

SAMPLE CHAPTER

Silverlight 5

IN ACTION

Revised Edition of
Silverlight 4 in Action

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MANNING



Silverlight 5 in Action

by Pete Brown

Appendix A

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brief contents

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appendix A:

Database, connection, and data model setup

In several examples in this book, including those in the printing (see chapter 31), MVVM (see chapter 33), and WCF RIA Services (see ebook appendices D, E, and F), you need to work against database data and an entity data model. For this you'll need SQL Server with the AdventureWorks database loaded.

In this appendix, you'll install the database, then create the database connection and the entity data model. The entity data model will be added to the ASP.NET web project in your Silverlight solution. The steps are intended to be performed as part of a larger project setup. You'll be referred to this appendix at a specific point in each of the chapters, by which time you'll already have a basic solution setup.

A.1 *Install the AdventureWorks database*

If your database installation doesn't already contain the AdventureWorks database, visit <http://msftdbprodsamples.codeplex.com/> to download the latest version for your database version.

The CodePlex database sample site includes a number of database releases for the various editions of SQL Server, up to SQL Server 2010 RC0 as of this writing. My own dedicated database server is running SQL Server 2008, and I have a local SQL Server Express 2008 database instance that came with Visual Studio 2010. The sample databases will install on either one.

A.1.1 *Installing on a dedicated SQL Server instance*

In this setup and in all of my examples, I'm using SQL Server 2008 on a dedicated server. You can install locally or use a separate server or virtual machine (VM). Though I haven't tested with older versions, this should also work on SQL Server 2005. A default installation of Visual Studio 2010 up-level versions (such as Pro and Ultimate)

includes SQL Server Express 2008. If you have an MSDN subscription, you can also download the developer editions of SQL Server through your subscription program.

If you have a full SQL Server 2008 installation, you can download the full MSI and install the suite of databases. Once the database is installed, you can set up the database connection and create the entity data model.

The CodePlex site includes a walkthrough (kept current with the releases) showing how to install the sample databases. Depending on the engine you're using and the options selected when you installed your database server, some databases may not be available to you. The only database you use in this book is AdventureWorks, also called AdventureWorks OLTP. You can ignore the warehousing and reporting databases if you wish—I don't use them in the examples. There are so many of them, you should simply not bother installing the warehouse databases unless you know you need them for something else.

If you're not using a full dedicated installation of SQL Server, you'll want to install using SQL Server Express.

A.1.2 Installing on SQL Server Express

SQL Server Express comes with most editions of Visual Studio and installs by default. It's the default database server used for ASP.NET membership, role, and session information on a development machine. But because it doesn't install any client tools, many folks don't realize it's there.

As with the dedicated SQL Server instance install, you can download the full MSI and install the suite of databases. You can safely ignore the warehousing and reporting databases. Once the database is installed, you can set up the database connection and create the entity data model.

If you're not running a full instance of SQL Server, the databases will install locally with SQL Server Express. When using SQL Server Express, you have two options:

- Install the databases locally, then use them like any other SQL Server installation (this doesn't work in all install scenarios).
- Install the databases locally, then drag the AdventureWorks.mdb file into your App_Data folder on the ASP.NET project.

I prefer the second option; it simplifies the creation of the database connection, and it's supported in most installation scenarios. But either option will typically work.

Regardless of whether you used a local SQL Server instance or a remote one, once you have the AdventureWorks database installed you'll need to create the database connection and the entities.

A.2 Database connection and entities

First create a Silverlight project for the example you're following. Be sure you create the associated web project (the default action), because that's where the connection information and any services will live. The new project dialog for the default Silverlight project type will look like figure A.1. The dialog for the Silverlight Business

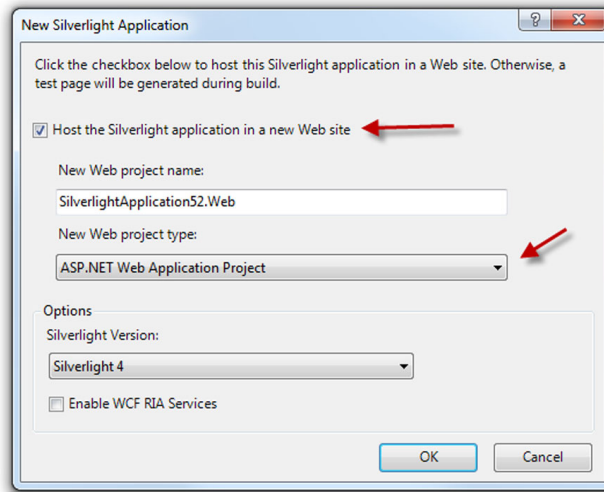


Figure A.1 When creating the Silverlight application, be sure to host the application in a new web application.

