2011



USER GUIDE

DotNetNuke

This is a brief introduction to the new code generation project *DotNetNuke Factory*, available with <u>Code</u> <u>On Time</u> web application generator. You can now integrate a line-of-business web application with the popular web content management system <u>DotNetNuke</u>, the leading web content system for ASP.NET.

Why DotNetNuke?

If you have experience with creating database web applications, then you've probably considered using a dynamic portal to increase the flexibility of your web application.

One can easily picture a whole world built around a few business data enabled pages. Users register using a portal, with the latest release notes and instructions posted for their convenience. Add a quick online survey and a few blog posts to your web application, without a fuss.

If you try building such a portal on your own, you will soon find that the task is not that simple. While you may be the leading expert in web application design with a database to prove it, web content delivery is another topic altogether.

Content management systems such as DotNetNuke and Microsoft SharePoint are widely adopted by organizations and businesses of all sizes as repositories of knowledge and web assets.

<u>DotNetNuke</u> is a proven portal software built with ASP.NET, boasting countless installations and a large dedicated user base. The easily available Community Edition of this product makes it especially attractive for developers who need portal-style functionality in their application at a low cost.

Integrating DotNetNuke with Your Line-of-Business Application

DotNetNuke is exceptionally easy to install and maintain – done entirely in a web browser.

DotNetNuke has impressive extensibility. One popular method of extending DotNetNuke is module development. A "module" represents an area on a portal page that is rendered by a custom application. For example, a calendar of events or a survey can be implemented as a module and placed on any portal page.

You can also create a database application with complex data management features and have it incorporated in a DotNetNuke module.

The development process is somewhat complicated. Here is where <u>Code On Time</u>'s *DotNetNuke Factory* comes to the rescue. *DotNetNuke Factory* will aid you in building a dedicated application packaged as a DotNetNuke module. This module can be deployed to the portal in seconds.

WebMatrix and DotNetNuke

Many popular software titles, including DotNetNuke, were developed for Microsoft ASP.NET Web Platform. Microsoft has created <u>WebMatrix</u>, a vehicle to allow simple download and installation of many popular open source web applications. WebMatrix includes a lightweight version of Microsoft Internet Information Services called IIS Express. This web server makes it possible to run web applications on virtually any type of operating system from Microsoft. You will have to download WebMatrix at <u>http://webmatrix.com</u> to proceed with this tutorial.

Preparing a Database

DotNetNuke maintains its content in an SQL Server database. WebMatrix will automatically install SQL Express on your computer if you don't have it already.

If you are planning to build a line-of-business database web application then you may want to create an empty SQL Server database. If you already have a database with a few tables then you are good to go. We will use the *MyApp* database name going forward – the sample data will co-exist with the DotNetNuke tables and other database objects.

Installing DotNetNuke

Run WebMatrix and create a new web site from the Web Gallery. Select DotNetNuke and enter *MyDnn* in the Site Name box at the bottom of the screen. Click the *Next* button.



Accept the EULA and wait for DotNetNuke to download and install.

The new site will be opened in WebMatrix when the download process has been completed and the web site is ready for use. Click *Run* button on the tool bar to start the portal web site.

📚 📃 🗊 🗠 🖓 MyDNN - N	licrosoft WebMatrix			
Home			🕜 Online Help	
My Sites Site Site	Requests View			
MyDNN	MyDNN			
Requests URL: http://localhost:54540 Settings Path: http://localhost:54540				
	Files	Databases	Reports	
	Browse your files Start working by viewing, adding, or editing files for this web site.	Manage databases Create a new database or add an existing one to your web site.	Run a report Optimize your web site for search engines by finding broken hyperlinks, missing metadata and more.	
Site				
Files Databases	Set up the remote p To enable easy publis	publishing location for your web hing, enter your remote hosting info	site. ırmation.	
111 Reports	Need web besting t	for your web site?	-	

Your default web browser will display the DotNetNuke Installation Wizard. Choose *Typical* installation method and click *Next*.



Make sure that your site passes the file permissions check and press Next.

