UW Extension  
Certificate in C# Programming

# Creating Web Applications in C# Project

In this project you create a data driven website using Microsoft’s ASP.Net and a SQL Server database. The website must perform the following tasks using the stored procedures and view of the database:

* Students can request login
* Students can log in to the website
* Students can look at a list of courses
* Students can register for a course
* Students can see the courses in which they are registered

A complete website must include:

* Working interactivity for all controls (textboxes, buttons, links, etc.) using JavaScript/C#
* Input validation for controls using JavaScript/C#
* Basic styling using CSS
* **MVC (100 of 300 points)**

The Web Site

Your website will include the set of web pages shown in Figure 1.

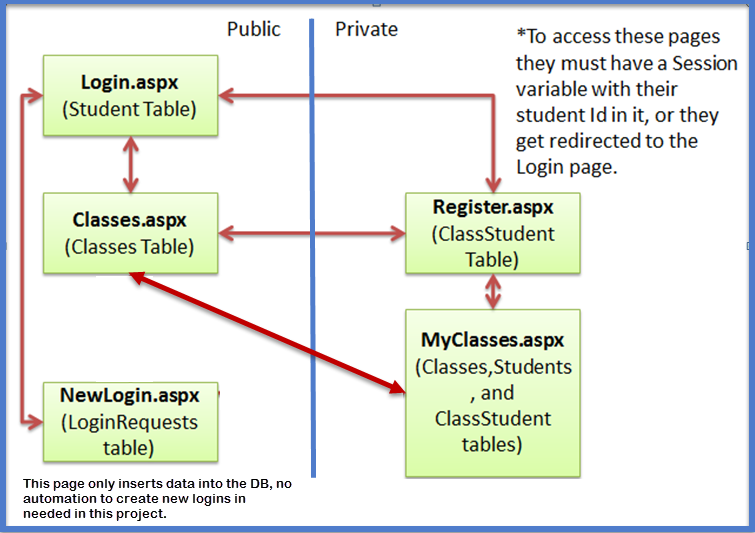


Figure 1: The project web pages

**Note:** MVC will use "cshtml" instead of "aspx" pages.

## **Abstraction Layers**

The various components of the Presentation, Processing, and Data layers of your web application need to use abstraction objects (Figure 2).

* All data processing code must be created in one or more classes in a class library project.
* All pages must read data from SQL views.
* All transactions (insert, updates, and deletes) must use SQL stored procedures.