Application template will be different and will have the options already set; WCF RIA Services projects using the business application template will automatically create the correct projects by default.

Once you have the project created, the next step is to add the database connection and create some entities.

Right-click the web project in the Solution Explorer and choose Add New Item. In the Data section of the installed templates, select ADO.NET Entity Data Model. Name that entity data model `AdventureWorksEntities.edmx`. Figure A.2 shows the dialog with the correct template selected and named.

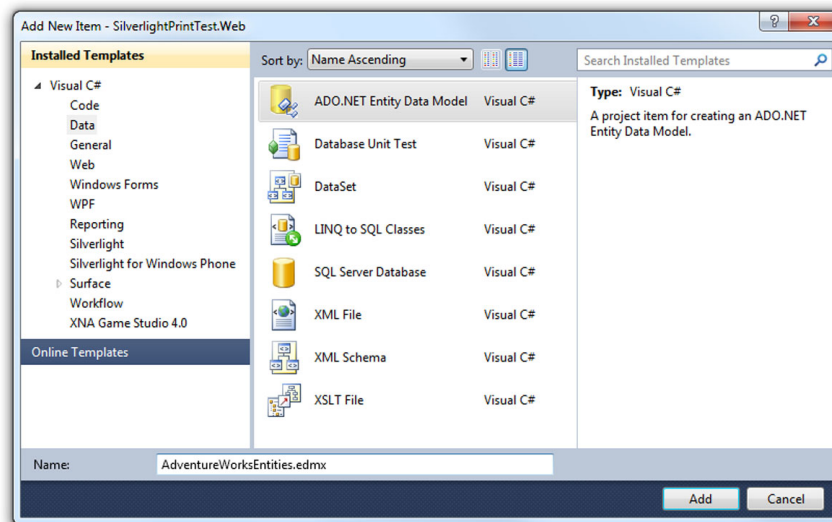


Figure A.2 Creating the AdventureWorksEntities entity data model

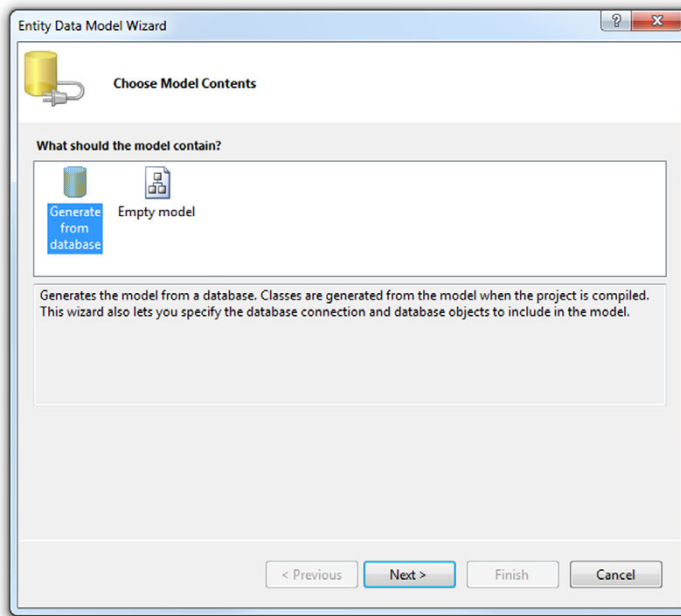


Figure A.3 The first step of the Entity Data Model Wizard. Be sure to choose Generate from Database.

Once you click Add, Visual Studio will walk you through a wizard that makes the process of generating the model pretty easy. In the first page of the wizard, choose Generate from Database and click Next. The other option, Empty Model, would require you to build the entities from scratch. Figure A.3 shows the wizard dialog with the correct option selected.