On the *Configure Database Connection* page, select your database server type and enter the database name. Enter *DNN* in the *Object Qualifier* input box. DotNetNuke will add this prefix to the names of all database objects that it needs to create, which will allow you to distinguish your own database tables from those that belong to the portal.

Click *Next* and wait for the installation of the system scripts to finish. If an error is displayed or "undefined...success" is looping, you have probably entered incorrect connection settings. Click *Next* when installation of database is complete.

You will be prompted to enter the identities of two users – *host* and *admin*. The first user "owns" the entire portal and can install any content including new modules. The second user is allowed to perform various administrative functions. We suggest that you enter passwords *host123%* and *admin123%* for the corresponding user identities for this tutorial. Leave the other settings as default.

Once complete, the portal home page will open and you will be automatically logged in as *host/host123%*.



Generating the DotNetNuke Factory Project

We are now ready to create our first line-of-business application integrated with DotNetNuke portal.

Start <u>Code On Time</u> generator and select *DotNetNuke Factory* project.

🕑 Welcome - Code OnTime	
Activation	
You are using Code OnTime Some of the project features r	Generator for Microsoft.NET. A collection of code generation projects is included. equire an activation code. Register your activation code.
My Projects	
Please start by selecting a proj code of the selected project ty	ject in the library below. The project wizard will guide you through a series of pages to gather information required to generate an application /pe. Some of the project features require a activation code.
New Project	
Azure Factory	Create an Azure Cloud solution from your SQL Azure database. Includes a Web Role and class library implementing a web site with navigation system, role-based security, membership manager, built-in data export, reporting, and much more. Have it online in 15 minutes.
DotNetNuke Factory	Creates application pages as controls with data views incorporated in a DotNetNuke module. Registered module can be configured by end users. Integrate a line-of-business database application with a popular open source web content management system in minutes.
Web App Factory	Create an ASP.NET/AJAX solution composed of a web application project and class library implementing a web site with navigation system, role-based security, membership manager, built-in data export and reporting, adaptive filtering, advanced search options, and much more.
Web Site Factory	Create an ASP.NET/AJAX web site with navigation system, role-based security, membership manager, built-in data export and reporting, adaptive filtering, advanced search options, and much more. The generated project is managed via the file system folder structure.
We recommend creating We Use free Microsoft Visual We	eb Site Factory project if this is your first time using Code On Time. No additional software is required. eb Developer Express to further customize generated projects when needed.
© 2011 Code OnTime LLC. All rig	ghts reserved. Version 5.0.0.72.

Enter *MyFirstDnnApp* in the project name and choose the implementation language for your application (the project must have a different name from your DNN website). The project wizard will show up. Under *DotNetNuke Location*, click on the "…" button on the right-hand side of the *Path to DotNetNuke Installation* field.

🕑 Namespace - Code OnTime
You are about to generate an ASP.NET/AJAX solution DotNetNuke Factory.
About This Project
This project generates application pages as controls with data views. Controls are incorporated in a DotNetNuke module. Published module can be hosted in a DotNetNuke portal and configured by end users. Integrate your line- of-business database application with a popular open source web content management system in minutes.
Data Aquarium Framework is in the foundation of this <i>Visual Studio Solution</i> . The project includes a collection of code files, a single web service, and a few JavaScript components. The framework relies on XML data controller descriptors that combine SQL queries, data fields, views, and actions to render an advanced AJAX-powered presentation.
DotNetNuke Location
Please specify a location of DotNetNuke portal instance that will be used for development and testing.
Path to DotNetNuke Installation:
Namespace and Framework
C# is the programming language of this project. The application framework code will be implemented in a custom namespace. Namespace: MvCompany_MvEirstDonApp
The same identifier will be also used to name the web application theme and the connection string in the configuration file.
Framework:
Cancel Next

Browse to [My Documents]\My Web Sites\MyDnn and press OK.



Click Next and you will arrive to the Database Connection page.

Typically, your application will share the database with DotNetNuke, particularly if you plan to sell or distribute your module to other owners of DotNetNuke portals. If this is your situation, leave "Use connection string of the host application" box checked.

