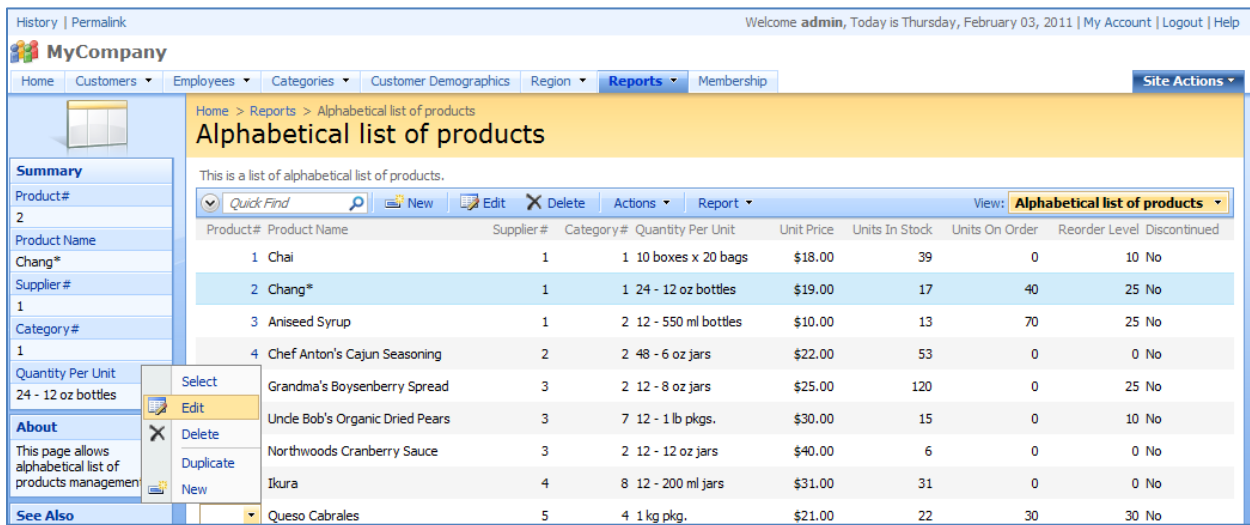
Save Cancel

« Previous | Page: 1 2 | Next » Items per page: 10, 25, 50, 100 | Showing 1-10 of 11 items | Refresh

Switch to the *Commands* tab and edit *command1*. In *Table Name*, enter “Products”.

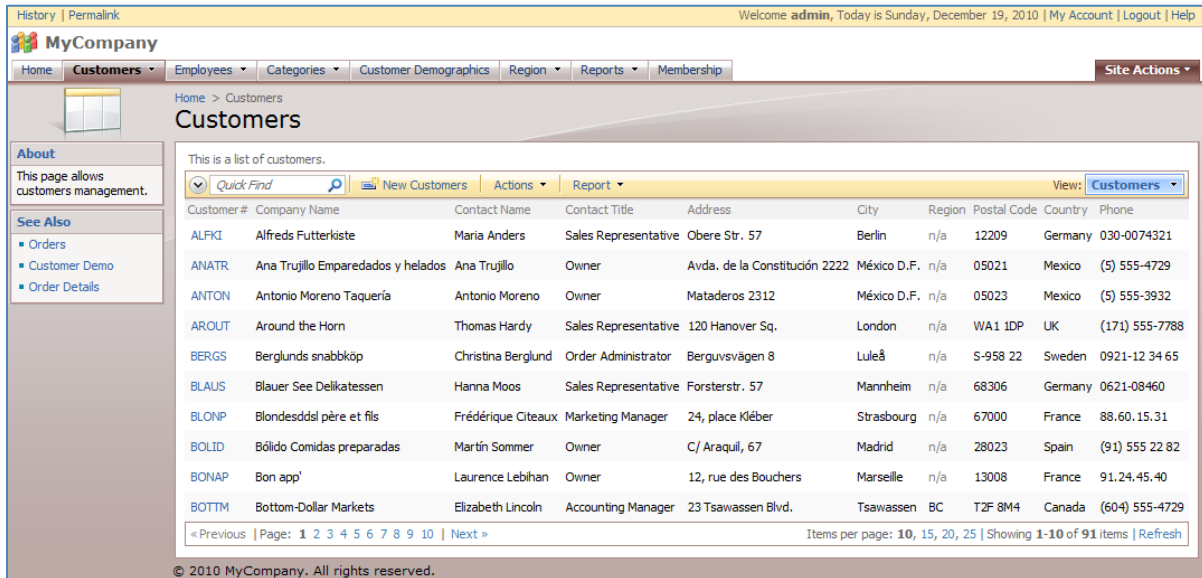


Save the command, exit the *Designer*, and generate the project. When the application loads, navigate to the *Alphabetical list of fields* page. You can see that the first column now contains links, which navigate to detail view for the record. Using the dropdown menu next to the links, you can edit the record, and it will be saved upon pressing *Ok*. Clicking on the row of a record will activate the summary on the side of the page.



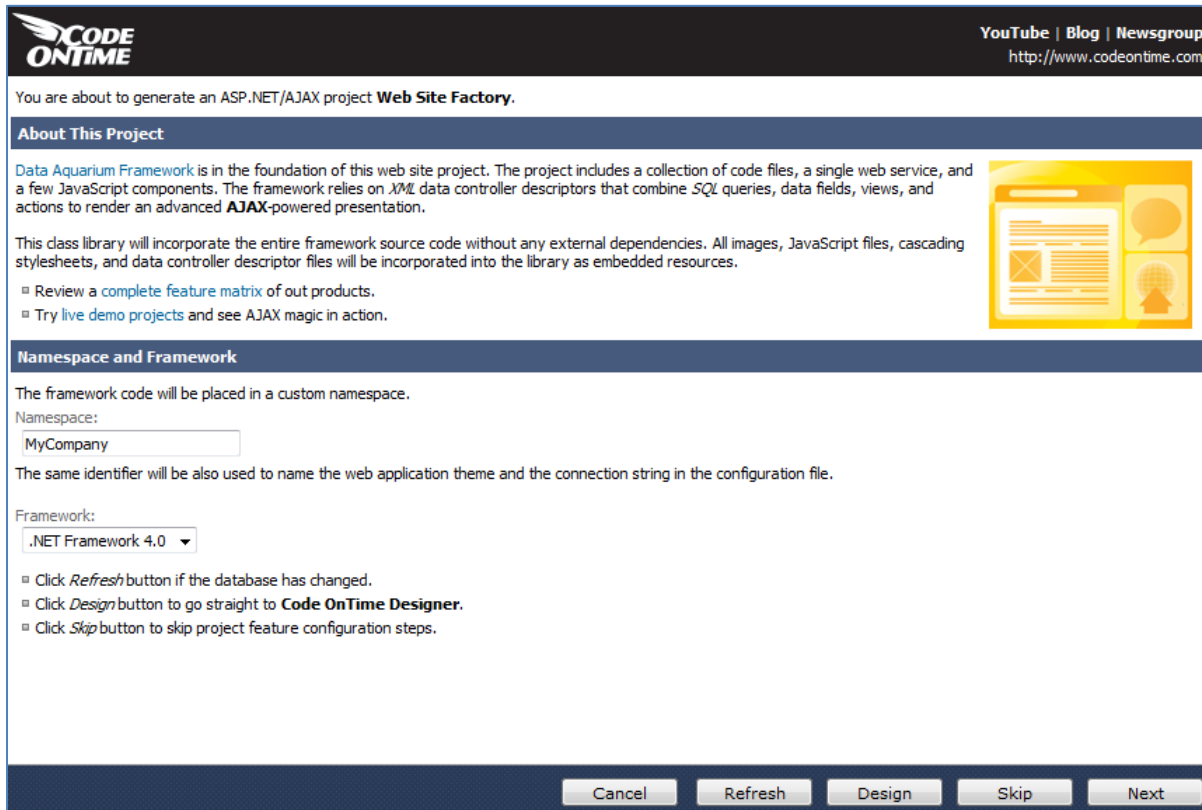
Custom Logo and Footer

Here is the standard *Web Site Factory* application. At the top of the page, there is *MyCompany* text with a logo. At the bottom, there is the copyright.



The screenshot shows a web application interface for "MyCompany". At the top, there is a navigation bar with "Home", "Customers", "Employees", "Categories", "Customer Demographics", "Region", "Reports", and "Membership". Below this is a breadcrumb trail "Home > Customers" and a main heading "Customers". The main content area displays a table of customer information. The table has columns for Customer #, Company Name, Contact Name, Contact Title, Address, City, Region, Postal Code, Country, and Phone. The table lists 10 customers, including ALFKI, ANATR, ANTON, AROUT, BERGS, BLAUS, BLONP, BOLID, BONAP, and BOTTM. At the bottom of the table, there is a pagination control showing "Page: 1 2 3 4 5 6 7 8 9 10" and "Items per page: 10, 15, 20, 25 | Showing 1-10 of 91 items | Refresh". The footer of the page contains the copyright notice "© 2010 MyCompany. All rights reserved."

The header and footer text is derived from the namespace. Default namespace is "MyCompany", but can be anything. It can be changed from within the project wizard, on the *Namespace* page.



