CM1605 Web Technology Assignment Specification (Stage 1)	
Module Leader	Janani Harischandra
Stage	1
Unit (Group/Individual)	Group
Weighing	50%
Qualifying Mark	D
Learning Outcomes Covered in this Assignment:	LO 1 Apply user experience design methods for interactive web applications. LO 2 Collaboratively develop and evaluate an integrated web-based solution for a real-world problem, demonstrating the use of a range of web technologies and data sources.
Handed Out Date	1st of June 2021
Due Date	27th of July 2021 at 1.00pm LK time
Expected Deliverable	Web Application + A single Report + Viva
Method of Submission	Web Application with source code + a single PDF report submitted online via Campus Moodle
Method of Feedback and Due Date	Rubric based 23rd August 2021
BCS Criteria(Pending) Met by this Assignment	N/A

Assessment Regulations

Refer to the "How you are assessed section" in the Student Handbook for undergraduate students for a clarification of how you are assessed, penalties and late submissions, what constitutes plagiarism etc.

Penalty for Late Submission

Coursework received late without valid reason shall not be accepted and shall receive no grade, but shall count as one of the assessment opportunities prescribed in paragraph 9 of **RGU Academic Regulation A4 section 4.3.**

It is recognized that on occasion, illness, personal crisis or other valid circumstances can mean that you fail to submit and/or attend an assessment on time. In such cases you must inform the School of any extenuating circumstances through a ***Coursework Extension Form*** or a ***Deferral Request Form***, with valid evidence for non-submission of an assessment up to a maximum of five working days after the assessment submission date. This information will be reported to the relevant Assessment Board that will decide whether a student should be allowed to reattempt without penalty (a deferral). For more detailed information regarding University Assessment Regulations and accessing forms, please refer to the following website: www.rgu.ac.uk/academicregulations www.rgu.ac.uk/academicregulations

Grading

Marks will be awarded for the coursework based on the provided Grading Grid. These marks will be mapped onto a grade scale from A-F as determined by the individual module coordinator.

Coursework Specification

It is required to work in groups of 4 students (all group members should be from the same Web Technology tutorial group).

Artificial Intelligence (AI) is widely used in the domain of productivity. AI programs are able to crawl collected information quickly and understand patterns humans simply cannot. From this data and insight collection, AI is capable of predicting of future opportunities, recommendations and predictive results on how to take action. Not only can that it can offer predictive data, but also prescriptive information for humans to act on. This can increase productivity and free up valuable time of humans while saving cost and many more. As a result of this, there has been a rise in the demand for smart personal productivity applications. Due to the fact of cost effectiveness these smart personal productivity tools have been indispensable in human lives today. You are given the task to design and develop a web site (front end) of a web based personal productivity application. You may chose 1 of the following scenarios.

Fitness assistant application

You have been hired by an agency to design and develop a smart web application which allows you to records the daily food intake and activity log, thereby suggesting a personalized diet plan customized according to personal weight loss goals. The design of the application will have the following objectives

- An eye catching design for the application
- A sign up process with user preferences
- Buy fitness related products
- Displaying leader board summary
- Send feedback
- Test your knowledge
- Gallery page (Healthy Food Recipes)

Scheduling assistant Application

You have been hired by a company to design and develop an interactive web solution which suggest the most appropriate time for your tasks. This AI powered web application will connect your to-do list with your calendar. The users will have the option to send feed back to the application on the predicted time given for tasks. The design of the application will have the following objectives

- An eye catching design for the application
- A sign up process with user preferences
- Buy personal organizer products
- Displaying best days
- Send feedback
- Gallery page (Version of scheduling application- business, marketing/ light weight/premium)

Legal assistant Application

You have been hired by a company to design and develop an interactive web based solution that analyzes contracts and other legal documents, checking for fairness and clarity. It will perform risk analysis on your documents and points out potential legal issues and expenses you may face in the future. The AI tool carefully points out that it does not provide legal advice. The accredited lawyers will be registered in the web site to provide legal advice. The design of the application will have the following objectives

- An eye catching design for the application
- A form to submit user preferences

- Buy stationery items
- Displaying past legal risk analysis data
- Test your knowledge
- Send feedback
- Gallery page (Information of the accredited lawyers)

Part A

This web site should include below web pages and functionalities explained under each Student Task.

