Chapter 3: PDSC Tools - Haystack Usage

The Haystack Code Generator creates entity classes, repository classes, view models, controllers and .cshtml files you can drop into the PDSC Framework template for a complete set of search, add, edit, and delete pages for each table in your database.

Using Haystack

Locate the PDSC-Haystack folder and run the **Haystack.exe** file. You should be presented with a screen that looks like Figure 1. If this is not the first thing you see, then go back to Chapter 1 to learn how to install Haystack for the first time.

Create a New Project

The first step for generating code using Haystack is to create project that points to your sample application database you created in SQL Server. Click on the **New** button to create a new project as shown in Figure 1.
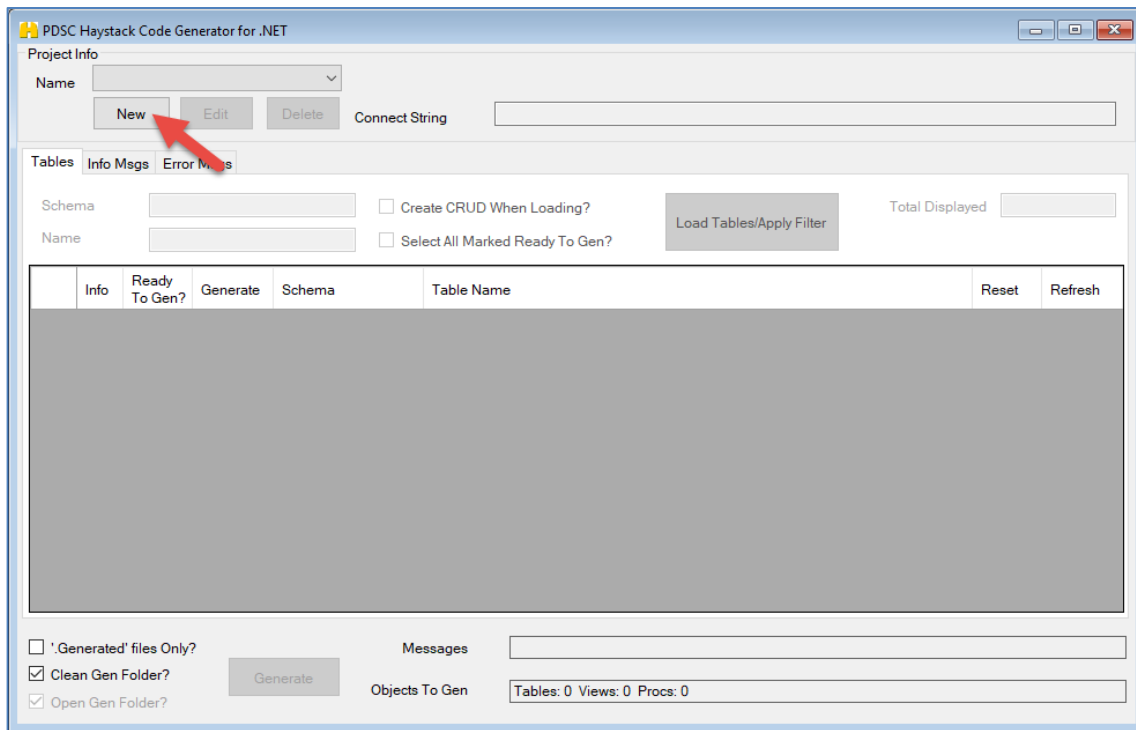
Figure 1: Create a new project to start generating code