You can also use DotNetNuke as a powerful front end for the Internet facing portion of your web site and build an application with other types of backend database servers such Oracle and MySQL. If this is the case then make sure to uncheck "Use connection string of the host application" box and configure your database connection.

If you are creating your first app in a blank SQL Server database then we suggest populating this database with content. Click the "..." button next to *Connection String* field.



Select Northwind under Sample Tables and click Install.

Database:	
МуАрр	Create
Sample Tables: You can popluate the application datab Northwind	ase with sample tables.
Pe	pulate database with sample tables.

Your database will be populated with the contents of the sample *Northwind* database. This content now co-exists with DotNetNuke database objects. Click *OK* to confirm successful installation and click OK one more time to finish connection string configuration.

Click *Next* button to proceed. Preserve the defaults on the *Business Logic Layer* page. Click *Next* and enable dynamic and static reports. Click *Next* and select *Package Properties*. Enter *My First DNN App* as the *Friendly Name* of our application. This will be used by DotNetNuke to identify our application.

Features - Code OnTime	
Please specify global features of the generat	ed baseline application.
Features	
Form Properties Grid Properties Lookups Annotations EASE Configuration Package Properties	Some types of projects support properties such as Version as Friendly Name that are incorporated in the compiled binaries of generated applications. If the property values are not entered then default values are assigned automatically. Enter package properties Package Properties Version = 01.00.00 Friendly Name = My First DNN App Description = DotNetNuke Factory application module Owner Name = Code On Time LLC Owner Url = http://codeontime.com Owner Email = customerservice@codeontime.com
	List one property per line. Property name may contain spaces. Property Name = Property Value The list of supported project properties depends on the project type.
	Cancel Back Next +
10/11/2011 4:02:17 AM) REFERENCES 10/11/2011 4:02:17 AM [Temto 10/11/2011 4:02:17 AM) 10/11/2011 4:02:17 AM Sample "02 Northwind 10/11/2011 4:02:17 AM	[dbo].[Temtories] (y/D] ************************************

Click *Next* a few more times until you reach the summary of application data controllers. Click *Generate* to have the code generator produce the application source code. Upon generation, a test web application login page will be displayed. Sign in as *admin/admin123%*.

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(←)(→) 🥔 http:	://localhost:37506/Login.aspx?ReturnUrl= : 🔎 👻 🗟 🗙 🚹 🖈	⊂ ₽
🥖 DotNetNuke Facto	ory Login 🗙 🔤	
		*
Please enter	a user name and nassword registered	
in the develo	pment instance of DotNetNuke portal.	
	Log In	
User Name:	admin	
Password:	••••••	
Rememb	er me next time.	
		-
		Ŧ

You will have to select a logical page to display. Select *Customers* and press *Update* to save the selection.

		× □ - □ ☆ ★ ☆ × 5⊴ - Q
		admin Logout
Customers Customers / Orders Customers / Order Demo Customers / Order Details Employees Employees / Employee Territories Categories Categories Categories Products Customer Demographics Region Region / Territories Region / Shippers Region / Suppliers Reports Reports Alphabetical list of products	This page allows customers management.	E
Update Cancel	Right Pan	
Footer		

The logical page will be loaded in your browser.

