

2010



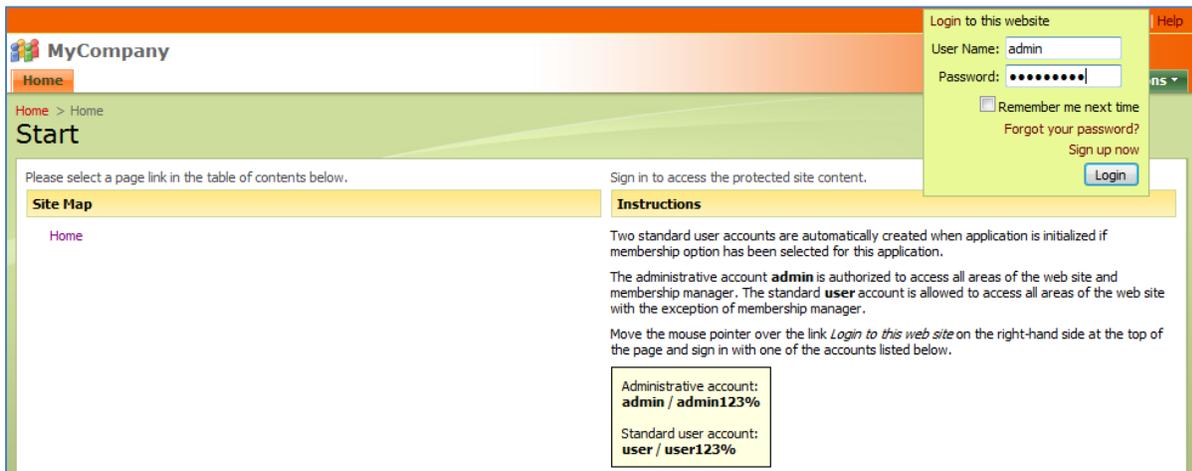
COOKBOOK
Role-based Security

Role-based Security

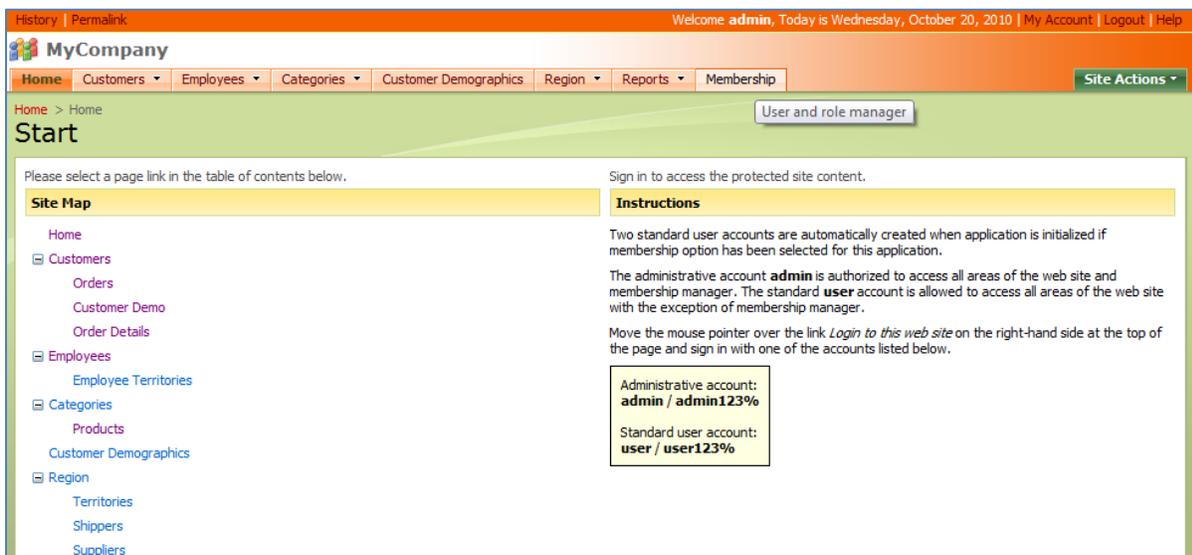
Web Site Factory applications rely on *Microsoft ASP.NET* for security infrastructure. In *ASP.NET* applications, each user is assigned one or several roles. The roles that a user has determine what a user is able to do. For example, only users with the *Administrator* role can access the *Membership Manager*. You can secure your pages, fields, and the various actions through roles.