The screenshot shows the "Code OnTime" project wizard. The top navigation bar includes "YouTube | Blog | Newsgroup" and the URL "http://www.codeontime.com". The main heading is "You are about to generate an ASP.NET/AJAX project **Web Site Factory**." Below this is a section titled "About This Project" which describes the Data Aquarium Framework and provides links to a "complete feature matrix" and "live demo projects". To the right of this text is a graphic showing a web page layout. The next section is "Namespace and Framework". It asks for the "Namespace:" and shows "MyCompany" entered in a text box. It also asks for the "Framework:" and shows ".NET Framework 4.0" selected in a dropdown menu. Below these fields are three instructions: "Click *Refresh* button if the database has changed.", "Click *Design* button to go straight to **Code OnTime Designer**.", and "Click *Skip* button to skip project feature configuration steps." At the bottom of the wizard are five buttons: "Cancel", "Refresh", "Design", "Skip", and "Next".

However, we can also directly specify the header and footer text on the *Features* page. Enter your own custom header and footer in the respective fields. You can use HTML tags to modify the header or footer.

Please specify global features of the generated application. You can override the global features in **Code OnTime Designer**.

Features

Specify the text displayed at the top of all pages in the page header. Project namespace is displayed if left blank.

Page Header:

Specify the text displayed at the bottom of all pages in the page footer. A standard copyright message is displayed if left blank.

Copyright:

Annotations

A standard annotations plug-in allows to enhance all data controllers of a generated application with unlimited number of free-form notes and file attachments that can be associated with any records by end-users at run-time. Requires support for ASP.NET Membership option to be enabled.

Enable global record annotations and store attachment and note files in folder.

Form Layout

Standard form layout displays category information on the left side of the screen. The data fields are listed on the right side of the screen.

Start each data field category in the new column with category information displayed on top.

Float data fields in view categories from left to right to fill the entire space available.

Show modal forms in master data views without children and in child data views.

Grid Layout

All grid views will present up to data fields. Use *Designer* to modify, add, and remove the data fields of individual views.

Activate search mode in master grid views by default.

Data lookup windows must always open in search mode.

Enable multi-selection in all grid views. Only *Delete* action is automatically supported on multiple rows.

Enable batch editing in all data controllers. Requires multi-selection mode.

Miscellaneous

Enable relationship explorer hyperlinks in lookup fields of all data controllers.

Enable permalinks to allow bookmarking of master records selected by end users.

Enable interactive history of most-recent-used data objects.

Generate the application, and you will see that the custom header and footer will have been applied, and the HTML tags work as expected.

History | Permalink Welcome admin, Today is Sunday, December 19, 2010 | My Account | Logout | Help

Code On Time LLC

Home Customers Employees Categories Customer Demographics Region Reports Membership Site Actions

Home > Customers

Customers

This is a list of customers.

Quick Find Actions Report View: Customers

| Customer # | Company Name | Contact Name | Contact Title | Address | City | Region | Postal Code | Country | Phone |
|------------|------------------------------------|--------------------|----------------------|-------------------------------|-------------|--------|-------------|---------|----------------|
| ALFKI | Alfreds Futterkiste | Maria Anders | Sales Representative | Obere Str. 57 | Berlin | n/a | 12209 | Germany | 030-0074321 |
| ANATR | Ana Trujillo Emparedados y helados | Ana Trujillo | Owner | Avda. de la Constitución 2222 | México D.F. | n/a | 05021 | Mexico | (5) 555-4729 |
| ANTON | Antonio Moreno Taquería | Antonio Moreno | Owner | Mataderos 2312 | México D.F. | n/a | 05023 | Mexico | (5) 555-3932 |
| AROUT | Around the Horn | Thomas Hardy | Sales Representative | 120 Hanover Sq. | London | n/a | WA1 1DP | UK | (171) 555-7788 |
| BERGS | Berglunds snabbköp | Christina Berglund | Order Administrator | Berguvsvägen 8 | Luleå | n/a | S-958 22 | Sweden | 0921-12 34 65 |
| BLAUS | Blauer See Delikatessen | Hanna Moos | Sales Representative | Forsterstr. 57 | Mannheim | n/a | 68306 | Germany | 0621-08460 |
| BLONP | Blondesdssl père et fils | Frédérique Citeaux | Marketing Manager | 24, place Kléber | Strasbourg | n/a | 67000 | France | 88.60.15.31 |
| BOLID | Bólido Comidas preparadas | Martín Sommer | Owner | C/ Araquil, 67 | Madrid | n/a | 28023 | Spain | (91) 555 22 82 |
| BONAP | Bon app' | Laurence Lebihan | Owner | 12, rue des Bouchers | Marseille | n/a | 13008 | France | 91.24.45.40 |
| BOTTOM | Bottom-Dollar Markets | Elizabeth Lincoln | Accounting Manager | 23 Tsawassen Blvd. | Tsawassen | BC | T2F 8M4 | Canada | (604) 555-4729 |

« Previous | Page: 1 2 3 4 5 6 7 8 9 10 | Next » Items per page: 10, 15, 20, 25 | Showing 1-10 of 91 items | Refresh

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We can also add graphical logos to the header. Go back to the *Features* page and replace the header with a space, so that it will be blank. If a space isn't inserted, the default project namespace will be displayed.

Features

Specify the text displayed at the top of all pages in the page header. Project namespace is displayed if left blank.

Page Header:

Specify the text displayed at the bottom of all pages in the page footer. A standard copyright message is displayed if left blank.

Copyright:

Annotations

A standard annotations plug-in allows to enhance all data controllers of a generated application with unlimited number of free-form notes and file attachments that can be associated with any records by end-users at run-time. Requires support for ASP.NET Membership option to be enabled.

Enable global record annotations and store attachment and note files in folder.

Form Layout

Standard form layout displays category information on the left side of the screen. The data fields are listed on the right side of the screen.

Start each data field category in the new column with category information displayed on top.

Float data fields in view categories from left to right to fill the entire space available.

Show modal forms in master data views without children and in child data views.

Grid Layout

All grid views will present up to data fields. Use *Designer* to modify, add, and remove the data fields of individual views.

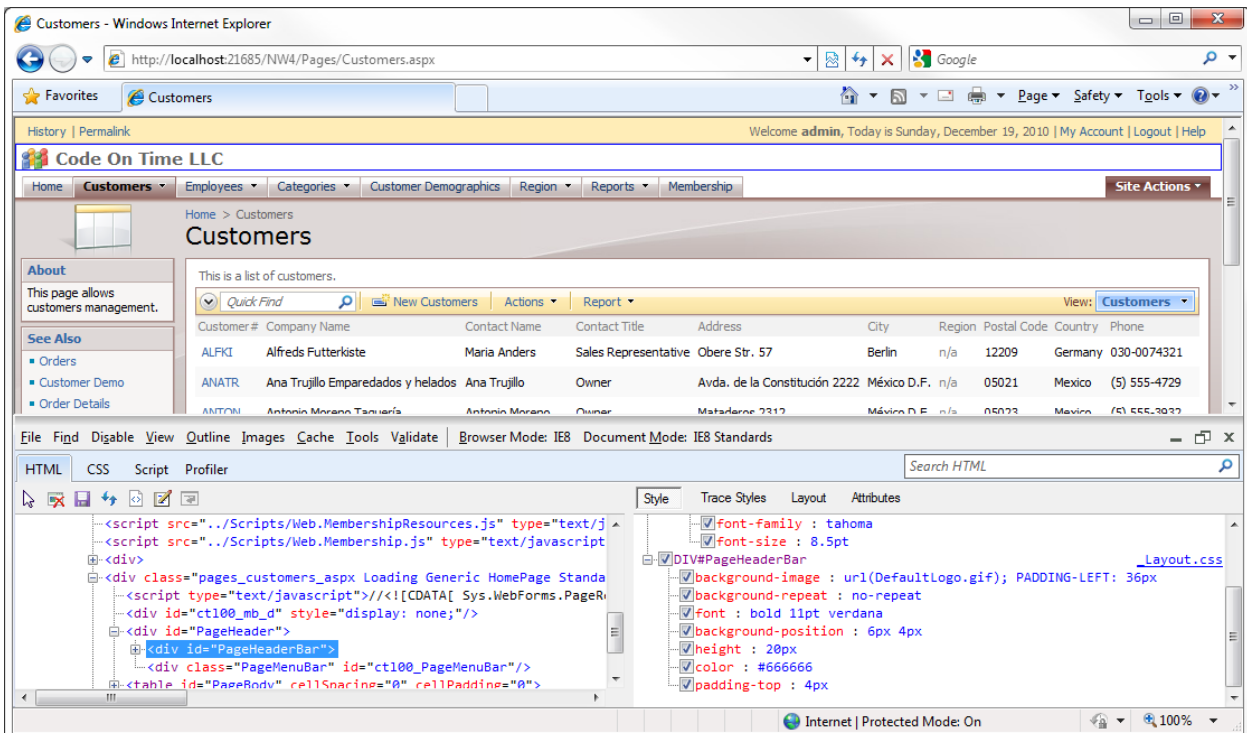
Activate search mode in master grid views by default.

Data lookup windows must always open in search mode.

