**Assignment 1 – Server Side Scripting**

This assignment requires you to create a new ASP.NET Web Application, create and validate user inputs and perform calculations using ASP.NET and c#. Your mark counts for 20% of your final grade.

Due Date:  **Wednesday, October 12 @ 11:59 pm**

**Submission Requirements via Blackboard:**

* Link to a PRIVATE GitHub Repository
* Link to your site running on Microsoft Azure

All work must be your own. Failure to submit an independent assignment will result in a grade of zero.

# Description: Game Calculator

You will build a simple c# web application that performs some basic calculations.

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

* Create a new empty Web Application project
* Build an input form with various server controls
* Validate user input with .net server controls
* Perform calculations using Server Side Script
* Output the calculation results using server controls
* Document your code with comments within your scripts

A sample solution can be found here:

http://comp2084-as1.azurewebsites.net/

**Application Requirements:**

1. Document each section of your c# scripts with comments. You do not need to document every single line.
2. Build a master page and incorporate Bootstrap css to set up a basic page layout and design. This does not have to be fancy but should have some basic styling other than simply black default font on a white page. The master page should contain a header with the site title and a basic footer.
3. Build a default.aspx page that uses your master page. default.aspx tracks the results of 4 separate games or contests. For EACH GAME your page requires:
   1. A radio button list for **Result.**  Choices are **Win** / **Lose**.
   2. An input for **Points Scored**
   3. Validation that **Points Scored** has a numeric input that cannot be negative
   4. An input for **Points Allowed**
   5. Validation that **Points Allowed** has a numeric input that cannot be negative
   6. Validation that **Points Scored** and **Points Allowed** for 1 game cannot be the same. This means there are no ties or draws; 1 team most win each game.
   7. An input for **Spectators** (the # of people watched the game)
   8. Validation that **Spectators** has numeric input that cannot be negative
   9. In total your page requires 16 inputs. 4 games and each game needs:
      1. Result
      2. Points Scored
      3. Points Allowed
      4. Spectators
   10. Validation that all 16 fields have inputs provided. No fields can be left blank
4. Add a button that says **Summary**. Clicking the Summary button will calculate and display the following information. Each item should be displayed in a separate asp:label:
   1. # of games won
   2. # of games lost
   3. Winning % - what % of the player's games did they win. For example, if they win 3 of 4 game the Winning % would show as **.75**
   4. Total points scored
   5. Total points allowed
   6. Point Differential - the difference between the total points scored and total points allowed. For example, if the player scores 12 total points and allows 8 total points, the Point Differential is **4**. If the player scores 10 total points and allows 15 total points the Point Differential is **-5**.
   7. Total Spectators
   8. Average Spectators

**Evaluation Method**

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

# Evaluation Criteria (max 28 marks + 2 possible bonus marks)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Criteria** | **0** | **4** | **6** | **8** | **Marks** |
| **Application Setup** | - Little or no application | - Partly complete application | - Mostly complete application setup | - Complete asp.net web application | **2** |
| **Master Page w/css** | - No functioning master & css | - Some functioning master & css | - Mostly functioning master & css | - Fully functioning master & css | **2** |
| Inputs | - No inputs | - Some inputs correct | - Most inputs complete | - All inputs complete | **4** |
| Validation | - No validation | - Some validation | - Most validation | - All validation | **8** |
| Calculations | - No calculation | - Some calculations correct | - Most calculations correct | - Complete and correct | **8** |
| Outputs | - No output | - Some output | - Most output | - All outputs | **2** |
| **Code Commenting** | - No comments | - Some attempt to explain code | - Most sections clearly explained | - All sections clearly explained | **2** |
| **\*\*\* BONUS \*\*\*** |  |  |  | - Up to 2 bonus marks for any additional working functionality of your choosing | **2** |