Pages

The current page being displayed does not have a user logged in. The only page available is *Home*, both on the *Site Map* and on the menu bar. The membership bar allows us to sign in. By default, there are two accounts available for use, administrator and standard user. Let's log in as administrator.

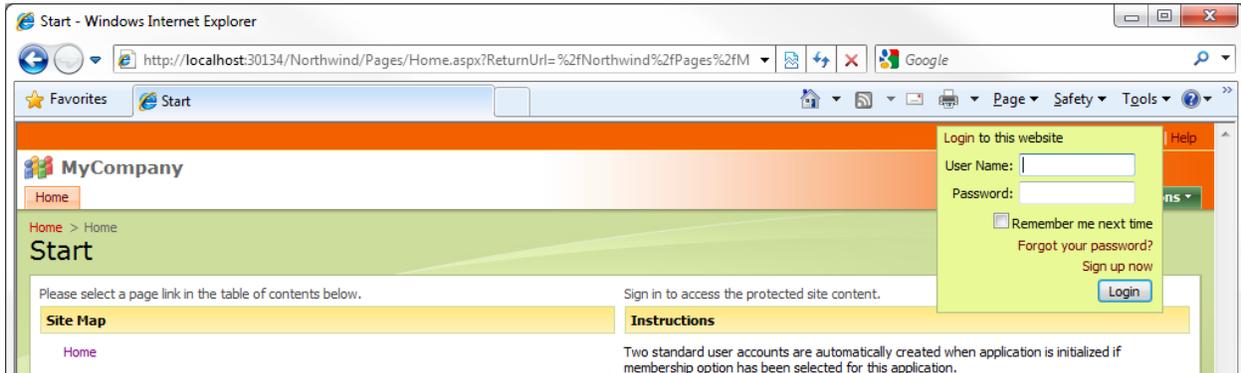


You can see that after logging in, the sitemap and menu bar has been expanded. More options are available, including the *Membership* page.