Enable multi-selection in all grid views. Only *Delete* action is automatically supported on multiple rows.

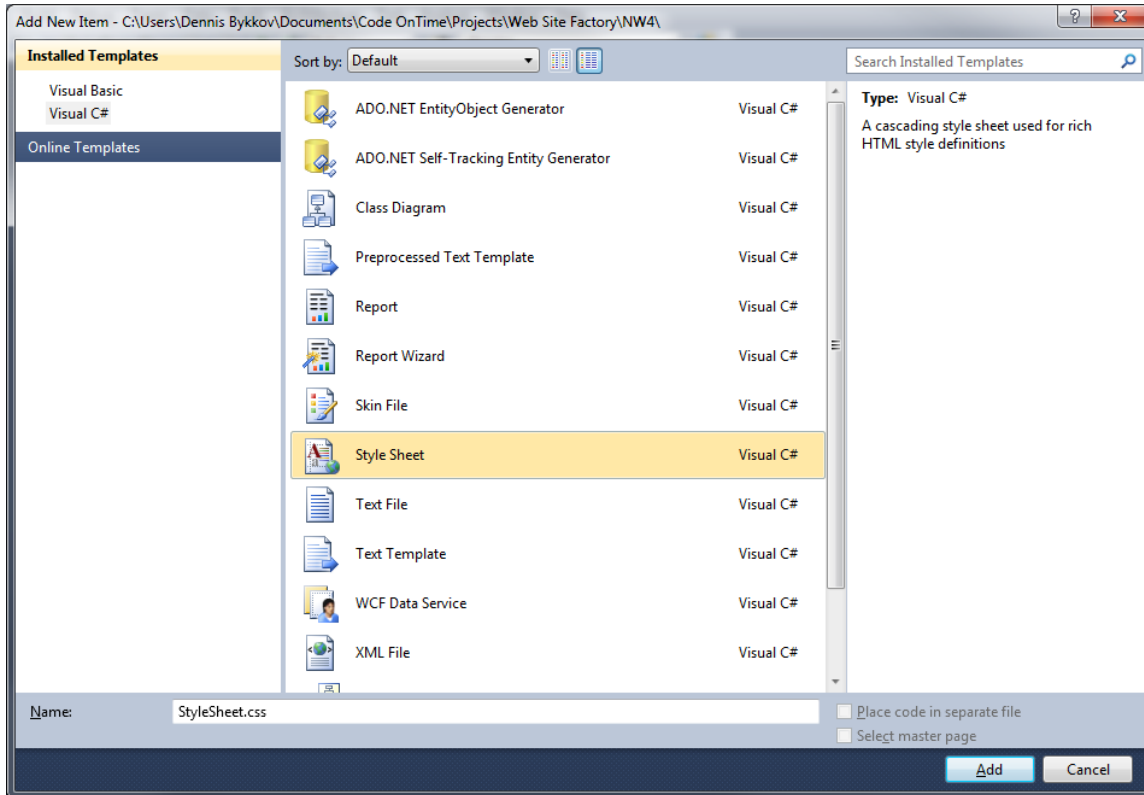
Enable batch editing in all data controllers. Requires multi-selection mode.

Save and regenerate the application. Activate *Developer Tools* in *Internet Explorer 8* by pressing *F12* on your keyboard. In the screen that appears, press *Find | Select Element By Click*. Click on the header area, and the HTML will be inspected for that section.



You can see that the section is a div called *PageHeaderBar* that has a background image *DefaultLogo.gif*, of height 20px. Let's replace the default logo with our own logo.

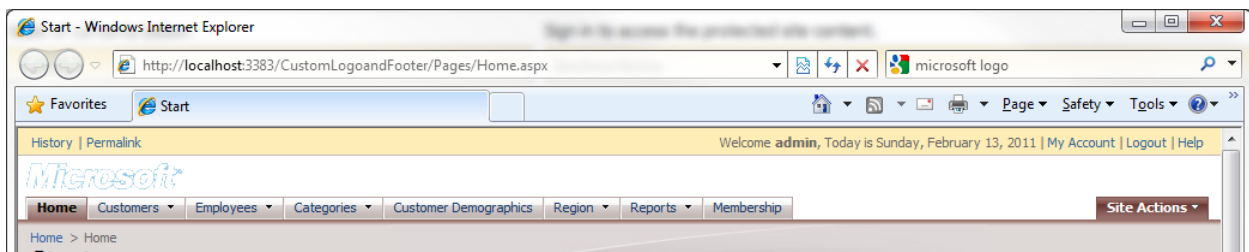
Open *Microsoft Visual Studio* or *Visual Web Developer*. Press *File | Open Web Site*, and select the folder of your project. In the *Solution Explorer*, navigate to *App_Themes/MyCompany*. Right click on *MyCompany* folder and press *Add New Item*. Select *Style Sheet*, and press *Add*.



Now, paste in the code shown below:

```
div#PageHeaderBar
{
    background-image: url(http://i.microsoft.com/global/en/publishingimages/sitebrand/microsoft.gif);
    height: 25px;
}
```

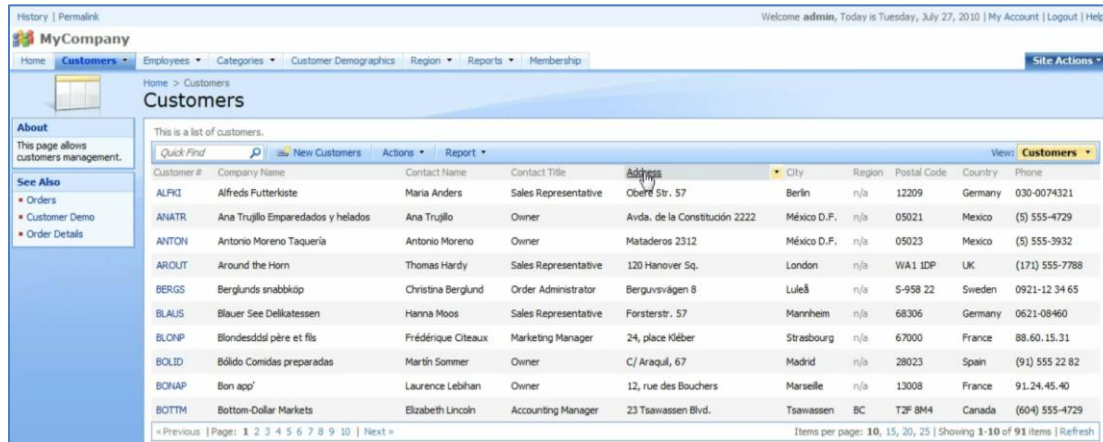
The background image links to the *Microsoft* logo on their home page. Any other image of appropriate size will do. Save the file, and refresh the web page. You can now see that the new logo appears in your web application.



Using the Designer Spreadsheet

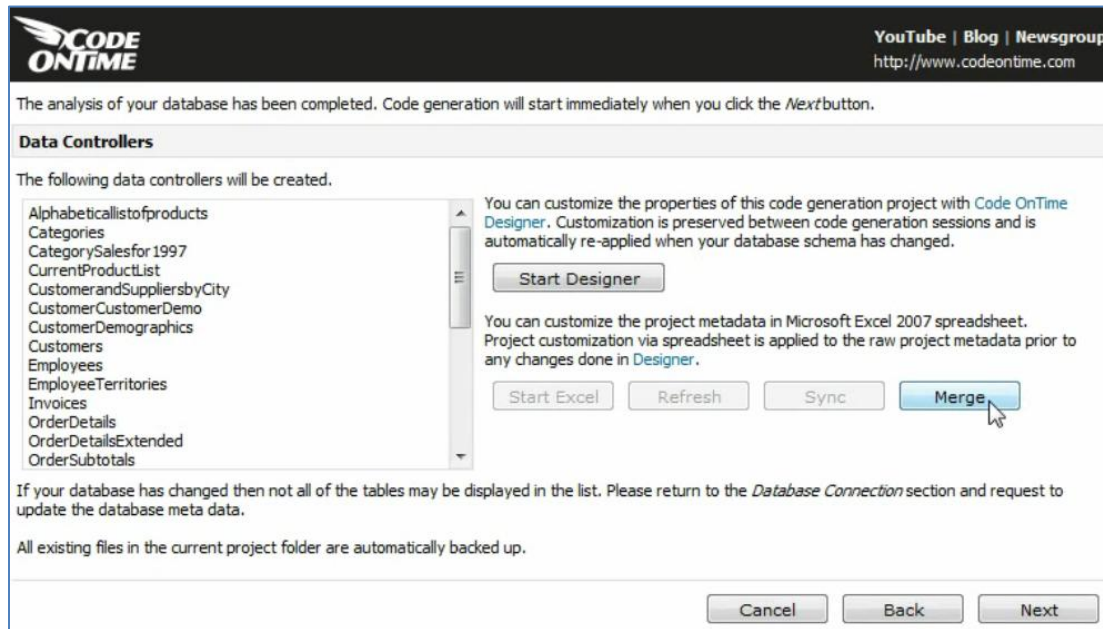
Using Excel to Build ASP.NET/AJAX Apps

Shown below is the baseline application that needs to be modified. In the grid view of *Customers*, you can see *Contact Name* and *Contact Title* fields. It would be nice if the *Phone* field were placed closer to these fields, so that end users can more easily figure out which number to call. Let's move *Phone* field where the *Address* field currently is, and insert *Fax* field next to it. *Fax* field is available for each record, but is not present in grid view. The *Region* field is empty for a lot of records, so let's get rid of it.