You'll then be presented with the Choose Your Data Connection step, as shown in figure A.4. If the AdventureWorks database isn't located in the connection list, click the New Connection button and create a new Microsoft SQL Server (SqlClient) connection to your database.

If you already have a connection for AdventureWorks set up, simply select that. The authentication method chosen will differ depending on your SQL Server setup. Figure A.5 shows how my dialog looks, with all the overly interesting parts redacted.

Once the connection is created, allow the dialog to save the entity connection string as `AdventureWorksEntities`. Also, if you're using SQL Server authentication, check the option to include the sensitive data (password) in the connection string, as shown in the two radio buttons in the middle of figure A.4.

If saving the connection information makes you uncomfortable, you can either try with Windows Authentication (depends on the machine or network setup) or create a dedicated SQL Server account with limited rights just for the sample. Of the choices, I recommend the dedicated SQL Server account.

Once the connection is picked or newly set up, you'll be prompted to select the entities to be added to the model.

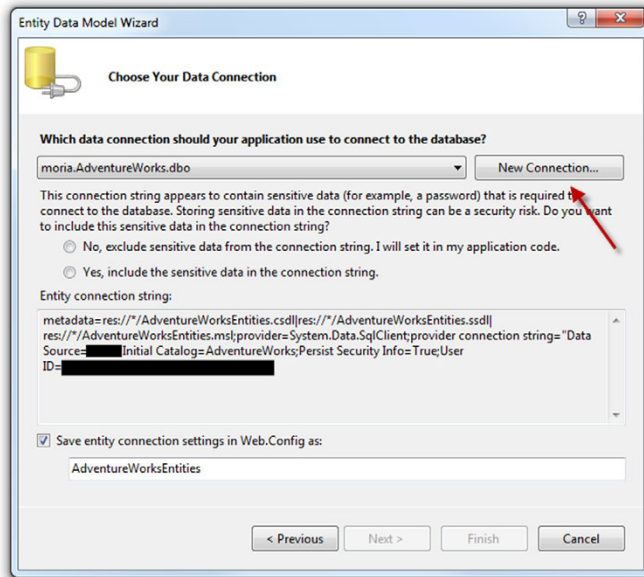


Figure A.4 The Choose Your Data Connection dialog box. If you don't already have an AdventureWorks connection created, click the New Connection button. This screenshot shows the data connection dialog with a valid data connection already selected by default.

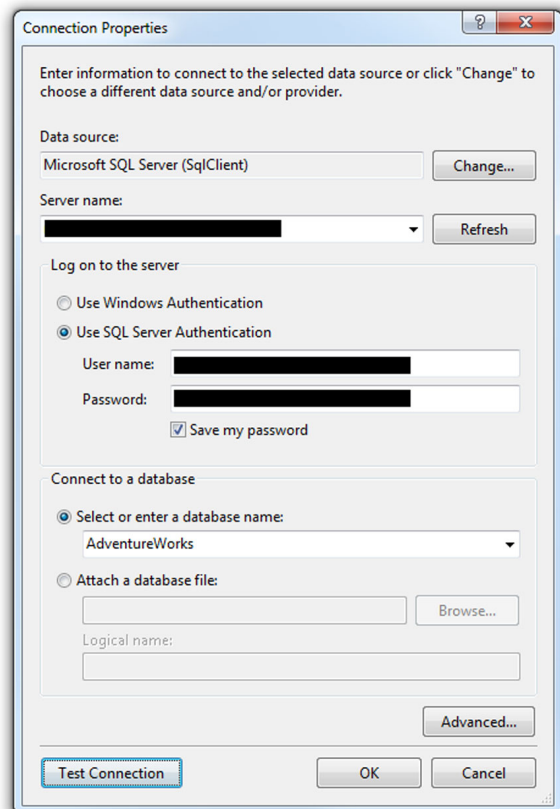


Figure A.5 Creating a new connection to the AdventureWorks database. Be sure to test the connection.