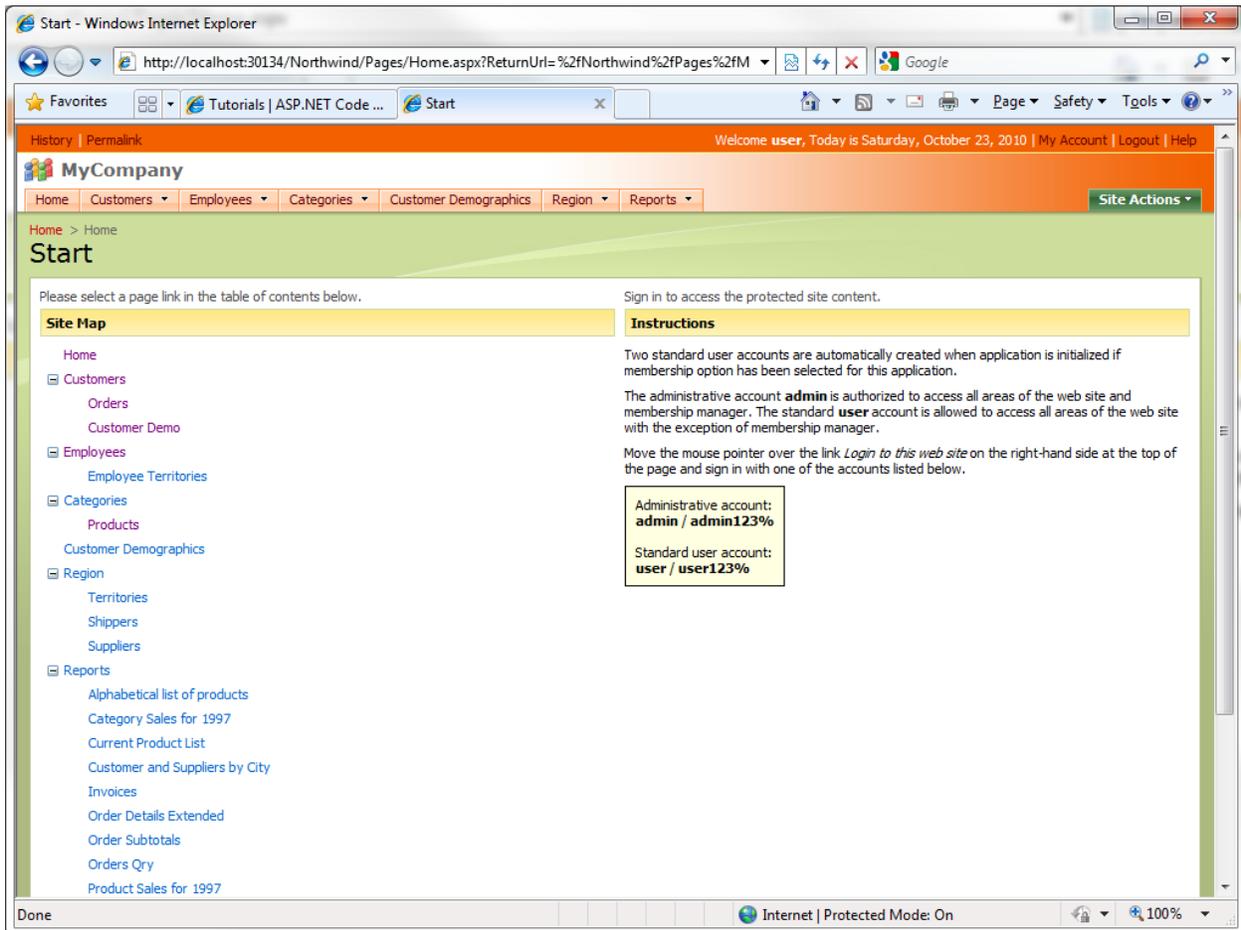


Navigate to the *Membership* page. On this page, we can create, modify, and delete *Users* and *Roles*. This enables a high degree of control over who can access the application. However, this page is only

accessible to those users with administrative privileges. When we sign out, you can see that we have been given a redirect URL, and taken back to the home page and prompted to log in.

