**Assignment 1 – Enterprise Computing**

This assignment requires you to create a new ASP.NET MVC Web Application and integrate it with a SQL Server database to perform CRUD operations. Your mark counts for 20% of your final grade.

Due Date:  **Monday, February 26 @ 11:59 pm**

**Submission Requirements via Blackboard:**

* Link to your private Assignment 1 repository (invite me – username **ifotn** - as a collaborator)
* Link to your Assignment site running on Azure (or alternative server that supports .NET)

All work must be your own. Failure to submit an independent assignment will result in a grade of zero. If your database tables are exactly the same (or very close to the same) as another student’s, it will potentially be considered as Academic Misconduct. Code will be checked carefully with code comparison software.

# Description: Dynamic ASP.NET MVC Site

You will build a simple C# MVC web application that performs CRUD operations using an SQL Server database.

In this assignment you will use Visual Studio and C# to:

* Create a new MVC Web Application project
* Set up and connect to a SQL Server database
* Use the Entity Framework to generate Model classes
* Generate Controllers and Views to implement CRUD functionality
* Document your code with comments within your scripts

**Application Requirements:**

1. Decide what your application purpose will be. Create something of interest or use to you personally.
2. Create a database with 2 tables that have a one-to-many (i.e. parent-child) relationship. Each table must contain a unique Primary Key and at least 3 other fields. The child table should contain a Foreign Key column as well.
3. Create a new ASP.NET MVC web application. It is HIGHLY RECOMMENDED to include any authentication or unit testing.
4. Use Entity Framework to generate Model classes based on the two tables in your database.
5. Use the MVC Scaffolding to create Controllers and Views to perform all Create-Read-Update-Delete (CRUD) operations for both of your tables.
6. On the site layout template, add links to your Index views for both of the new Controllers you have created.
7. Modify the site in the following ways:
   1. Add a descriptive title to both the navigation bar and the page title tag
   2. Change the footer to include your name, student #, and the course name and code
   3. Delete the auto-generated About and Contact pages, as well as the links to these pages that are in the navigation bar
   4. Modify the auto-generated content on the home page to include a meaningful page heading as well as text that accurately describes the purpose of your site and what kind of data it manages (based on the tables / MVC files you’ve added).
8. Use GitHub to make regular commits (minimum 4) and create a README.md file that explains the purpose of your application. Use .gitignore so the Packages folder does not get included in your online repository.
9. Publish to the site to Azure or any other web server that supports ASP.NET and SQL Server. Include this link in your README.md file.
10. Bonus #1: Customize the theme by adding either your own CSS or an additional open-source theme (on top of Bootstrap) to give your site a different look from the standard .NET MVC template with Bootstrap. If you use a pre-built theme or css library you must cite the source with a comment in your \_Layout.cshtml file AND in your README.md file.
11. Bonus #2: Add an advanced .NET MVC feature that we have not yet learned in class. You MUST document this feature in the README.md so I know what to look for.

**Evaluation Method**

Work is evaluated based on how your application performs on the following items:

# Evaluation Criteria (max 28 marks + 4 possible bonus marks)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Criteria** | **0-2** | **3-4** | **5-6** | **7-8** | **Marks** |
| **Database Setup** |  |  |  | 2 Unique tables w/PK’s and min 3 other fields each | **2** |
| **Application Setup** | Little or no application | Partly complete application | Mostly complete application setup | Complete ASP.NET MVC web application | **2** |
| **Model Generation** | No Model classes | Models partly complete |  | Full, functional Models generated by Entity Framework | **8** |
| Controllers / Views | No Controllers / Views | Files included but little CRUD functionality | Created but not all CRUD operations functional | All Controllers and Views complete and fully functional | **8** |
| Template / Layout Changes | No changes to template default | Some template changes done to spec | Only minor changes outstanding | All Layout / Content changes complete. Site purpose explained in README.md | **4** |
| Version Control | None | < 4 commits, incomplete README.md |  | Min 4 descriptively-named commits, plus clear README.md | **2** |
| Server Deployment | No deployment | Deployed with errors |  | Full deployed online. Link in README.md | **2** |
| **\*\*\* Bonus 1 \*\*\*** |  |  |  | Fully customized layout. Documented in README.md | **2** |
| **\*\*\* Bonus 2\*\*\*** |  |  |  | Up to 2 bonus marks for any extra working functionality of your choosing. Documented in README.md | **2** |