**COMP229 – Advanced Web Application Development**

**Team Project – Personal Library - Value 15%**

**Part 1 (Project Concept & Setup)** – **10 Marks**

* Initial Project Structure Setup.
  + Major elements in place.
  + File/Folder structure established.
* Page Comment Headers.
* First Draft of External Document.
* GitHub Repo.

**Due: Friday, 18 November 2016 @ 11:59:59 pm**

**LATE DEADLINE: Sunday, 20 November 2016 @ 11:59:59 pm**

**Part 2 (Main Tracking Page, DB & Partial Function)** – **10 Marks**

* At least one Item on Main Page.
* Main Tracking Page Setup.
* Database Structure Setup.
  + Tables, relationships, etc.
* Method Comments & Contextual Variables.
* Updated External Document.
* Updated GitHub Repository with frequent commits from all group members.

**Due: Friday, 25 November 2016 @ 11:59:59 pm**

**LATE DEADLINE: Sunday, 27 November 2016 @ 11:59:59 pm**

**Part 3 (Full Functionality & Site Security)** – **20 Marks**

* Site Security and Admin Pages.
  + CRUD functions are admin only.
* Full Site Functionality.
* Updated Responsive Design and Structure.
  + Implemented via proper CSS and Bootstrap implementation.
* Add any additional Inline Comments.
* Final Version of External Document.
* Updated GitHub Repository with frequent commits from all group members.

**Due: Friday, 02 December 2016 @ 11:59:59 pm**

**LATE DEADLINE: Sunday, 04 December 2016 @ 11:59:59 pm**

Team Project – Personal Library **Maximum Mark:** **40**

**Overview**: Working with a partner, you will build an **ASP.NET Web Forms Application** that will track a personal library of books, games, or other items. Your **Main Tracking Page** will display the **number of items** in your collection, **recent additions**, **currently loaned count**, and **other relevant details**. Each item will track pertinent details (ISBN/UPC, Title, game platform/book format, etc) and your web application will indicate if you’ve completed the item. Your Web App will also measure a point/review score for the title, and link to the official or publisher’s site for the item. The site will allow for updating/adding these details. You must ensure that you deploy appropriate User Input Validation throughout your web application. All these details will be recorded in a database using appropriate tables and relations.

**Instructions:**

Your Web Application will include the following requirements and constraints:

1. **Main Tracking Page:**
   1. This Main Tracking Page will allow a **registered user** who is **logged in** to enter the statistics and data related to the items included in your collection.
   2. Item statistics and data will be displayed within various HTML elements and ASP.NET server controls contained in the page. All Controls will be **appropriately styled and positioned** to enhance the overall user experience.
   3. Each item should: include a **name**, a **short description**, **a review score**, **completed status** and if it is currently owned/loaned/wanted, etc.
   4. After all data is entered for each item, a **registered** **user** who is **logged in** can use a button, link or other control to update an item’s details.
   5. Anonymous users may view any data but will be prevented from making any changes.
2. **Site Security.** Your web application must be secure**:**
   1. **User Registration** must be included. A form will allow the user to enter profile information (**username**, **password, email address, etc.),** which will be stored in a database table.
   2. A form will allow a **registered user** to **Login**.
   3. Upon successful **Login**, other forms or controls will allow the user to **Logout** and / or **modify** his or her profile.
   4. **Site security** will prevent non-registered users from modifying any item details.
3. **Web Application Structure.** Your Web App must be designed using well-structured semantic HTML, CSS, JavaScript and implement a responsive front-end framework (e.g. Bootstrap) along with a dynamic back-end (using ASP.NET and MS Azure [optional])**:**
   1. Your Site must be **responsive,** and adapt to various viewport sizes. **Note:** Using a mobile-first framework such as Bootstrap is highly recommended.
   2. Your **CSS** rules reside in separate file(s) in the **Content** folder and adhere to best practices. You may use SASS and Compass for additional functionality.
   3. Your **JavaScript** files, libraries (and other external code) are contained in **Scripts** folder and are appropriately linked to your site.
   4. Your **images and multimedia assets** are contained in the **Assets** folder and appropriately linked to your site. **Note:** You may need to provide additional versions of your multimedia assets to accommodate various viewport sizes rather than simply resizing images dynamically.
   5. All Your Code (HTML, CSS, JavaScript, jQuery, C#, etc.) is error free.
   6. Your SQL database must be provided as an SQL file for re-building on the professor’s machine.
4. **Internal Documentation** for your site**:**
   1. Ensure you include a **Page Comment** **header** for your **HTML**, **CSS, C#, and JavaScript files** that indicate: The **Author's name**, **Short Version History**, **and File Description**.
   2. Ensure you include **Method** **Comment headers** for all your **HTML structure, CSS style sections,** **C# classes** and **methods**, and any **JavaScript** **functions**.
   3. Ensure all your code uses **contextual variable names** that help make the files human-readable.
   4. Ensure you include **inline comments** that describe your GUI Design and Functionality. **Note**: please avoid “over-commenting”.
5. Create an **External Document** for your Web App that includes:
   1. A **team Logo**.
   2. **Table of contents**.
   3. A **Detailed description** of your Web App including its core functionality.
   4. A **Version History** of your Web App. A screen capture of your GitHub Commit history and a link to your GitHub Repository is required.
   5. A **Typography** and **Colour** Section that describes any fonts and colours you will use for your Web App. Include Colour Swatches with Hex or RGB codes.
   6. A **Wireframes Section** that includes a wireframe image and appropriate arrows and labels for each page template of your Web Site.
   7. **Screen Capture Section** that includes Screen Shots (samples) of each of your site’s templates.
6. Share your files on **GitHub** to demonstrate Version Control Best Practices and push your site to a cloud host**.**
   1. Your repository must include **your code** and be well structured.
   2. Your repository must include **commits** that demonstrate the project being updated at different stages of development – each time a major change is implemented.
   3. You DO NOT have to include your documentation or SQL file in git, though you are free to do so. **NOTE**: If including your SQL file, **DO NOT INCLUDE ANY AUTHORIZED USER DETAILS** (email, name, password, etc) in the file.

**Bonus [Optional]:**

1. Host your solution with a cloud provider (Microsoft Azure, etc). **[2 Marks]**
2. Implement CDCI (Continuous Deployment – Continuous Integration) from GitHub. **[1 Marks]**
3. Conduct a short (5 – 10 minutes) in-class presentation of your solution. **[2 Marks]**

**SUBMITTING YOUR WORK**

Your submission should include:

1. An external document (MS Word or PDF).
2. A link to your GitHub Repo
3. A zip archive of your website’s Project files submitted to e-centennial (DropBox)

Late submissions:

* Each submission will be deducted 10% of its value for each day late.
* Submissions **WILL NOT** be accepted after the date outlined in the descriptions above.

External code (e.g. from the internet or other sources) can be used for student submissions within the following parameters:

1. The code source (i.e. where you got the code and who wrote it) must be cited in your internal documentation.
2. It encompasses a maximum of 10% of your code (any more will be considered cheating).
3. You must understand any code you use and include documentation (comments) around the code that explains its function.
4. You must get written approval from me via email.