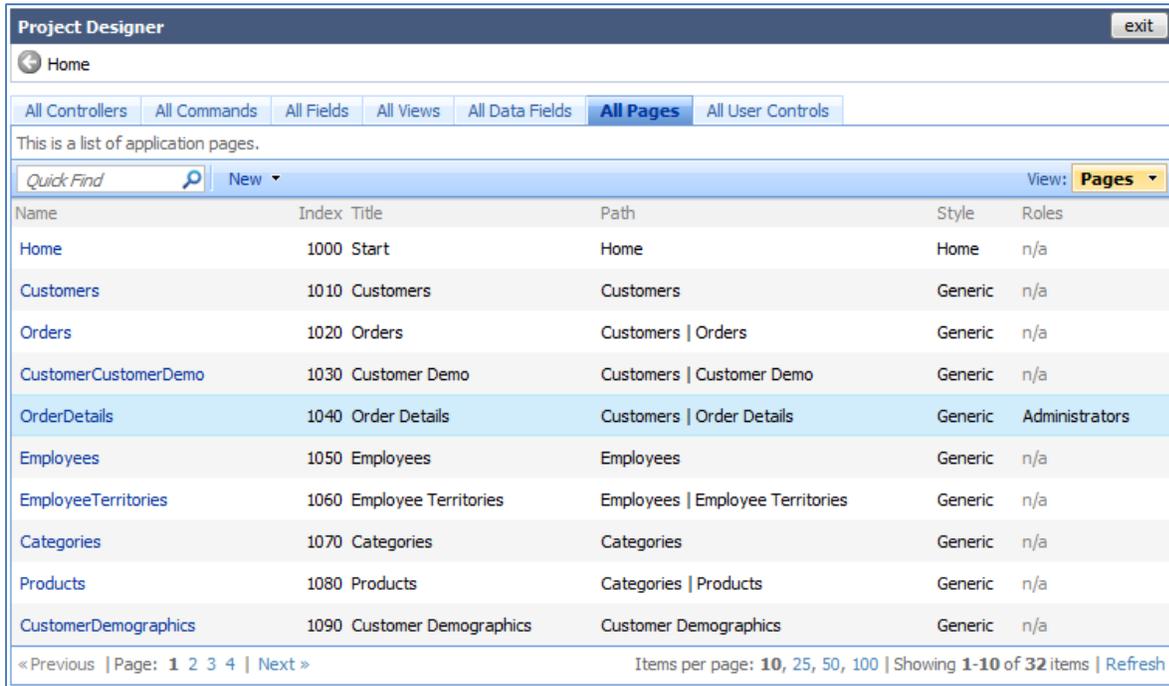


If we log in as a standard user, then we will be redirected again. The navigation enables access to all of the pages in the application except the *Membership* page, which is absent.

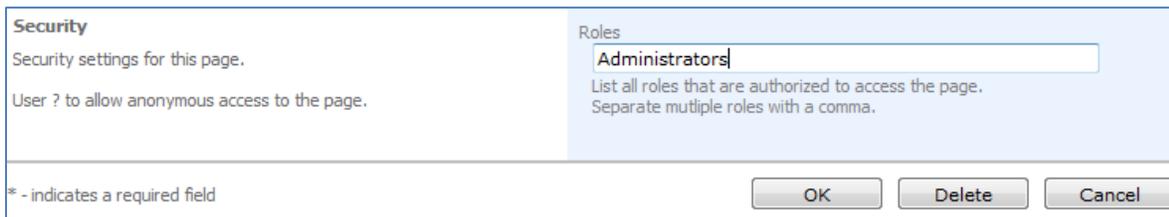


Let's change things up a bit. We will change the security so that only those users with administrative privileges will be able to access the *Order Details* page. Run *Code On Time Generator*, click on the project

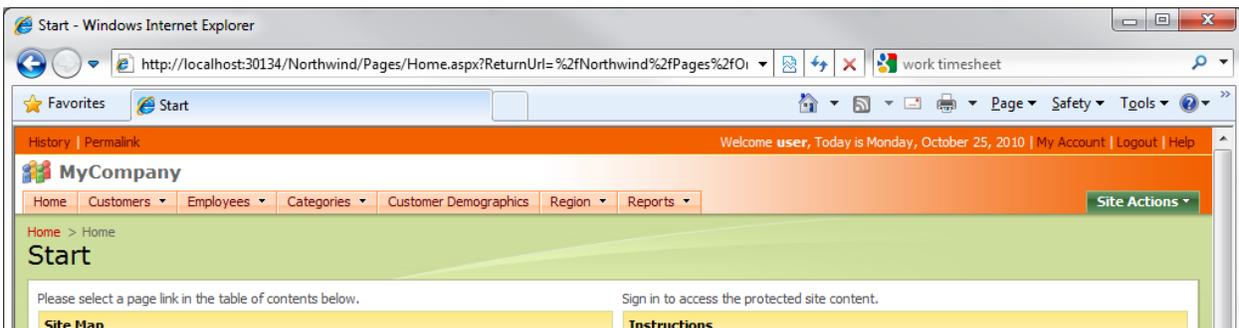
name, and then press the *Design* button. Click on the *All Pages* tab at the top, and select *Order Details* page.



Press the *Edit* button, and change the *Roles* field to “Administrators”. This will insure that only users with the administrator’s role can see the page. Press *Ok*, then *Close*, and generate the application.



When the web application loads in your browser, you can see that you are still logged in as a standard user. The *Order Details* page is no longer available in the navigation. You can try entering the URL for *Order Details* page. This will only redirect you back to the home page.



If you logout, and log in as admin, the page will be available.

Order Details - Windows Internet Explorer
 http://localhost:30134/Northwind/Pages/OrderDetails.aspx

Welcome admin, Today is Monday, October 25, 2010 | My Account | Logout | Help

MyCompany

Home Customers Employees Categories Customer Demographics Region Reports Membership Site Actions

Home > Customers > Order Details

Order Details

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 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.