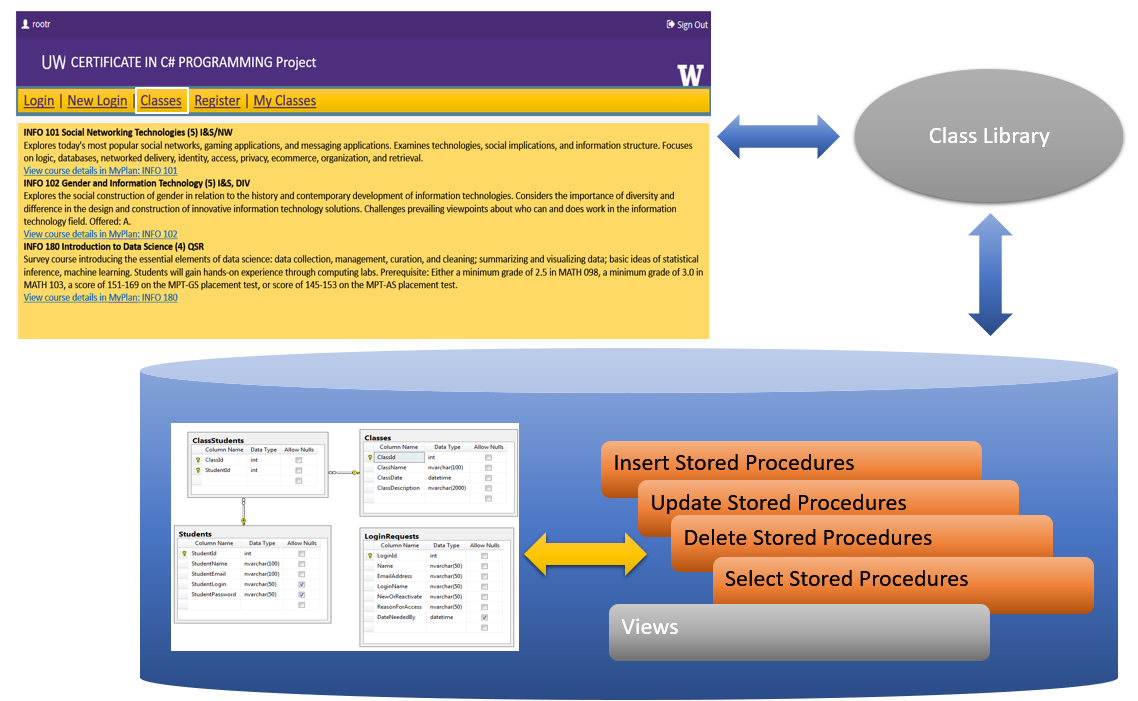


Figure 2: The project abstraction layers

## The Database

Your instructor has provided a SQL script for a database with the tables, stored procedures, and views required for the project. This AdvWebDevProject database contains the objects shown in Figure 3. **You will find the code in the "The Final\AdvWebDevProject\_Final Code.sql" file.**

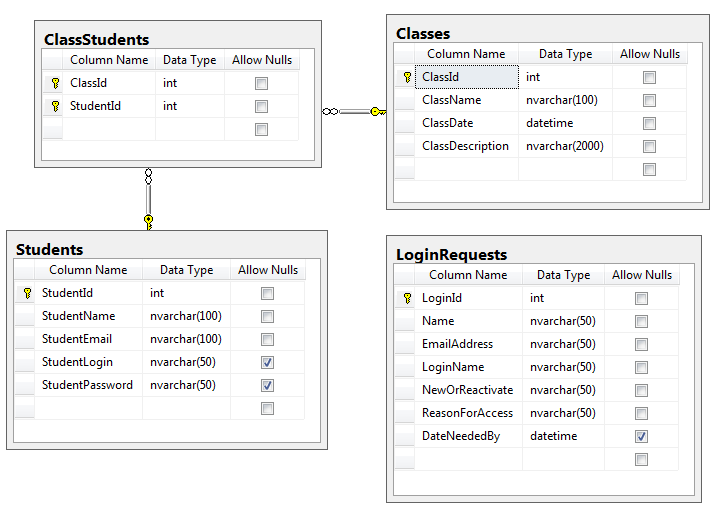


Figure 3: The tables of the AdvWebDevProject database

# Working with Local SQL Databases

You can use Visual Studio to **create and manage local database files using either SQL Server Developer Edition, SQL Server Express, or LocalDB**. Doing so, allows you include a SQL Server data file (.mdf) as part of your projects. This works in both, MVC and Web Forms projects!

**Important**: Make sure there is only one place to change the connection string in your final! Use

*"LocalDB is a* ***lightweight version of the SQL Server*** *Express Database Engine that starts on demand and runs in user mode. LocalDB* ***runs in a special execution mode*** *of SQL Server Express that enables you to work with databases as .mdf files. Typically, LocalDB database files are* ***kept in the App\_Data folder of a web project****."* (<https://docs.microsoft.com/en-us/aspnet/mvc/overview/getting-started/introduction/creating-a-connection-string>, 2019)

**Note:** **If you have problems** with the local file option, your website can **use my UW SQL Server** to create your database **by** **creating a new database with you name** appended to it, then using it in your connection.

@"Provider=SQLOLEDB; Data Source=is-root01.ischool.uw.edu; User ID=CSharp; Password=sql; Initial Catalog= AdvWebDevProject**YourNameHere**";

## Post what you learned in this class

Take some time to reflect on your progress over this course. Afterwards, create a **post on the "Lessons learned " discussion board** about what you have learned. Paste this posting into a Word document and include it with the other files in your final project.