| Customer # | Company Name | Contact Name | Contact Title | Address | City | Region | Postal Code | Country | Phone |
|------------|------------------------------------|--------------------|----------------------|-------------------------------|--------------|---------|-------------|----------------|----------------|
| ALFKI | Alfreds Futterkiste | Maria Anders | Sales Representative | Oberstr. 57 | Berlin | n/a | 12209 | Germany | 030-0074321 |
| ANATR | Ana Trujillo Emparedados y helados | Ana Trujillo | Owner | Avda. de la Constitución 2222 | México D.F. | n/a | 05021 | Mexico | (5) 555-4729 |
| ANTON | Antonio Moreno Taqueria | Antonio Moreno | Owner | Mataderos 2312 | México D.F. | n/a | 05023 | Mexico | (5) 555-3932 |
| AROUT | Around the Horn | Thomas Hardy | Sales Representative | 120 Hanover Sq. | London | n/a | WA1 1DP | UK | (171) 555-7788 |
| BERGS | Berglunds snabbköp | Christina Berglund | Order Administrator | Berguvsvägen 8 | Luleå | n/a | S-958 22 | Sweden | 0921-12 34 65 |
| BLAUS | Blauer See Delikatessen | Hanna Moos | Sales Representative | Forsterstr. 57 | Mannheim | n/a | 68306 | Germany | 0621-08460 |
| BLOMP | Blondesdjal père et fils | Frédérique Citeaux | Marketing Manager | 24, place Kléber | Strasbourg | n/a | 67000 | France | 88.60.15.31 |
| BOLID | Bólido Comidas preparadas | Martin Sommer | Owner | C/ Araquil, 67 | Madrid | n/a | 28023 | Spain | (91) 555 22 82 |
| BOHAP | Bon app' | Laurence Lebihan | Owner | 12, rue des Bouchers | Marseille | n/a | 13008 | France | 91.24.45.40 |
| BOTTM | Bottom-Dollar Markets | Elizabeth Lincoln | Accounting Manager | 23 Tsawassen Blvd. | Tsawassen BC | T2F 8M4 | Canada | (604) 555-4729 | |

Run *Code On Time Generator*, select the project name, and press the *Skip* button. You will arrive at a list of data controllers. Click on *Merge* and confirm to create a new *Excel* spreadsheet with data from the application.



CODE ONTIME YouTube | Blog | Newsgroup
<http://www.codeontime.com>

The analysis of your database has been completed. Code generation will start immediately when you click the *Next* button.

Data Controllers

The following data controllers will be created.

- Alphabetical list of products
- Categories
- CategorySales for 1997
- CurrentProductList
- Customer and Suppliers by City
- CustomerCustomerDemo
- CustomerDemographics
- Customers
- Employees
- EmployeeTerritories
- Invoices
- OrderDetails
- OrderDetailsExtended
- OrderSubtotals

You can customize the properties of this code generation project with *Code OnTime Designer*. Customization is preserved between code generation sessions and is automatically re-applied when your database schema has changed.

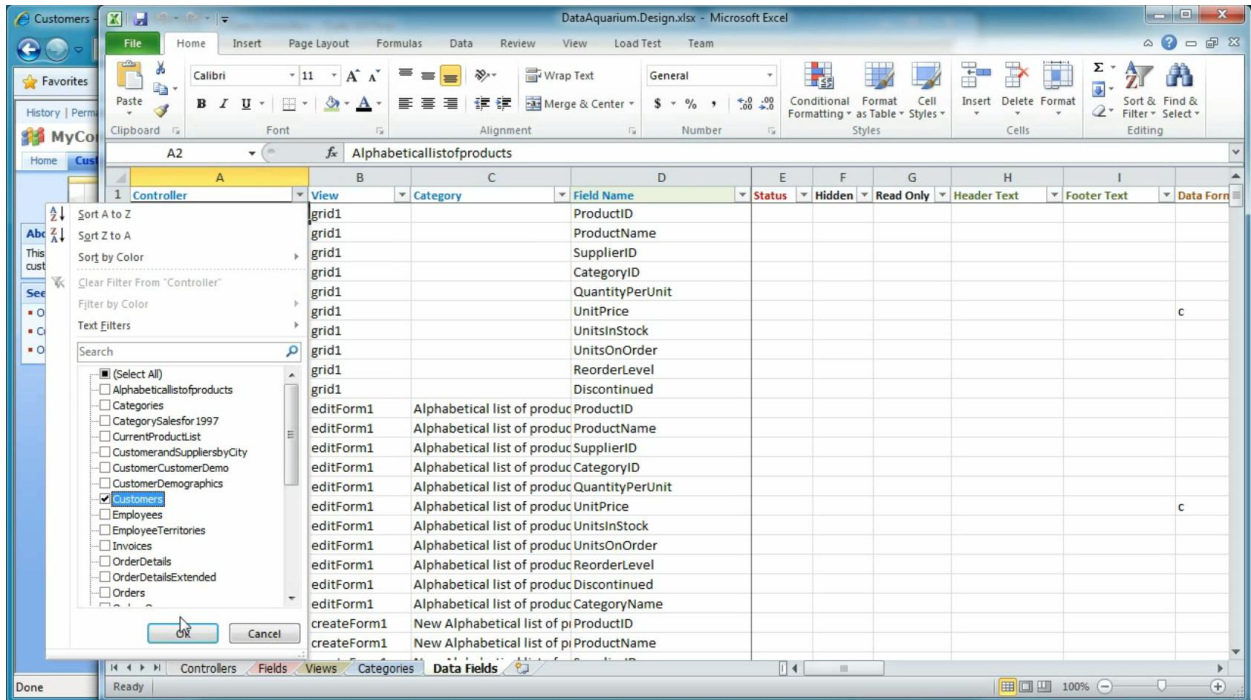
You can customize the project metadata in Microsoft Excel 2007 spreadsheet. Project customization via spreadsheet is applied to the raw project metadata prior to any changes done in *Designer*.

If your database has changed then not all of the tables may be displayed in the list. Please return to the *Database Connection* section and request to update the database meta data.

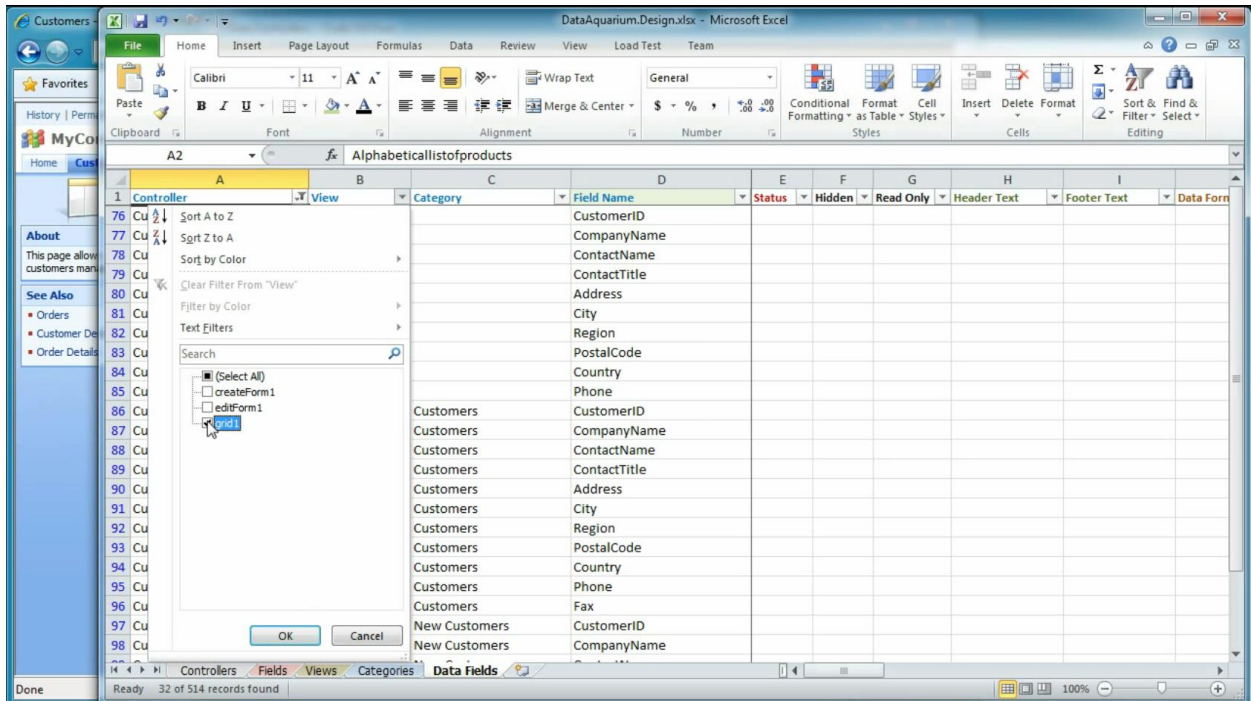
All existing files in the current project folder are automatically backed up.