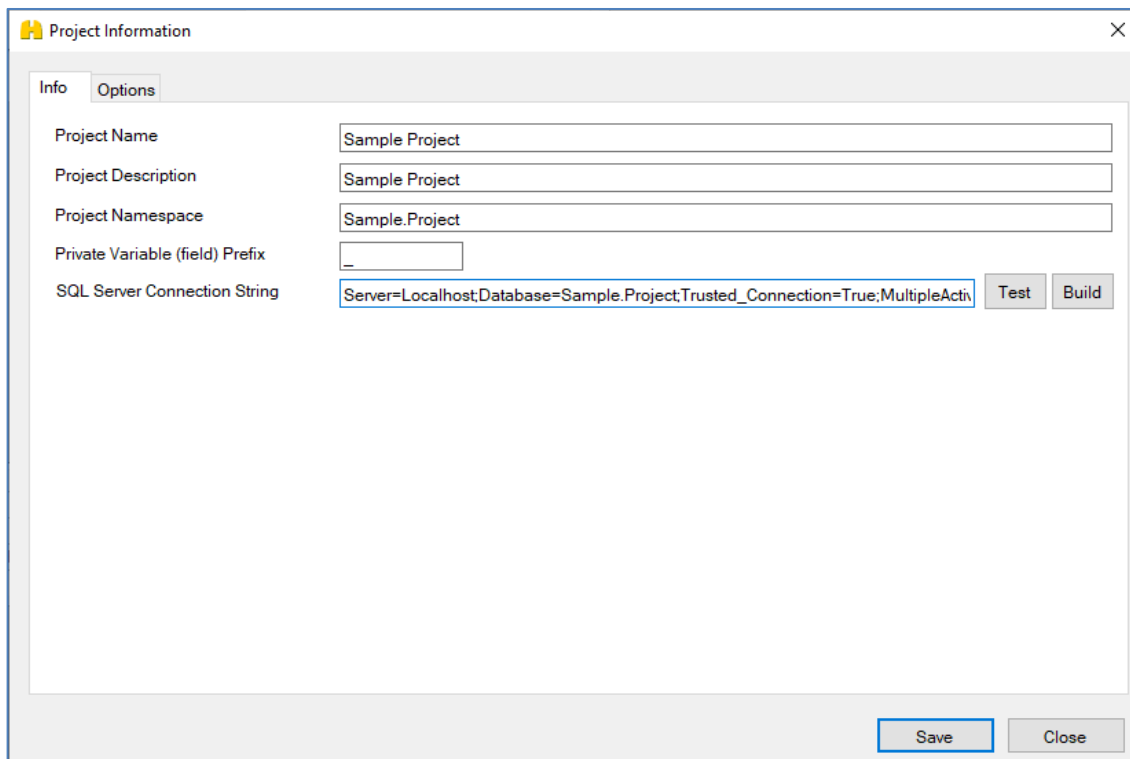After clicking on the **New** button you should see a screen that looks like Figure 2.

Figure 2: Add the new project information

Fill in the Project Name, Project Description and the Project Namespace. The project namespace should be a valid C# namespace identifier (no spaces, etc.). Add a valid connection string to point to the Sample.Project database you created earlier in this documentation. Click the Test button to ensure you created it correctly.

Click on the Options tab (Figure 3) to display information you can use to personalize any comments where you want your name generated, or what the required messages should look like.
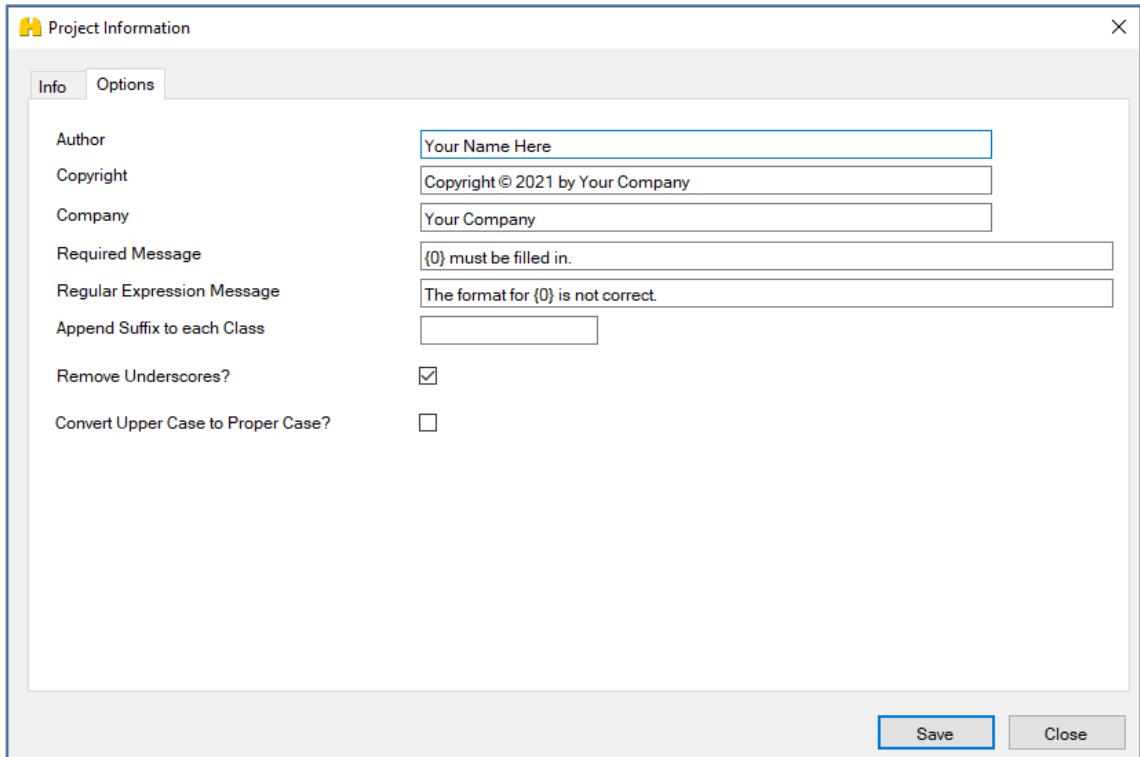