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	🖉 http://localhost:37506/Start.as	px						Q - 2	¢× î ★
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Quick	Find New Custom	ers Actions •	Report •					View:	Customers •
A filter	has been applied. Country includes	Canada, Germany.							x
istomer#	Company Name	Contact Name	Contact Title	Address	City	Region	Postal Code	Country V	Phone
LFKI	Alfreds Futterkiste	Maria Anders	Sales Representative	Obere Str. 57	Berlin	n/a	12209	Germany	030-0074321
LAUS	Blauer See Delikatessen	Hanna Moos	Sales Representative	Forsterstr. 57	Mannheim	n/a	68306	Germany	0621-08460
оттм	Bottom-Dollar Markets	Elizabeth Lincoln	Accounting Manager	23 Tsawassen Blvd.	Tsawassen	BC	T2F 8M4	Canada	(604) 555-4729
	Drachenblut Delikatessen	Sven Ottlieb	Order Administrator	Walserweg 21	Aachen	n/a	52066	Germany	0241-039123
RACD									
RACD	Frankenversand	Peter Franken	Marketing Manager	Berliner Platz 43	München	n/a	80805	Germany	089-0877310
RACD RANK OENE	Frankenversand Königlich Essen	Peter Franken Philip Cramer	Marketing Manager Sales Associate	Berliner Platz 43 Maubelstr. 90	München Brandenburg	n/a n/a	80805 14776	Germany Germany	089-0877310 0555-09876
RACD RANK OENE AUGB	Frankenversand Königlich Essen Laughing Bacchus Wine Cellars	Peter Franken Philip Cramer Yoshi Tannamuri	Marketing Manager Sales Associate Marketing Assistant	Berliner Platz 43 Maubelstr. 90 1900 Oak St.	München Brandenburg Vancouver	n/a n/a BC	80805 14776 V3F 2K1	Germany Germany Canada	089-0877310 0555-09876 (604) 555-3392
RACD RANK COENE AUGB EHMS	Frankenversand Königlich Essen Laughing Bacchus Wine Cellars Lehmanns Marktstand	Peter Franken Philip Cramer Yoshi Tannamuri Renate Messner	Marketing Manager Sales Associate Marketing Assistant Sales Representative	Berliner Platz 43 Maubelstr. 90 1900 Oak St. Magazinweg 7	München Brandenburg Vancouver Frankfurt a.M.	n/a n/a BC n/a	80805 14776 V3F 2K1 60528	Germany Germany Canada Germany	089-0877310 0555-09876 (604) 555-3392 069-0245984
RANK COENE AUGB EHMS IEREP	Frankenversand Königlich Essen Laughing Bacchus Wine Cellars Lehmanns Marktstand Mère Paillarde	Peter Franken Philip Cramer Yoshi Tannamuri Renate Messner Jean Fresnière	Marketing Manager Sales Associate Marketing Assistant Sales Representative Marketing Assistant	Berliner Platz 43 Maubelstr. 90 1900 Oak St. Magazinweg 7 43 rue St. Laurent	München Brandenburg Vancouver Frankfurt a.M. Montréal	n/a n/a BC n/a Québec	80805 14776 V3F 2K1 60528 H1J 1C3	Germany Germany Canada Germany Canada	089-0877310 0555-09876 (604) 555-3392 069-0245984 (514) 555-8054
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The pages in the screen shots above are not a part of DotNetNuke portal. These pages simulate a hosting environment for your application. Your application "lives" in the *Preview* area of the main page of the host application.

This test web app is useful for making changes to the application and quickly previewing. You can log out and try different identities and configure the host page to present different logical pages of your applications.

Publishing DotNetNuke Factory Project

Now it's time to publish our application to DotNetNuke portal.

Bring up <u>Code On Time</u> generator and select the *publish* action next to your project.

#	Project Name	Туре	Last Modified	Actions
1.	MyFirstDnnApp 🥝	DotNetNuke Factory	10/11/2011 4:09 AM	open, develop, <u>publish</u> , browse

The resource file used to distribute DotNetNuke modules is created for your application and presented in *Windows Explorer* folder window. You can use this file to install your application in a different portal. The code generator will also copy this resource into the installation folder of the previously specified DotNetNuke instance.

We can now continue installation from within our own DotNetNuke portal.

Installing DotNetNuke Factory Module

Bring up the browser window with DotNetNuke portal. If you have lost the window then start the application again using WebMatrix. Login as *host/host123%*. Only host users are allowed to install new modules and other types of extensions. Click on the *Host* link at the top of the portal page.