(Note: If your Excel spreadsheet comes up with no data, you will need to install *Microsoft Access Database Engine 2010 Redistributable* at <http://www.microsoft.com/downloads/en/details.aspx?FamilyID=c06b8369-60dd-4b64-a44b-84b371ede16d&displaylang=en>)

There are several sheets, displayed at the bottom of the screen, that allow you to change various aspects of your application, including *Controllers*, *Fields*, *Views*, *Categories*, and *Data Fields*. Navigate to the *Data Fields* sheet. Filter the data fields to those that belong to the *Customers* data controller.



Next, limit the fields to only those that belong to the view of *grid1*.



We will make several changes to this view. Right click on the *Phone* row and press *Cut*. On the *Address* field, right click and press *Insert Paste Row*. This will relocate the *Phone* row into *Address's* position.

| | A | B | C | D | E | F | G | H | I | |
|-----|------------|-------|----------|--------------|--------|--------|-----------|-------------|-------------|----------|
| 1 | Controller | View | Category | Field Name | Status | Hidden | Read Only | Header Text | Footer Text | Data For |
| 76 | Customers | grid1 | | CustomerID | | | | | | |
| 77 | Customers | grid1 | | CompanyName | | | | | | |
| 78 | Customers | grid1 | | ContactName | | | | | | |
| 79 | Customers | grid1 | | ContactTitle | | | | | | |
| 80 | Customers | grid1 | | Phone | | | | | | |
| 81 | Customers | grid1 | | Address | | | | | | |
| 82 | Customers | grid1 | | City | | | | | | |
| 83 | Customers | grid1 | | Region | | | | | | |
| 84 | Customers | grid1 | | PostalCode | | | | | | |
| 85 | Customers | grid1 | | Country | | | | | | |
| 516 | | | | | | | | | | |
| 517 | | | | | | | | | | |
| 518 | | | | | | | | | | |
| 519 | | | | | | | | | | |

Right click on *Address* and press *Insert Blank Row*. Press *Ctrl + D* to duplicate *Phone* row into the new row. Rename the *Field Name* to “*Fax*”. There is an actual field in the database with this name, which can be confirmed by going to *Fields* sheet and filtering down to show only fields that belong to *Customers* controller.

| | A | B | C | D | E | F | G | H | I | |
|-----|------------|-------|----------|--------------|--------|--------|-----------|-------------|-------------|----------|
| 1 | Controller | View | Category | Field Name | Status | Hidden | Read Only | Header Text | Footer Text | Data For |
| 76 | Customers | grid1 | | CustomerID | | | | | | |
| 77 | Customers | grid1 | | CompanyName | | | | | | |
| 78 | Customers | grid1 | | ContactName | | | | | | |
| 79 | Customers | grid1 | | ContactTitle | | | | | | |
| 80 | Customers | grid1 | | Phone | | | | | | |
| 81 | Customers | grid1 | | Fax | | | | | | |
| 82 | Customers | grid1 | | Address | | | | | | |
| 83 | Customers | grid1 | | City | | | | | | |
| 84 | Customers | grid1 | | Region | | | | | | |
| 85 | Customers | grid1 | | PostalCode | | | | | | |
| 86 | Customers | grid1 | | Country | | | | | | |
| 517 | | | | | | | | | | |
| 518 | | | | | | | | | | |
| 519 | | | | | | | | | | |

The last step will involve removing the *Region* field from *grid1*. You can choose to delete the row from the spreadsheet altogether. Alternatively, you can type “*deleted*” in the *Status* column to delete the row from the view. You can also change the color of the *Region* row for better visual identification.

| | A | B | C | D | E | F | G | H | I | |
|-----|------------|-------|----------|--------------|---------|--------|-----------|-------------|-------------|----------|
| 1 | Controller | View | Category | Field Name | Status | Hidden | Read Only | Header Text | Footer Text | Data For |
| 76 | Customers | grid1 | | CustomerID | | | | | | |
| 77 | Customers | grid1 | | CompanyName | | | | | | |
| 78 | Customers | grid1 | | ContactName | | | | | | |
| 79 | Customers | grid1 | | ContactTitle | | | | | | |
| 80 | Customers | grid1 | | Phone | | | | | | |
| 81 | Customers | grid1 | | Fax | | | | | | |
| 82 | Customers | grid1 | | Address | | | | | | |
| 83 | Customers | grid1 | | City | | | | | | |
| 84 | Customers | grid1 | | Region | deleted | | | | | |
| 85 | Customers | grid1 | | PostalCode | | | | | | |
| 86 | Customers | grid1 | | Country | | | | | | |
| 517 | | | | | | | | | | |
| 518 | | | | | | | | | | |
| 519 | | | | | | | | | | |
| 520 | | | | | | | | | | |
| 521 | | | | | | | | | | |
| 522 | | | | | | | | | | |

Save the spreadsheet, go back to *Code On Time Generator*, and press the *Sync* button. The spreadsheet will become the foundation for your project settings.

You can confirm your changes by going into the *Designer*. Click on the *Start Designer* button. Navigate to the *Customers* controller, and switch to *Views* tab. Click on the “grid1” View. Switch to the *Data Fields* tab. You will notice that the new data field layout will be active in this list, displaying *Phone* after *Contact Title*, and not having *Region* in the list.

Review and modify properties of the project items and select *Close* to return to code generator.

Project Designer Close

Home > Controller: Customers > View: **grid1**

View Categories Styles **Data Fields**

This is a list of data fields.

Quick Find New Preview View: Data Fields

| Field Name | Category | Read Only | Cols | Rows | Data Type | Alias | Hidden |
|--------------|----------|-----------|------|------|-----------|-------|--------|
| CustomerID | n/a | Default | 5 | n/a | String | n/a | No |
| CompanyName | n/a | Default | 40 | n/a | String | n/a | No |
| ContactName | n/a | Default | 30 | n/a | String | n/a | No |
| ContactTitle | n/a | Default | 30 | n/a | String | n/a | No |
| Phone | n/a | Default | 24 | n/a | String | n/a | No |
| Fax | n/a | Default | 24 | n/a | String | n/a | No |
| Address | n/a | Default | n/a | n/a | String | n/a | No |
| City | n/a | Default | 15 | n/a | String | n/a | No |
| PostalCode | n/a | Default | 10 | n/a | String | n/a | No |
| Country | n/a | Default | 15 | n/a | String | n/a | No |

Showing 1-10 of 10 items | Refresh

Close the *Designer*, and generate the application by pressing *Next*. When generation finishes, a web page will appear with the modified application. Navigate to the *Customers* screen.

History | Permalink Welcome admin, Today is Tuesday, July 27, 2010 | My Account | Logout | Help

MyCompany

Home Customers Employees Categories Customer Demographics Region Reports Membership Site Actions

Home > Customers

Customers

This is a list of customers.

Quick Find New Customers Actions Report View: Customers

| Customer # | Company Name | Contact Name | Contact Title | Phone | Fax | Address | City | Postal Code | Country |
|------------|------------------------------------|--------------------|----------------------|----------------|----------------|-------------------------------|-------------|-------------|---------|
| ALFKI | Alfreds Futterkiste | Maria Anders | Sales Representative | 030-0074321 | 030-0076545 | Obere Str. 57 | Berlin | 12209 | Germany |
| ANATR | Ana Trujillo Emparedados y helados | Ana Trujillo | Owner | (5) 555-4729 | (5) 555-3745 | Avda. de la Constitución 2222 | México D.F. | 05021 | Mexico |
| ANTON | Antonio Moreno Taquería | Antonio Moreno | Owner | (5) 555-3932 | Serge | Mataderos 2312 | México D.F. | 05023 | Mexico |
| AROUT | Around the Horn | Thomas Hardy | Sales Representative | (171) 555-7788 | (171) 555-6750 | 120 Hanover Sq. | London | WA1 1DP | UK |
| BERGS | Berglunds snabbkop | Christina Berglund | Order Administrator | 0921-12 34 65 | 0921-12 34 67 | Berguvsvägen 8 | Luleå | S-958 22 | Sweden |
| BLAUS | Blauer See Delikatessen | Hanna Moos | Sales Representative | 0621-08460 | 0621-08924 | Forsterstr. 57 | Mannheim | 68306 | Germany |
| BLOMP | Blondesdél père et fils | Frédérique Citeaux | Marketing Manager | 88.60.15.31 | 88.60.15.32 | 24, place Kléber | Strasbourg | 67000 | France |
| BOLID | Bólido Comidas preparadas | Martín Sommer | Owner | (91) 555 22 82 | (91) 555 91 99 | C/ Araquil, 67 | Madrid | 28023 | Spain |
| BONAP | Bon app' | Laurence Lebihan | Owner | 91.24.45.40 | 91.24.45.41 | 12, rue des Bouchers | Marseille | 13008 | France |
| BOTTM | Bottom-Dollar Markets | Elizabeth Lincoln | Accounting Manager | (604) 555-4729 | (604) 555-3745 | 23 Tsawassen Blvd. | Tsawassen | T2F 8M4 | Canada |

« Previous | Page: 1 2 3 4 5 6 7 8 9 10 | Next » Items per page: 10, 15, 20, 25 | Showing 1-10 of 91 items | Refresh

You can see that the columns should now be in the correct order, *Contact Name, Contact Title, Phone,* and *Fax*. *Regions* column is no longer displayed.