Figure 3: Fill in your information

Click the **Save** button once you are complete with all this information.

Load Tables

After saving your new project information click on the **Load Tables/Apply Filter** button (See Figure 4, item #1). Once the tables have been loaded, locate the Customer table and click on the **Info** button (See Figure 4, item #2).
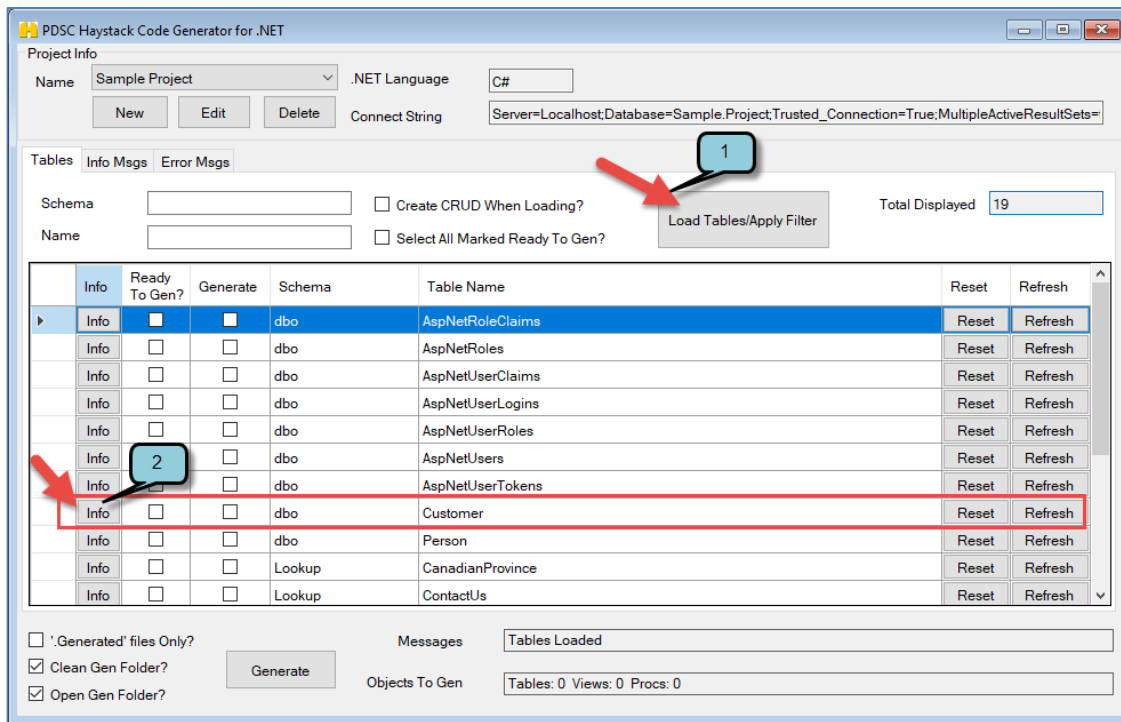
Figure 4: Load tables for generation