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Fields

Fields can also be secured through roles. You can specify some roles to only view the field as read-only, and specify other roles to not view the field at all.

Suppose that you need to protect certain fields from modification and/or viewing by unwanted users. *Northwind* allows editing of the *CustomerID* field, which could be disastrous if changed. Let's make this a read only field for standard users.

Customers - Windows Internet Explorer
 http://localhost:30134/Northwind/Pages/Customers.aspx

Welcome admin, Today is Monday, October 25, 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	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 helader...	Ana Trujillo	Owner	Avda. de la Constitución 2222	México D.F.	n/a	05021	Mexico	(5) 555-4729

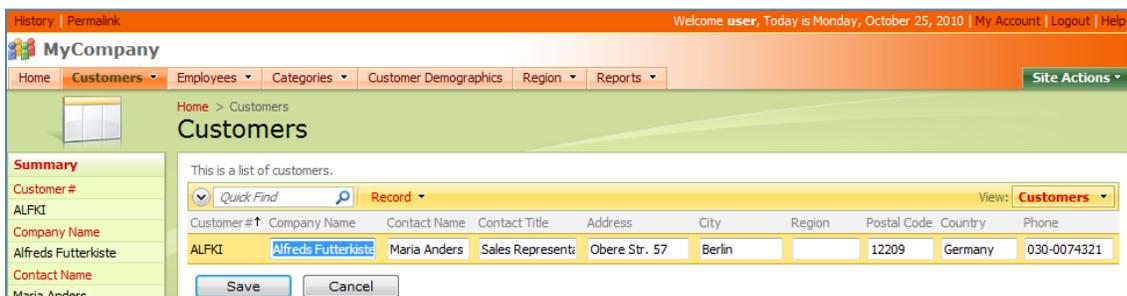
Run *Code On Time Generator*, click on the name of the project, and press the *Design* button. Click on the *Customers* controller in the *All Controllers* list. Navigate to the *Fields* tab, and select the *CustomerID* field.



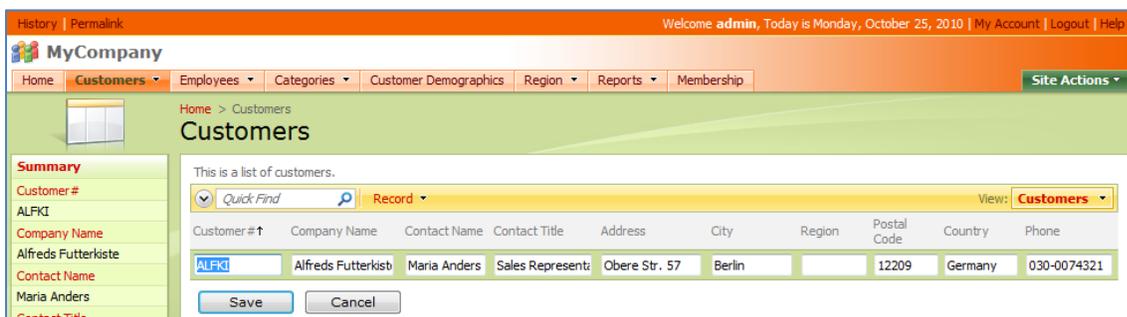
Edit *CustomerID*. Change the *Write Roles* field to “Administrators”. If you wanted the field completely hidden to standard users, you can write “Administrators” in the *Read Field*. Save the field, press *Close*, and generate the application.



When the web application loads in the browser, log in as standard user. When you edit a customer record, the *CustomerID* field will be read only.



If we log in as administrator, the *CustomerID* field will be editable again.



Actions

Suppose that you have a need to prevent some users from executing certain actions. By default, the standard user account can create, edit, and delete products. Let's change this so that the standard user can only view the products. Administrator will be the only role that can create, edit, and delete. There are several locations we will have to modify, such as the dropdown, the buttons on the action bar, and the buttons in detail view.

This will be done by switching to *Code On Time Generator*, clicking on the project name, and pressing on the *Designer* button. Select the *Products* controller. Switch to the *Action Groups* tab.

