Assignment 2 – Server Side Scripting

This assignment requires you to create a new ASP.NET Web Application, interact with a database and implement security measures. The goal is to create a production-quality application. Your mark counts for 30% of your final grade.

Submission Requirements via Blackboard:

Part I - Due Monday, Nov 28 @ 11:59 pm

- Site Map Document with your directory structure and all url's in your site
- Database schema in PDF, PNG or JPG format (ERD)
- Application setup with master page and css
- Link to a PRIVATE GitHub repository showing a minimum of 5 commits

Part II - Due Monday Dec 5 @ 11:59 pm

- Link to a PRIVATE GitHub repository (the same one)
- Link to your site running on Azure
- Working Register and Login pages

Part III – Due Monday Dec 12 @ 11:59 pm

- Link to a PRIVATE GitHub repository (the same one)
- Link to your site running on Azure
- Full CRUD functionality all on private pages

You **MUST** do this assignment independently. All submissions must be unique. Sharing code with another project is strictly prohibited and will constitute Academic Misconduct. Failure to submit an independent assignment will result in a grade of zero.

Description: **Build Something Useful and Cool**
For this project you will use ASP.NET to develop a web application that is of interest to you. So long as your app meets the project requirements you may choose the subject. I suggest building something that you may use or else that you would be willing to show as part of your portfolio. Some suggestions:

- Time Tracker
- Online Budget Manager
- Sports Fantasy Pool Administrator
- Exercise / Food Log
- Travel Planner
- Car Mileage Tracker

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

- Create a new Web Application project
- Build an input form with various server controls
- Validate user input with .net server controls
- Document your code with comments within your scripts
- Perform CRUD operations against an SQL Server database
- Implement Security using ASP.NET Identity

Application Requirements:

Part 1 (12 marks total)

1. Create and submit a Site Map document, which will list each URL for your application and show the directory tree. You can use Visio, www.draw.io, Microsoft Word, Photoshop, or any other diagram tool.

2. Create a database schema (i.e. Entity Relationship Diagram) that shows your database structure. You can use Visio, www.draw.io, Microsoft Word, Photoshop, or any other diagram tool.

3. Set up a new Visual Studio Web Application

4. Create a master page to use for your site's theme and layout. The master page that includes a global navigation bar and common footer.

5. Implement CSS (you may use Bootstrap but you must make the site look different from our Contoso University or Mvc Music Store sites). You can also use an alternate framework like Material Design, Pure CSS, or your own design.

6. Make a minimum of 5 commits to a private repository (not all in the last 2 hours before the due date and time!). Invite me – **ifotn** – as a collaborator to your repository

Part 2 (13 marks total)

7. Set up a new SQL Server Database on Azure (use a different Location than you have used previously). *** Please notify me immediately if you still do not have access to create an Azure SQL Server Database.

8. Create an ADO.NET Entity Data Model to connect your application to your database

9. Build a register page so I can create an account for myself

10. Build a login page so I can log in to the site

11. Make a minimum of 5 commits to your private repository (not all in the last 2 hours before the due date and time!)

Part 3 (25 marks total)

12. Build the pages that contain the functionality you need:
    a. use .net server controls for any form inputs or data displays
    b. employ proper validation using .net validation controls
    c. use and basic css
    d. Create / Read / Update and Delete functionality
    e. All CRUD operations must use Entity Framework

13. All pages besides your home page, register, and login must be secured using ASP.NET Identity or Forms Authentication and your database

14. Implement Error Handling with a custom Error page, 404 page, and try catch blocks.

15. Document each section of your c# scripts with comments. You do not need to document every single line.

Evaluation Method

Your work will be evaluated based on how your application performs on the following items:

Evaluation Criteria (max 50 marks + 2 possible bonus marks)

Criteria	0-2	3-4	5-6	7-8	Marks
Site Map	- Little or no site map	- Partly complete map	- Mostly complete map	- Complete site map	**2**
Database Schema	- No ERD	- Partly complete ERD	- Mostly complete & accurate ERD	- Fully complete & accurate ERD	**2**
Application Setup	- None	- Partial	- Mostly complete	- Complete	**2**
Master Page / Css	- None	- Minimal	- Partial	- Complete	**4**
Database / Entity Framework Setup	- Missing	- Attempted	- Mostly complete	Complete	**4**
Database Operations (CRUD)	- No functioning CRUD	- Some CRUD	- Most CRUD working correctly	- All CRUD working correctly	**12**
Validation	- No inputs / val	- Some inputs correct	- Most input, validation & calculation	- All inputs, validation & calculation	**4**
Security	- No working security	- Some secured elements	- Most appropriate elements secured	- Full authentication & authorization	**8**
Version Control	- None	- Minimal	- Fair Amount	- Min 5 commits for all 3 parts of project	**6**
Error Handling	None	Some error handling	Most error handling complete	Complete error handling	**2**
Code Commenting	- No comments	- Some attempt to explain code	- Most sections clearly explained	- All sections clearly explained	**2**
Azure Deployment	None	- Attemped		- Complete	**2**
***** BONUS *****				- Up to 2 bonus marks for any additional working functionality of your choosing	**2**