After clicking the Info button, you should see a screen that looks like Figure 5. While you don't need to do anything else, you can double-click on each column and set various properties to help you customize what is generated by Haystack. For now, just click on the **Save** button.
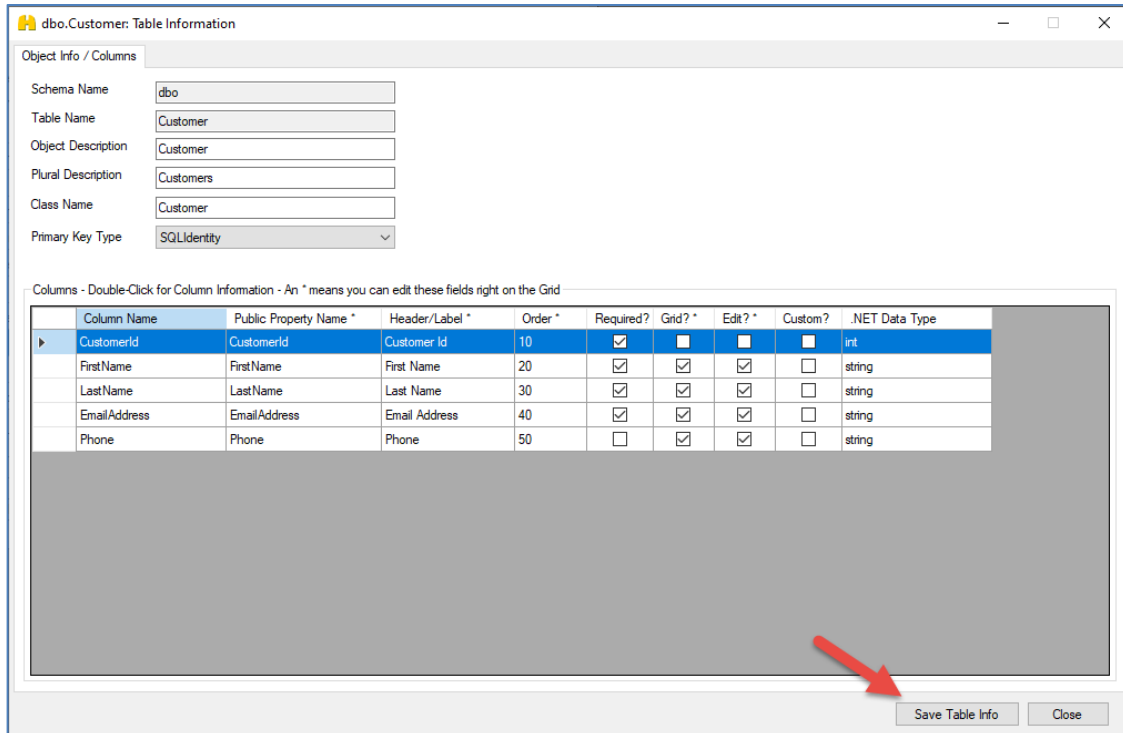
Figure 5: The columns for the table are loaded on this screen.