Next, let's modify the *Employees* screen. If you select an employee, you can see the fields listed from top to bottom. It would be better if these fields were presented in a more compact way. Switch back to the *Designer Spreadsheet*, and navigate to the *Categories* sheet. Filter the *Controller* column to only view categories from *Employees*. You will get two rows, *Employees* and *New Employees*. Change the *Floating* column to "Yes".

| | A | B | C | D | E | F | G | H | |
|----|------------|-------------|---------------|--------|------------|-----|----------|----------|--------------------------|
| 1 | Controller | View | Category | Status | New Column | Tab | Floating | Template | Description |
| 18 | Employees | editForm1 | Employees | | | | yes | | \$DefaultEditDescription |
| 19 | Employees | createForm1 | New Employees | | | | yes | | \$DefaultNewDescription |
| 62 | | | | | | | | | |
| 63 | | | | | | | | | |

Go back to *Code On Time Generator*, and press *Sync*. Then press *Next* to regenerate the application. Once the generator finishes, navigate to the *Employees* page. *Employee* record is now more compact, and fields flow from left to right in the page.

Please review employees information below. Click Edit to change this record, click Delete to delete the record, or click Cancel/Close to return back.


New Employees Actions Report View: Review Employees

Employees

These are the fields of the employees record that can be edited.

| Last Name | First Name | Title | Title Of Courtesy | Birth Date | Hire Date | Address | City | Region | Postal Code | Country | Home Phone | Extension |
|-----------|------------|-----------------------|-------------------|------------|-----------|--------------------|--------|--------|-------------|---------|----------------|-----------|
| Fuller | Andrew | Vice President, Sales | Dr. | 2/19/1952 | 8/14/1992 | 908 W. Capital Way | Tacoma | WA | 98401 | USA | (206) 555-9482 | 3457 |

Photo



Notes

Andrew received his BTS commercial in 1974 and a Ph.D. in international marketing from the University of Dallas in 1981. He is fluent in French and Italian and reads German. He joined the company as a sales representative, was promoted to sales manager in January 1992 and to vice president of sales in March 1993. Andrew is a member of the Sales Management Roundtable, the Seattle Chamber of Commerce, and the Pacific Rim Importers Association.

Reports To Last Name: N/A Photo Path: http://accweb/emmployees/fuller.bmp

Edit Delete Close

Employee Territories list is displayed as details of the selected employee. Let's put the territories on the employees detail view as a checkbox list. To do this, switch to the *Designer Spreadsheet*. Navigate to the *Fields* sheet, and filter *Controller* to "Employees".

| Field Name | Controller | Field Name | Status | Type | Allow Nulls | Read Only | Is Key | Server Default | Computed | SQL Formula |
|--------------|------------|--------------|--------|--------|-------------|-----------|--------|----------------|----------|-------------|
| CustomerID | | CustomerID | | String | no | | yes | | | |
| CompanyName | | CompanyName | | String | no | | | | | |
| ContactName | | ContactName | | String | | | | | | |
| ContactTitle | | ContactTitle | | String | | | | | | |
| Address | | Address | | String | | | | | | |
| City | | City | | String | | | | | | |
| Region | | Region | | String | | | | | | |
| PostalCode | | PostalCode | | String | | | | | | |
| Country | | Country | | String | | | | | | |
| Phone | | Phone | | String | | | | | | |
| Fax | | Fax | | String | | | | | | |

Right click on the *Notes* field, and press *Insert Row*. For the new row, set controller to *Employees*. The *Field Name* will be "Territories". The *Type* is "String". Type "Yes" under *Allow Nulls*. Set *Computed* to "yes". Under *SQL Formula*, type "NULL".

| | A | B | C | D | E | F | G | H | I | J |
|----|------------|-----------------|--------|----------|-------------|-----------|--------|----------------|----------|-------------|
| 1 | Controller | Field Name | Status | Type | Allow Nulls | Read Only | Is Key | Server Default | Computed | SQL Formula |
| 42 | Employees | EmployeeID | | Int32 | no | yes | yes | | | |
| 43 | Employees | LastName | | String | no | | | | | |
| 44 | Employees | FirstName | | String | no | | | | | |
| 45 | Employees | Title | | String | | | | | | |
| 46 | Employees | TitleOfCourtesy | | String | | | | | | |
| 47 | Employees | BirthDate | | DateTime | | | | | | |
| 48 | Employees | HireDate | | DateTime | | | | | | |
| 49 | Employees | Address | | String | | | | | | |
| 50 | Employees | City | | String | | | | | | |
| 51 | Employees | Region | | String | | | | | | |
| 52 | Employees | PostalCode | | String | | | | | | |
| 53 | Employees | Country | | String | | | | | | |
| 54 | Employees | HomePhone | | String | | | | | | |
| 55 | Employees | Extension | | String | | | | | | |
| 56 | Employees | Photo | | Byte[] | | | | | | |
| 57 | Employees | Territories | | String | yes | | | | yes | NULL |
| 58 | Employees | Notes | | String | | | | | | |

Label will be "Territories". *Items Style* will be "CheckBoxList".

| | A | B | N | O | P | Q | R | S |
|----|------------|-----------------|---------------|------------------|--------------------|--------------|-------|-----------------------|
| 1 | Controller | Field Name | HTML Encoding | Format On Client | Data Format String | Items Style | Items | Items Data Controller |
| 42 | Employees | EmployeeID | | | | | | |
| 43 | Employees | LastName | | | | | | |
| 44 | Employees | FirstName | | | | | | |
| 45 | Employees | Title | | | | | | |
| 46 | Employees | TitleOfCourtesy | | | | | | |
| 47 | Employees | BirthDate | | | | | | |
| 48 | Employees | HireDate | | | | | | |
| 49 | Employees | Address | | | | | | |
| 50 | Employees | City | | | | | | |
| 51 | Employees | Region | | | | | | |
| 52 | Employees | PostalCode | | | | | | |
| 53 | Employees | Country | | | | | | |
| 54 | Employees | HomePhone | | | | | | |
| 55 | Employees | Extension | | | | | | |
| 56 | Employees | Photo | | | | | | |
| 57 | Employees | Territories | | | | CheckBoxList | | |
| 58 | Employees | Notes | | | | | | |

However, here we need to reference some information. Change the filter on the *Controller* column to include *EmployeeTerritories* and *Territories*. *EmployeeTerritories* is a junction table which links *Employees* and *Territories*. To make editing data easier, you can change the color of the rows of different tables. This will help us understand what's going on.

| | | | | | | | | |
|-----|---------------------|----------------------------------|--|--------|-----|-----|-----|------|
| 53 | Employees | Country | | String | | | | |
| 54 | Employees | HomePhone | | String | | | | |
| 55 | Employees | Extension | | String | | | | |
| 56 | Employees | Photo | | Byte[] | | | | |
| 57 | Employees | Territories | | String | yes | | yes | NULL |
| 58 | Employees | Notes | | String | | | | |
| 59 | Employees | ReportsTo | | Int32 | | | | |
| 60 | Employees | ReportsToLastName | | String | | yes | | |
| 61 | Employees | PhotoPath | | String | | | | |
| 62 | EmployeeTerritories | EmployeeID | | Int32 | no | | yes | |
| 63 | EmployeeTerritories | EmployeeLastName | | String | | yes | | |
| 64 | EmployeeTerritories | TerritoryID | | String | no | | yes | |
| 65 | EmployeeTerritories | TerritoryTerritoryDescription | | String | | yes | | |
| 66 | EmployeeTerritories | TerritoryRegionRegionDescription | | String | | yes | | |
| 208 | Territories | TerritoryID | | String | no | | yes | |
| 209 | Territories | TerritoryDescription | | String | no | | | |
| 210 | Territories | RegionID | | Int32 | no | | | |
| 211 | Territories | RegionRegionDescription | | String | | yes | | |

For the field *Items Data Controller*, insert “Territories”. *Items Data Value Field* will be “TerritoryID”. *Items Data Text* field will be “TerritoryDescription”.

| | A | B | R | S | T | U | V |
|-----|---------------------|----------------------------------|-------|-----------------------|------------------------|-----------------------|--------------------|
| 1 | Controller | Field Name | Items | Items Data Controller | Items Data Value Field | Items Data Text Field | Items New Data |
| 48 | Employees | HireDate | | | | | |
| 49 | Employees | Address | | | | | |
| 50 | Employees | City | | | | | |
| 51 | Employees | Region | | | | | |
| 52 | Employees | PostalCode | | | | | |
| 53 | Employees | Country | | | | | |
| 54 | Employees | HomePhone | | | | | |
| 55 | Employees | Extension | | | | | |
| 56 | Employees | Photo | | | | | |
| 57 | Employees | Territories | | Territories | TerritoryID | TerritoryDescription | |
| 58 | Employees | Notes | | | | | createForm1 (Ctrl) |
| 59 | Employees | ReportsTo | | Employees | | | |
| 60 | Employees | ReportsToLastName | | | | | |
| 61 | Employees | PhotoPath | | | | | |
| 62 | EmployeeTerritories | EmployeeID | | Employees | | | createForm1 |
| 63 | EmployeeTerritories | EmployeeLastName | | | | | |
| 64 | EmployeeTerritories | TerritoryID | | Territories | | | createForm1 |
| 65 | EmployeeTerritories | TerritoryTerritoryDescription | | | | | |
| 66 | EmployeeTerritories | TerritoryRegionRegionDescription | | | | | |
| 208 | Territories | TerritoryID | | | | | |
| 209 | Territories | TerritoryDescription | | | | | |