Id	Scope	Header Text	Flat Rendering
ag1	Grid	n/a	No
ag2	Form	n/a	No
ag3	Action Bar	New	Yes
ag4	Action Bar	Edit/Delete	Yes
ag5	Action Bar	Actions	No
ag6	Action Bar	Record	No
ag7	Action Bar	Report	No
ag8	Row	n/a	No

Click on *ag1*, or *Action Group 1*. Click on the actions tab. You can see that there is *Select*, *Edit*, a blank action, *Duplicate*, and *New*. These actions correspond to the dropdown next to the product name in the application.

Edit the *Edit* action. In the *Roles* field, type in "Administrators". This will insure that only users with the *Administrators* role can edit. Perform the same with *Delete*, *Duplicate*, and *New*.

Command Name	Command Argument	Header Text	When Last Command Name	When Last Command Argument	When Key Selected	When HRef (Regex)	When View (Regex)	When Tag (Regex)	Roles	Scope
Select	editForm1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Grid
Edit	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Administrators	Grid
Delete	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Administrators	Grid
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Grid
Duplicate	createForm1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Administrators	Grid
New	grid1		N/A		N/A				Administrators	Grid

Go back to the *Action Group* list. Navigate to *ag2*. Here is a long list of actions. Most of these are activated when a previous action has been selected, such as *Edit*, *New*, or *Duplicate*. In this case, the only actions that need modification would be the first two, without a *When Last Command Name* argument. Insert “Administrators” in their *Role* fields.

Command Name	Command Argument	Header Text	When Last Command Name	When Last Command Argument	When Key Selected	When HRef (Regex)	When View (Regex)	When Tag (Regex)	Roles	Scope
Edit	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Administrators	Form
Delete			N/A		N/A				Administrators	Form
Cancel	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Form

Go back to the *Action Group* list, and click on *ag3*. This action is the *New Product* button on the action bar. Change the *Role* field to “Administrators”.

Command Name	Command Argument	Header Text	When Last Command Name	When Last Command Argument	When Key Selected	When HRef (Regex)	When View (Regex)	When Tag (Regex)	Roles	Scope
New	createForm1		N/A		N/A				Administrators	Action Bar

On the *Action Group* list, navigate to *ag4*. These are the buttons that appear on the action bar when you select a record, *Edit* and *Delete*. Add “Administrators” to the *Role* fields of these actions. Now, generate the application.

Command Name	Command Argument	Header Text	When Last Command Name	When Last Command Argument	When Key Selected	When HRef (Regex)	When View (Regex)	When Tag (Regex)	Roles	Scope
Edit	editForm1	n/a	n/a	n/a	Yes	n/a	grid1	n/a	Administrators	Action Bar
Delete			N/A		Yes		grid1		Administrators	Action Bar

Login as user, and navigate to *Products*. First thing you will notice is that there is no *New Products* button. When you activate the dropdown menu, the only option available is *Select*. When you go into detail view, the only button available is *Close*.

History | Permalink Welcome user, Today is Monday, October 25, 2010 | My Account | Logout | Help

MyCompany

Home Customers Employees Categories Customer Demographics Region Reports Site Actions

Home > Categories > Products

Products

This is a list of products.

Quick Find Actions Report View: 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 Syru	Exotic Liquids	Condiments	12 - 550 ml bottles	\$10.00	13	70	25	No
Chef Antoin's Cajun Seasoning	New Orleans Cajun Delights	Condiments	48 - 6 oz jars	\$22.08	53	0	0	No
Chef Antoin'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
Unde 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

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Logout, and login as administrator. You can see that the *New*, *Edit*, and *Delete* buttons have returned.

History | Permalink Welcome admin, Today is Monday, October 25, 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.

Quick Find New Products Actions Report View: 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 S	Exotic Liquids	Condiments	12 - 550 ml bottles	\$10.00	13	70	25	No
Chef Antoin's Cajun Seasoning	New Orleans Cajun Delights	Condiments	48 - 6 oz jars	\$22.08	53	0	0	No
Chef Antoin'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
Unde 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

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