Click on the **Generate** button, Figure 6, to generate the MVC and C# files for the selected Customer table.
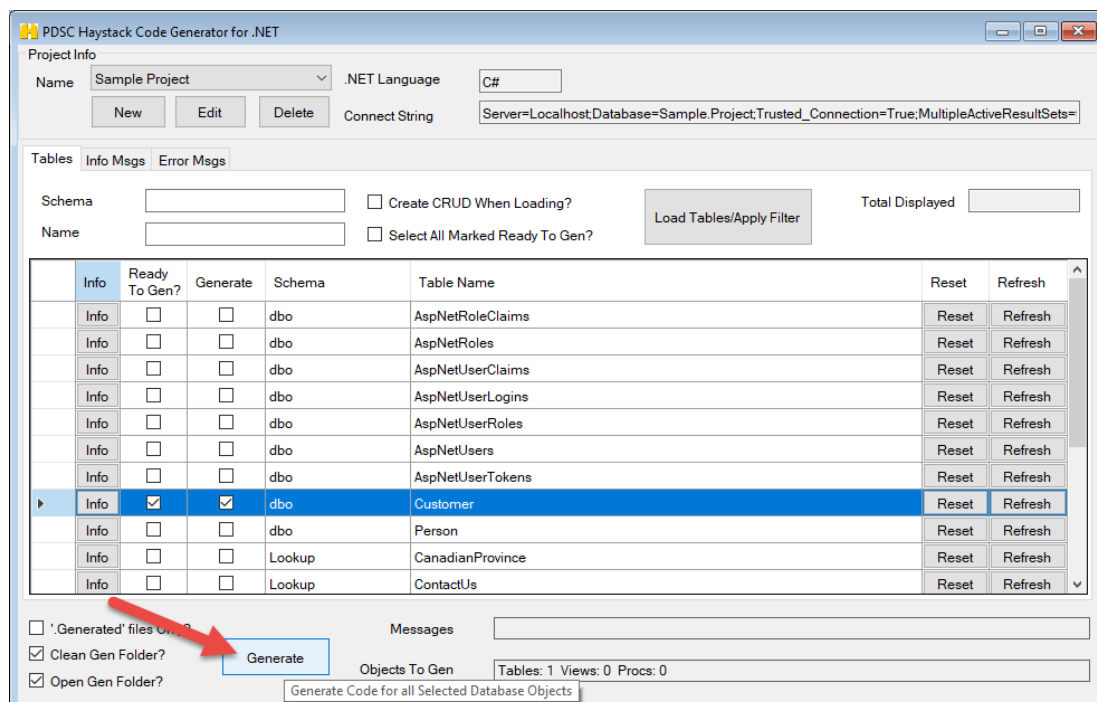

Figure 6: Generate the files for adding to your project

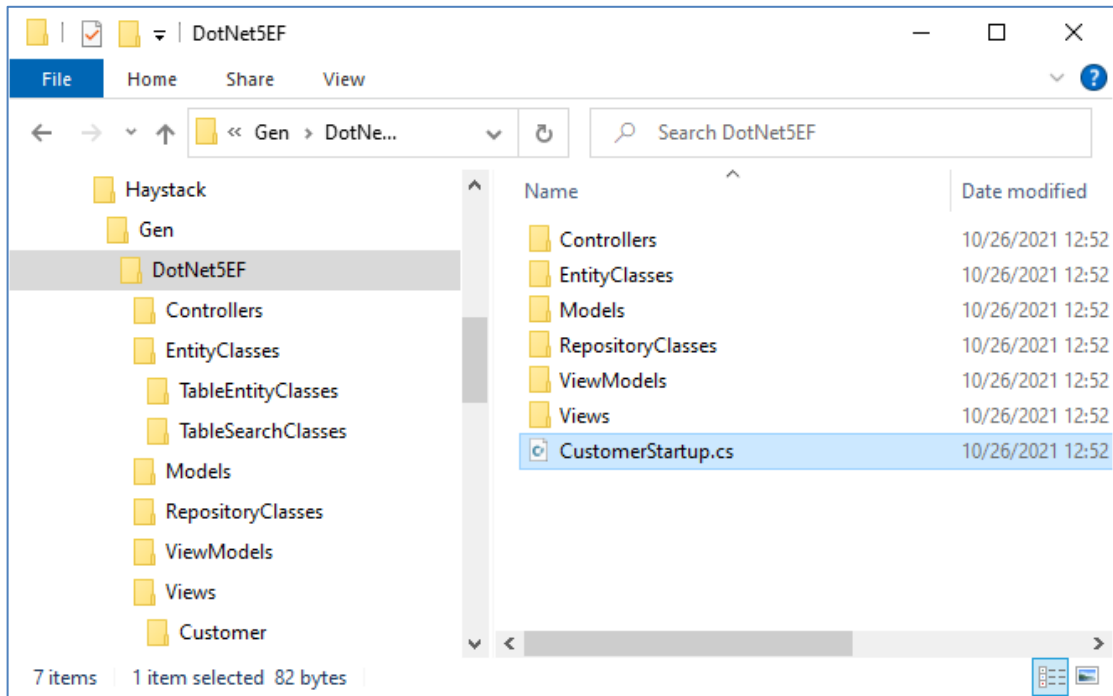After the generation, a Windows Explorer window will open that looks like Figure 7.