The last field is *Items Target Controller*. The value will be the name of the junction table, “EmployeeTerritories”.

| | A | B | U | V | W | X | Y |
|----|---------------------|-------------------|-----------------------|---------------------|-------------------------|------------|----------------------|
| 1 | Controller | Field Name | Items Data Text Field | Items New Data View | Items Target Controller | Items Copy | Calculated On Server |
| 48 | Employees | HireDate | | | | | |
| 49 | Employees | Address | | | | | |
| 50 | Employees | City | | | | | |
| 51 | Employees | Region | | | | | |
| 52 | Employees | PostalCode | | | | | |
| 53 | Employees | Country | | | | | |
| 54 | Employees | HomePhone | | | | | |
| 55 | Employees | Extension | | | | | |
| 56 | Employees | Photo | | | | | |
| 57 | Employees | Territories | TerritoryDescription | | EmployeeTerritories | | |
| 58 | Employees | Notes | | | | | createForm1 (Ctrl) |
| 59 | Employees | ReportsTo | | createForm1 | | | |
| 60 | Employees | ReportsToLastName | | | | | |
| 61 | Employees | PhotoPath | | | | | |
| 62 | EmployeeTerritories | EmployeeID | | createForm1 | | | |

Next, go to the *Data Fields* sheet. Filter *Controller* column to only display those fields from *Employees*. Filter the *View* column to display only *createForm1* and *editForm1*. On the *Photo* row of *editForm1*, right click and press *Insert Row*. Press *Ctrl + D* to duplicate the above row onto the new row. For *Field Name*, write “Territories”. Change the number of *Columns* to “5”, so that there will be five columns of checkboxes.

| | A | B | C | D | I | J | K | L |
|-----|------------|-----------|-----------|-----------------|-------------|--------------------|------------------|---------|
| 1 | Controller | View | Category | Field Name | Footer Text | Data Format String | Format On Client | Columns |
| 119 | Employees | editForm1 | Employees | LastName | | | | 20 |
| 120 | Employees | editForm1 | Employees | FirstName | | | | 10 |
| 121 | Employees | editForm1 | Employees | Title | | | | 30 |
| 122 | Employees | editForm1 | Employees | TitleOfCourtesy | | | | 25 |
| 123 | Employees | editForm1 | Employees | BirthDate | | | | 10 |
| 124 | Employees | editForm1 | Employees | HireDate | | | | 10 |
| 125 | Employees | editForm1 | Employees | Address | | | | |
| 126 | Employees | editForm1 | Employees | City | | | | 15 |
| 127 | Employees | editForm1 | Employees | Region | | | | 15 |
| 128 | Employees | editForm1 | Employees | PostalCode | | | | 10 |
| 129 | Employees | editForm1 | Employees | Country | | | | 15 |
| 130 | Employees | editForm1 | Employees | HomePhone | | | | 24 |
| 131 | Employees | editForm1 | Employees | Extension | | | | 4 |
| 132 | Employees | editForm1 | Employees | Territories | | | | 5 |
| 133 | Employees | editForm1 | Employees | Photo | | | | 15 |

We will also have to create a new row under *createForm1*. Insert a row above the *Notes* field of *createForm1* view, and duplicate the above row by pressing *Ctrl + D*. Change the *Field Name* to “Territories”, and change *Column* to “5”.

| | A | B | C | D | L | M | N | O |
|-----|------------|-------------|---------------|-----------------|---------|------|-------------------|-------------------------|
| 1 | Controller | View | Category | Field Name | Columns | Rows | Alias Field Name | Hyperlink Format String |
| 134 | Employees | editForm1 | Employees | Notes | | 5 | | |
| 135 | Employees | editForm1 | Employees | ReportsTo | | | ReportsToLastName | ~/Pages/Employees.a |
| 136 | Employees | editForm1 | Employees | PhotoPath | | | | |
| 137 | Employees | createForm1 | New Employees | LastName | 20 | | | |
| 138 | Employees | createForm1 | New Employees | FirstName | 10 | | | |
| 139 | Employees | createForm1 | New Employees | Title | 30 | | | |
| 140 | Employees | createForm1 | New Employees | TitleOfCourtesy | 25 | | | |
| 141 | Employees | createForm1 | New Employees | BirthDate | 10 | | | |
| 142 | Employees | createForm1 | New Employees | HireDate | 10 | | | |
| 143 | Employees | createForm1 | New Employees | Address | | | | |
| 144 | Employees | createForm1 | New Employees | City | 15 | | | |
| 145 | Employees | createForm1 | New Employees | Region | 15 | | | |
| 146 | Employees | createForm1 | New Employees | PostalCode | 10 | | | |
| 147 | Employees | createForm1 | New Employees | Country | 15 | | | |
| 148 | Employees | createForm1 | New Employees | HomePhone | 24 | | | |
| 149 | Employees | createForm1 | New Employees | Extension | 4 | | | |
| 150 | Employees | createForm1 | New Employees | Territories | | 5 | | |
| 151 | Employees | createForm1 | New Employees | Notes | | 5 | | |
| 152 | Employees | createForm1 | New Employees | ReportsTo | | | ReportsToLastName | |
| 153 | Employees | createForm1 | New Employees | PhotoPath | | | | |

Let’s make a few more changes to the fields *Title* and *TitleofCourtesy*. These fields will benefit from auto completion in the application. Go to the *Auto Complete* column and type in “1” for each of the fields.

| | A | B | C | D | O | P | Q |
|-----|------------|-------------|---------------|-----------------|--|---------------|--------------------|
| 1 | Controller | View | Category | Field Name | Hyperlink Format String | Auto Complete | Aggregate Function |
| 134 | Employees | editForm1 | Employees | Notes | | | |
| 135 | Employees | editForm1 | Employees | ReportsTo | ~/Pages/Employees.aspx?EmployeeID={ReportsTo}&_controller=Employees& | | |
| 136 | Employees | editForm1 | Employees | PhotoPath | | | |
| 137 | Employees | createForm1 | New Employees | LastName | | | |
| 138 | Employees | createForm1 | New Employees | FirstName | | | |
| 139 | Employees | createForm1 | New Employees | Title | | 1 | |
| 140 | Employees | createForm1 | New Employees | TitleOfCourtesy | | 1 | |
| 141 | Employees | createForm1 | New Employees | BirthDate | | | |
| 142 | Employees | createForm1 | New Employees | HireDate | | | |
| 143 | Employees | createForm1 | New Employees | Address | | | |

Save the spreadsheet, go back to the *Generator* and press *Sync*, and regenerate the application. Navigate to the *Employees* page. By selecting an employee, you can see a list of associated territories. If you start editing, a five column list of checkboxes will appear.

Please review employees information below. Click Edit to change this record, click Delete to delete the record, or click Cancel/Close to return back.

Record: View: **Review Employees**

* - indicates a required field

Employees

These are the fields of the employees record that can be edited.