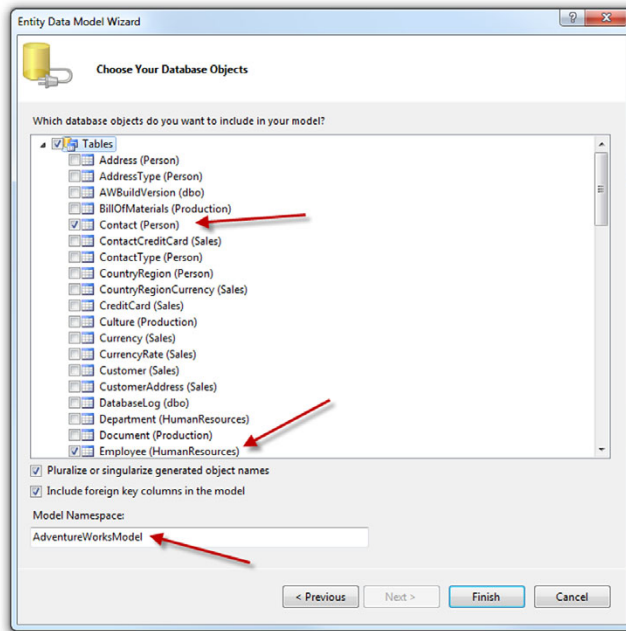


Figure A.6 Select the **Contact** and **Employee** tables from the **AdventureWorks** database. Leave the model namespace set to **AdventureWorksModel**.

A.2.1 Choosing the entities to create

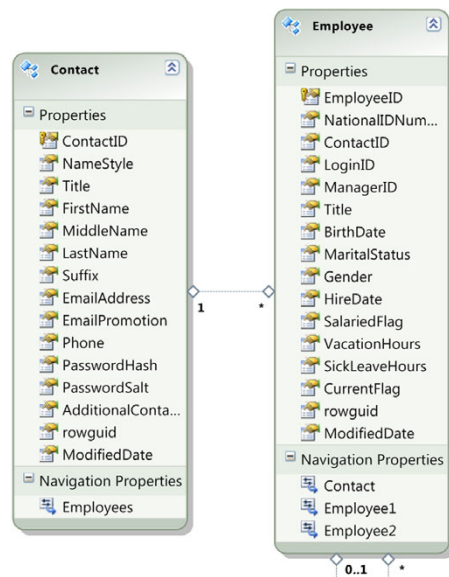
On the Choose Your Database Objects page, select the Employee (Human Resources) table and the Contact (Person) table. Leave the other options as is, including setting the namespace to `AdventureWorksModel`. Figure A.6 shows the correct selected tables and the correct model name.

You can name the model anything you'd like. But to follow the examples in the book and use the code listings, you'll want to use the names indicated in the screenshots here.

At this point, you're able to finish the wizard. The wizard will process for a few seconds, and then add the connection information to your configuration file and the model .edmx and .edmx.cs files to your web project. The created .edmx file should look something like figure A.7 when opened in the designer.

Once you have the data model in place, build the solution to get all the types loaded, and then continue with the rest of the sample in the chapter.

Figure A.7 The **AdventureWorks** model viewed in the model designer. Double-click the EDMX file in the web project to view it on the design surface.



Silverlight 5 IN ACTION

Pete Brown



This hands-on guide explores Silverlight from the ground up, covering every feature in rich, practical detail. It is readable and the coverage is comprehensive. You'll master networking, MVVM, and more, with dozens of code samples you can use in Visual Studio or the free Visual Web Developer Express.

Silverlight 5 in Action teaches you how to build desktop-quality applications you can deploy on the web. Beginners will appreciate the progression from simple examples to full applications that employ good design and coding practices. Seasoned .NET developers will love how the sample code embraces and extends what they already know.

What's Inside

- 2D and 3D graphics and animation
- Business application services, rules, and validation
- The MVVM pattern and testing
- 5 free appendixes (200 pages) available online

A background in C# or VB.NET is helpful, but no knowledge of Silverlight or XAML is required. This book is a revised edition of *Silverlight 4 in Action*.

Pete Brown leads Microsoft's Silverlight/XAML Developer Community team. He's been a Silverlight MVP, an INETA speaker, and successful RIA Architect.

To download a free eBook plus additional content in PDF, ePub and Kindle formats, owners of this book should visit manning.com/Silverlight5inAction

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