Figure 7: The generated files are in the \My Documents\Haystack folder

Once the generation is complete, you can now start to copy the folders/files into the appropriate folders/projects in your Sample Project (Figure 8).
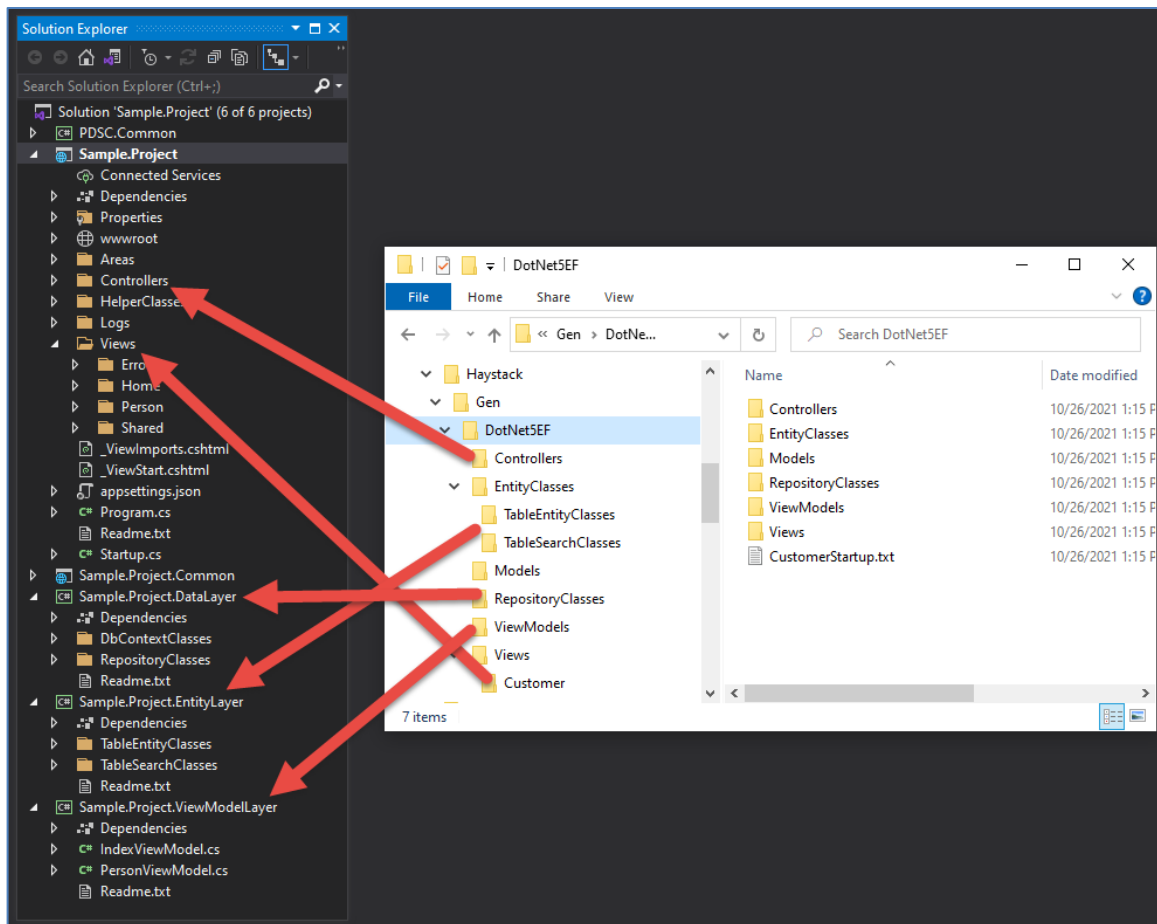
Figure 8: Copy the generated code into your project.

Generated Folder	Copy Into
\	In the *Startup.txt file is a line of code you need to add to the InjectAppServices() method in the Startup.cs file in your MVC project.
Controllers	Copy the files in this folder into the Controllers folder in your MVC project.
EntityClasses	Copy the two folders into the *.EntityLayer project.
Models	In this folder is a *DbContext.txt file with a line of code to add your ApplicationDbContext.cs file in the *.DataLayer project.
RepositoryClasses	Copy the files in this folder into the RepositoryClasses folder in the *.DataLayer project.
ViewModels	Copy the files in this folder into the *.ViewModelLayer project.
Views	Copy all folders under this folder into the Views folder in your MVC project.