ϵ	💐 http://localhost:54540/defa	ult.aspx		
🕺 My Web	site > Getting Started ×	Spatial Contract of		
Admin	<u>Host</u> Modules Pages Too	ls		
Getting	Host Features			
	Host Settings	Portals	😑 File Manager	
	S Vendors	🌆 SQL	🔄 Schedule	
	💦 Search Admin	📰 Lists	SuperUser Accounts	
	Extensions	Dashboard	🍜 What's New	
📝 Mar	Configuration Manager Professional Features	HTML Editor Manager		
	📑 Manage Web Servers	💼 Health Monitoring	Application Integrity	Revelation of the second
	👵 Search Crawler Admin	🍇 Security Center	luser Switcher 🍪	Proper
	🚨 Technical Support	My Support Tickets	📑 Activate Your License	E Care

Click Extensions option under Basic Features.



K My V	→ 💐 htt Vebsite > H	p://localhost:54540/Host/Extensions/tabio lost > Exten ×	i/36/portalid/0/Default.aspx		← □ - ↓ ★ ↑ ×5≊-Q	¢
Admi	n Host	Modules Pages Tools			Mode Edit	ĥ
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9		DTNETNUKE		LOGOUT	I SUPERUSER ACCOUNT	ш
YOU	ARE HERE:	Host Extensions				
EVT						
EX	EN210	N2				
In	nstalled Ext	ensions Available Extensions Pu	Irchased Extensions More Extensions		Collapse All	
	Authe	ntication Systems			^	
		Name	Description	Version		
	&	DNN_ActiveDirectoryAuthentication	The DotNetNuke Active Directory Authentication Project is an Authentication provider for DotNetNuke that uses the Windows Active Directory authentication protocol to authenticate users.	5.0.2	Install	
	Modul	les			^	
		Name	Description	Version		
	÷	Announcements	This module renders a list of announcements. Each announcement includes title, text and a "read more" link.	4.0.3	Install	Ŧ

Click on the Available Extensions tab and expand the Modules section.

Find *My First DNN App* and start installation.

÷	Media	This module renders Media files of various kinds, including social media, images, videos, music, and more.	4.0.0	Install
æ	My First DNN App	DotNetNuke Factory application module	1.0.0	Install
æ	News Feeds (RSS)	News Feed allows you to aggregate a collection of syndicated news feeds in Rich Site Summary (RSS) format and render the results in a single sorted list.	4.2.1	Install

Make sure to check the box titled "Ignore File Restrictions". DotNetNuke maintains a list of "approved" applications. Ours is brand new and is not going to be on the list.

Click the *Next* button a few times. Note that both release notes and license can be changed if you open the application in Visual Studio.

Accept the license and allow installation to finish. Press the Return button once, and wait for the page to refresh by itself while the application pool of the portal is restarted. Our module is now installed and can be found (and uninstalled) on *Installed Extensions* tab.

Navigate to the home page of your application. Add a new page titled *Northwind* by moving your mouse over the word *Pages* and enter page information under *Add New Page* section. Make sure the page is inserted after *News & Promotions*.



The new page will be created and displayed as a *Northwind* option on the menu.



Settings can be activated if you mouse over *Pages* at the top and click *Page Settings*. Change page *Permissions* to ensure that only registered users can see the content.

+ ttp://localhost:54540/N	lorthwind.as	рх				ראף אלא אלא א	n ★ ☆
💐 My Website > Northwind 🛛 🗙 📃							
Admin Host Modules Pages	Tools					Mode Edit	-
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Administrators	<u></u>	<u> </u>					
All Users		U					
Registered Users	ň						
Translator (en-US)							
Unauthenticated Users							
Username:		_		Add			- 1
Update Page Delete (Cancel						1
Created By SuperUser Account C	On 10/11/2011	4:35:24 AM					
Last Updated By SuperUser Acco	ount On 10/11	/2011 4:35:24 AM					
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Mouse over the transparent *Manage* button displayed in the top left corner of the ENTER TITLE content module. The button will become opaque and will show you the menu of available options. Delete the content module from the *Northwind* page.

0	Сот	NETNUKE
1	YOU ARE HERE:	lorthwind
E	Manage LE	
н	Edit	
	📝 Edit Content	🔍 My Work
	Admin	
	G Export Content	Import Content
	🚺 Help	Online Help
	Ciew Source	Settings
	8 Delete	O Refresh

Mouse over *Modules* link at the top of the page, select *All Categories* under *Category*, and choose *My First DNN App* option. Enter *Northwind* in the module *Title*, and press the *Add Module* button.