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|--|--|-----------|----------------------------------|-------------------------------|--|---------------------------------------|---------------------------------------|---------------------------------|----------------------------------|---------------------------------|----------------------------------|-----------------------------------|------------------------------------|---|-------------------------------------|-------------------------------------|-------------------------------------|---|-----------------------------------|-----------------------------------|-------------------------------------|----------------------------------|-----------------------------------|---------------------------------|-------------------------------------|---------------------------------|-------------------------------------|--------------------------------------|---------------------------------|--------------------------------------|----------------------------------|--------------------------------|---|---------------------------------|-------------------------------------|------------------------------------|-------------------------------|--|-----------------------------------|-----------------------------------|------------------------------------|--|---|----------------------------------|-----------------------------------|--|---------------------------------|---|---|---------------------------------|--------------------------------------|--|-----------------------------------|-------------------------------------|----------------------------------|-------------------------------------|--|
| Last Name * | First Name * | Title | Title Of Courtesy | Birth Date | Hire Date | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fuller | Andrew | Vice President, Sales | Dr. | 2/19/1952 | 8/14/1992 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Address | | City | Region | Postal Code | Country | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 908 W. Capital Way | | Tacoma | WA | 98401 | USA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Home Phone | Extension | Territories | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (206) 555-9482 | 3457 | <table style="width: 100%; border: none;"> <tr> <td><input type="checkbox"/> Atlanta</td> <td><input type="checkbox"/> Cary</td> <td><input type="checkbox"/> Hoffman Estates</td> <td><input type="checkbox"/> Philadelphia</td> <td><input type="checkbox"/> Santa Monica</td> </tr> <tr> <td><input type="checkbox"/> Austin</td> <td><input type="checkbox"/> Chicago</td> <td><input type="checkbox"/> Hollis</td> <td><input type="checkbox"/> Phoenix</td> <td><input type="checkbox"/> Savannah</td> </tr> <tr> <td><input type="checkbox"/> Beachwood</td> <td><input type="checkbox"/> Colorado Springs</td> <td><input type="checkbox"/> Louisville</td> <td><input type="checkbox"/> Portsmouth</td> <td><input type="checkbox"/> Scottsdale</td> </tr> <tr> <td><input checked="" type="checkbox"/> Bedford</td> <td><input type="checkbox"/> Columbia</td> <td><input type="checkbox"/> Melville</td> <td><input type="checkbox"/> Providence</td> <td><input type="checkbox"/> Seattle</td> </tr> <tr> <td><input type="checkbox"/> Bellevue</td> <td><input type="checkbox"/> Dallas</td> <td><input type="checkbox"/> Menlo Park</td> <td><input type="checkbox"/> Racine</td> <td><input type="checkbox"/> Southfield</td> </tr> <tr> <td><input type="checkbox"/> Bentonville</td> <td><input type="checkbox"/> Denver</td> <td><input type="checkbox"/> Minneapolis</td> <td><input type="checkbox"/> Redmond</td> <td><input type="checkbox"/> Tampa</td> </tr> <tr> <td><input type="checkbox"/> Bloomfield Hills</td> <td><input type="checkbox"/> Edison</td> <td><input type="checkbox"/> Morristown</td> <td><input type="checkbox"/> Rockville</td> <td><input type="checkbox"/> Troy</td> </tr> <tr> <td><input checked="" type="checkbox"/> Boston</td> <td><input type="checkbox"/> Fairport</td> <td><input type="checkbox"/> New York</td> <td><input type="checkbox"/> Roseville</td> <td><input checked="" type="checkbox"/> Westboro</td> </tr> <tr> <td><input checked="" type="checkbox"/> Braintree</td> <td><input type="checkbox"/> Findlay</td> <td><input type="checkbox"/> New York</td> <td><input type="checkbox"/> San Francisco</td> <td><input type="checkbox"/> Wilton</td> </tr> <tr> <td><input checked="" type="checkbox"/> Cambridge</td> <td><input checked="" type="checkbox"/> Georgetow</td> <td><input type="checkbox"/> Newark</td> <td><input type="checkbox"/> Santa Clara</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Campbell</td> <td><input type="checkbox"/> Greensboro</td> <td><input type="checkbox"/> Orlando</td> <td><input type="checkbox"/> Santa Cruz</td> <td></td> </tr> </table> | | | | <input type="checkbox"/> Atlanta | <input type="checkbox"/> Cary | <input type="checkbox"/> Hoffman Estates | <input type="checkbox"/> Philadelphia | <input type="checkbox"/> Santa Monica | <input type="checkbox"/> Austin | <input type="checkbox"/> Chicago | <input type="checkbox"/> Hollis | <input type="checkbox"/> Phoenix | <input type="checkbox"/> Savannah | <input type="checkbox"/> Beachwood | <input type="checkbox"/> Colorado Springs | <input type="checkbox"/> Louisville | <input type="checkbox"/> Portsmouth | <input type="checkbox"/> Scottsdale | <input checked="" type="checkbox"/> Bedford | <input type="checkbox"/> Columbia | <input type="checkbox"/> Melville | <input type="checkbox"/> Providence | <input type="checkbox"/> Seattle | <input type="checkbox"/> Bellevue | <input type="checkbox"/> Dallas | <input type="checkbox"/> Menlo Park | <input type="checkbox"/> Racine | <input type="checkbox"/> Southfield | <input type="checkbox"/> Bentonville | <input type="checkbox"/> Denver | <input type="checkbox"/> Minneapolis | <input type="checkbox"/> Redmond | <input type="checkbox"/> Tampa | <input type="checkbox"/> Bloomfield Hills | <input type="checkbox"/> Edison | <input type="checkbox"/> Morristown | <input type="checkbox"/> Rockville | <input type="checkbox"/> Troy | <input checked="" type="checkbox"/> Boston | <input type="checkbox"/> Fairport | <input type="checkbox"/> New York | <input type="checkbox"/> Roseville | <input checked="" type="checkbox"/> Westboro | <input checked="" type="checkbox"/> Braintree | <input type="checkbox"/> Findlay | <input type="checkbox"/> New York | <input type="checkbox"/> San Francisco | <input type="checkbox"/> Wilton | <input checked="" type="checkbox"/> Cambridge | <input checked="" type="checkbox"/> Georgetow | <input type="checkbox"/> Newark | <input type="checkbox"/> Santa Clara | | <input type="checkbox"/> Campbell | <input type="checkbox"/> Greensboro | <input type="checkbox"/> Orlando | <input type="checkbox"/> Santa Cruz | |
| <input type="checkbox"/> Atlanta | <input type="checkbox"/> Cary | <input type="checkbox"/> Hoffman Estates | <input type="checkbox"/> Philadelphia | <input type="checkbox"/> Santa Monica | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> Austin | <input type="checkbox"/> Chicago | <input type="checkbox"/> Hollis | <input type="checkbox"/> Phoenix | <input type="checkbox"/> Savannah | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> Beachwood | <input type="checkbox"/> Colorado Springs | <input type="checkbox"/> Louisville | <input type="checkbox"/> Portsmouth | <input type="checkbox"/> Scottsdale | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input checked="" type="checkbox"/> Bedford | <input type="checkbox"/> Columbia | <input type="checkbox"/> Melville | <input type="checkbox"/> Providence | <input type="checkbox"/> Seattle | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> Bellevue | <input type="checkbox"/> Dallas | <input type="checkbox"/> Menlo Park | <input type="checkbox"/> Racine | <input type="checkbox"/> Southfield | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> Bentonville | <input type="checkbox"/> Denver | <input type="checkbox"/> Minneapolis | <input type="checkbox"/> Redmond | <input type="checkbox"/> Tampa | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> Bloomfield Hills | <input type="checkbox"/> Edison | <input type="checkbox"/> Morristown | <input type="checkbox"/> Rockville | <input type="checkbox"/> Troy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input checked="" type="checkbox"/> Boston | <input type="checkbox"/> Fairport | <input type="checkbox"/> New York | <input type="checkbox"/> Roseville | <input checked="" type="checkbox"/> Westboro | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input checked="" type="checkbox"/> Braintree | <input type="checkbox"/> Findlay | <input type="checkbox"/> New York | <input type="checkbox"/> San Francisco | <input type="checkbox"/> Wilton | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input checked="" type="checkbox"/> Cambridge | <input checked="" type="checkbox"/> Georgetow | <input type="checkbox"/> Newark | <input type="checkbox"/> Santa Clara | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> Campbell | <input type="checkbox"/> Greensboro | <input type="checkbox"/> Orlando | <input type="checkbox"/> Santa Cruz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Also, if you create a new employee, and start typing in a title or title of courtesy, you can see the auto completion at work.

New Employees
Complete the form. Make sure to enter all required fields.

Last Name * First Name * Title
Title Of Courtesy Birth Date Hire Date

Address Region Postal Code Country

Home Phone Extension

Territories

| | | | | |
|---|---|--|--|---------------------------------------|
| <input type="checkbox"/> Atlanta | <input type="checkbox"/> Cary | <input type="checkbox"/> Hoffman Estates | <input type="checkbox"/> Philadelphia | <input type="checkbox"/> Santa Monica |
| <input type="checkbox"/> Austin | <input type="checkbox"/> Chicago | <input type="checkbox"/> Hollis | <input type="checkbox"/> Phoenix | <input type="checkbox"/> Savannah |
| <input type="checkbox"/> Beachwood | <input type="checkbox"/> Colorado Springs | <input type="checkbox"/> Louisville | <input type="checkbox"/> Portsmouth | <input type="checkbox"/> Scottsdale |
| <input type="checkbox"/> Bedford | <input type="checkbox"/> Columbia | <input type="checkbox"/> Melville | <input type="checkbox"/> Providence | <input type="checkbox"/> Seattle |
| <input type="checkbox"/> Bellevue | <input type="checkbox"/> Dallas | <input type="checkbox"/> Menlo Park | <input type="checkbox"/> Racine | <input type="checkbox"/> Southfield |
| <input type="checkbox"/> Bentonville | <input type="checkbox"/> Denver | <input type="checkbox"/> Minneapolis | <input type="checkbox"/> Redmond | <input type="checkbox"/> Tampa |
| <input type="checkbox"/> Bloomfield Hills | <input type="checkbox"/> Edison | <input type="checkbox"/> Morristown | <input type="checkbox"/> Rockville | <input type="checkbox"/> Troy |
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| <input type="checkbox"/> Cambridge | <input type="checkbox"/> Georgetow | <input type="checkbox"/> Newark | <input type="checkbox"/> Santa Clara | |
| <input type="checkbox"/> Campbell | <input type="checkbox"/> Greensboro | <input type="checkbox"/> Orlando | <input type="checkbox"/> Santa Cruz | |

Notes

Reports To Last Name Photo Path

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