Add Menu to Call Generated Page

Open the **\Views\Shared_Layout.cshtml** file and locate the <li> tag used for the "People" menu. Copy the entire <li> tag and paste it in immediately after the tag for the People menu. Modify this copied <li> to look like the following:

```
<li class="nav-item">
  <a class="nav-link text-dark"
      title="Manage Customers"
      data-waitmsg="Please wait while loading Customers..."
      onclick="pdscController.pleaseWait(this);"
      asp-controller="Customer" asp-area="" asp-
action="CustomerIndex">Customers</a>
</li>
```

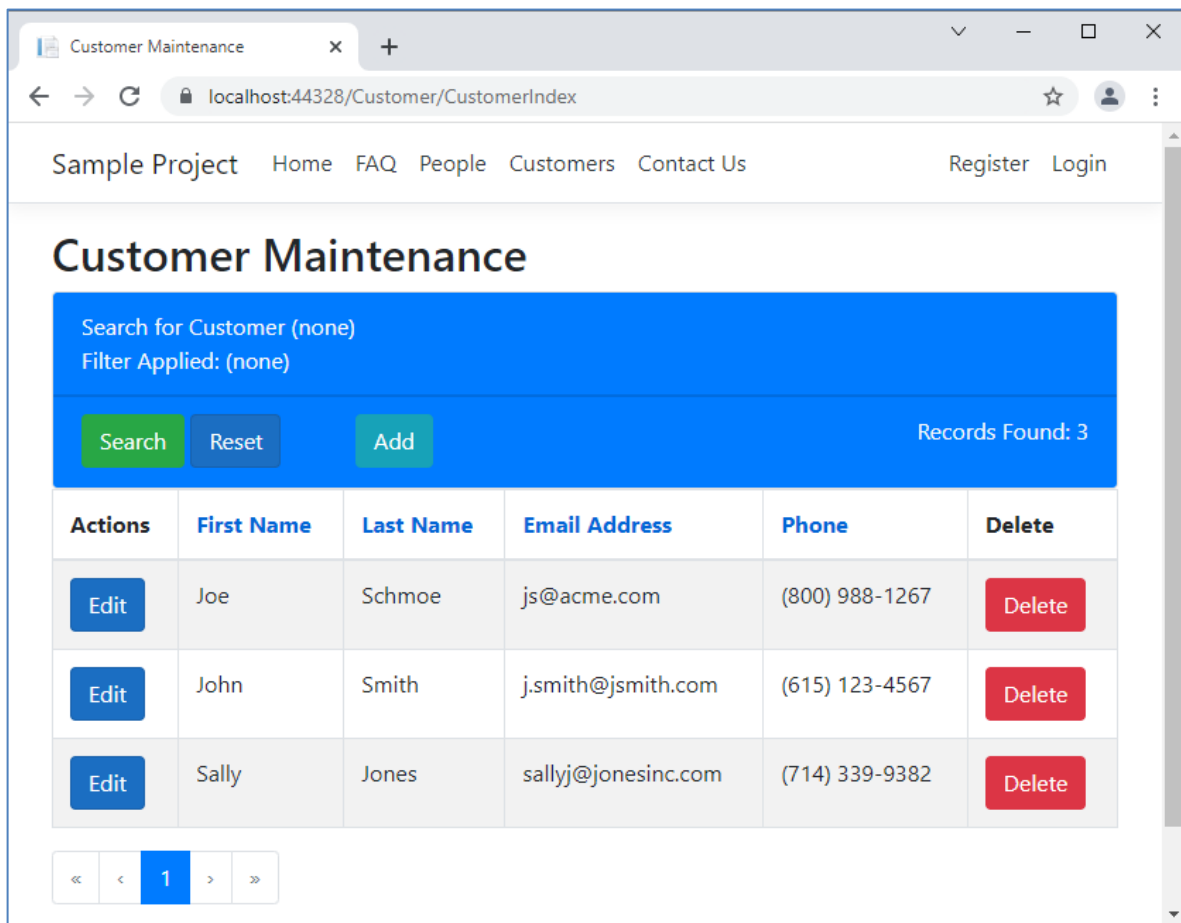Run the application and click on the **Customers** menu to display the customer data as shown in Figure 9.

Figure 9: The generated customer page