Admin Host I	Modules Page	s Tools					
Getting Started	Add Module Add New Module Sele	Module O Add Existing Module Find More Extensions ction	News & Promotions				
	Category	All Categories 🔹					
	Module	My First DNN App 🔹					
YOU ARE HERE:	Title	Northwind					
	Visibility:	Same As Page 🔹					
	Module Location						
	Pane	ContentPane 🔻					
	Insert	Bottom 💌					
	Module	▼					
		Add Module					
		Add Module					

The module is instantiated and now requires logical page selection.

TNETNUKË
Northwind
age is not selected. Please click Manage Settings to select a logic application page.

Mouse over the transparent *Manage* button and select *Settings*.

N	Manage ND	
L	Admin	
	🗾 Help	Ciew Source
- 1	Settings	🐻 Delete
	Nefresh	

Select My First DNN App Settings tab and select Customers page.



Select *Page Settings* tab and, under *Basic Settings*, set *Module Container* to *Host: DarkNight – Invisible*. Update module settings by clicking on *Update* button at the bottom of the screen.

						10		he	ode Edit
Getting Star	ted Home Ab	out Us Our Serv	ices News & Pro	motions Northwind		9	8		٩
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YOU ARE HER	RE: Northwind								
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Customer# C	ompany Name	Contact Name	Contact Title	Address	City	Region	Postal Code	Country	Phone
ALFKI A	freds Futterkiste	Maria Anders	Sales Representative	Obere Str. 57	Berlin	n/a	12209	Germany	030-0074321
ANATR A	na Trujillo Emparedados y he	lados Ana Trujillo	Owner	Avda. de la Constitución 2222	México D.F.	n/a	05021	Mexico	(5) 555-4729
ANTON A	ntonio Moreno Taquenía	Antonio Moreno	Owner	Mataderos 2312	México D.F.	n/a	05023	Mexico	(5) 555-3932
AROUT A	round the Horn	Thomas Hardy	Sales Representative	120 Hanover Sq.	London	n/a	WA1 1DP	UK	(171) 555-7788
BERGS B	erglunds snabbköp	Christina Berglu	d Order Administrator	Berguvsvägen 8	Luleå	n/a	5-958 22	Sweden	0921-12 34 65
BLAUS BI	lauer See Delikatessen	Hanna Moos	Sales Representative	Forsterstr. 57	Mannheim	n/a	68306	Germany	0621-08460
BLONP BI	londesddsl père et fils	Frédérique Citea	ux Marketing Manager	24, place Kléber	Strasbourg	n/a	67000	France	88.60.15.31
BOLID B	ólido Comidas preparadas	Martín Sommer	Owner	C/ Araquil, 67	Madrid	n/a	28023	Spain	(91) 555 22 82
BONAP B	on app'	Laurence Lebiha	n Owner	12, rue des Bouchers	Marseille	n/a	13008	France	91.24.45.40
BOTTM B	ottom-Dollar Markets	Elizabeth Lincolr	Accounting Manager	23 Tsawassen Blvd.	Tsawassen	BC	T2F 8M4	Canada	(604) 555-4729
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e Previous I P	1/22/139/	10/20/199/ 9/20/	1997 rederal Shipp	ing \$1.03 Anto	ner name: 5	aquena	matager	ing 1-5 of	7 items Refresh
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An application page similar to the one in the picture will show up.

Making Changes to Your Project

If you modify your web application in Code On Time Designer, you can use the test web application of the project to test the changes.

Publish the project when you are satisfied with your modifications. A resource file will always be created upon publication. If the module has been installed, then the installed version will be automatically updated to the latest version. Simply bring up the browser window with the portal page and refresh the page to see the changes.

Conclusion

Implementation of line-of-business web applications integrated with DotNetNuke portal is made easy with <u>Code On Time</u> generator and *DotNetNuke Factory*.