Student 1

- A presentation page with title and the name of people in the group. After 5 seconds, a second page will be displayed (Main Web page).
- The website should contain a form to enter the details of the user which is required to generate the predicted results depends on the chosen topic. This should include
    - Personal Details (Name, Age, Gender, Occupation, Email etc) – 5 **compulsory** criteria
    - At least three different **compulsory** criteria to preferences (Eg: Physical actives, food intake type, time of the day etc)
    - Use JavaScript validation to check that the user has filled-in the following compulsory fields - personal details, user preferences and number of items. Do NOT use HTML5 validation for this part. (If HTML5 validation used zero marks will be awarded)
    - If all compulsory fields are filled an alert should be generated to indicate the information submitted successfully. The pop up summary should contain "Dear Anna, Thank you for using MyfitnessPal, The results will be shown in a while."
- Create gallery page that allows the user to view images. This page contains 5 thumbnail images and an area to display a larger image and associated description of that image. When the user selects a thumbnail image, the corresponding large image and the description of that image should display in the defined location on the form. You may use onMouseOver or radio buttons to select the thumbnail. (The images will be related to the topic you choose Eg: if you're developing the fitness application this could be about healthy recipes etc.)
- Each page of the web site should include the title logo at the top, and a link to the page editor (the person who created the page) at the bottom of the page.
- Create a page editors page
- Consistency of web style should be ensure through the website. (Re-use external style sheet created by Student 2)
- Feel free to use additional JavaScript to add interactivity and increase ease of navigation.

Student 2

- The Main page should be designed in a way that the user can access several parts of the web site. The links on the main page should look like buttons and have a hover effect. This should be implemented using CSS.
- The consistency of the style should be ensured using a unique external style sheet file. This will be used by the other members of the group though out the website. The style sheet should be created for
    - **Main page**
    - **Navigation**
- The web site should contain a form to send comments about the web site. This form should include following.
    - Form input fields for users to enter their details (name, email address)
    - A field to enter comments
    - Option to rate the web site (using radio buttons or select)
    - A button to reset the forms. When reset button is clicked the form should be reset.

  - The form should be validated using JavaScript validation to check that the user has filled-in the compulsory fields - 'name', 'email' and 'rating'. (If HTML5 validation used zero marks will be awarded)
  - If the name, email and ratings are filled-in, the user should get an HTML popup window with the summary including the name, any comments and rating given on the form.
  - The pop box should give the below message format if all compulsory fields are filled.
  - Eg: if the user entered "Anna" for their name, rated the site as "good" and entered "Very informative website", "Dear Anna, Thank you very much for your feedback. You have rated our site as Good and your comment was Very informative website."
- A JavaScript quiz should be created to increase the user engagement of the website relates to the topic chosen.
  - An interactive **multiple choice** quiz should be implemented using JavaScript.
  - It should contain 5 questions related to the topic chosen.
  - Each question carries 2 marks and -1 for each wrong answer.
  - The different badges (Gold, Silver, Bronze) will be awarded to users depending on their performance
  - The quiz should be time-limited
  - When the quiz is completed users will be given the badge awarded with the points earned in a pop up box.
  - The message should contain "Congratulation! You have earned 12 points with a Silver badge", please claim the points in your next purchase"
- Each page of the web site should include the title logo at the top, and a link to the page editor (the person who created the page) at the bottom of the page.
- Create editors page
- Feel free to use additional JavaScript to add interactivity and increase ease of navigation.

Student 3

- The website should contain the page to buy products related to the selected scenario. i.e. if your topic is on fitness, you could be selling fitness related items (Shelves, Book Marks etc) by the system. This should include:
  - Personal details;
  - At least 5 different products to choose from
  - Number of items for each product
  - Automatically provide the total price of the bill.
  - Use JavaScript validation to check that the user has filled-in the following compulsory fields - personal details, product and number of items. (If HTML5 validation used zero marks will be awarded).
  - If the compulsory fields are filled-in, when the 'place order' button is clicked, the user should get a popup window with the summary of the order. For example, the text in the popup window could be something like: "Dear Anna, you have ordered 2 trainers at a cost of £20 each and 1 yoga mat at a cost of £50. Your total bill is £90."
- Use JavaScript to create the functionality to increase / decrease the font size used on the website. The basic functionality should include two buttons - a button to make the font size smaller and a button to make the font size larger. This should be added in buy Products page.
- The About Us page should contain four pictures of the members of the group. When the user moves the mouse over one picture, the details of that member should be displayed in an area on the page (for example, you could use a div below the pictures). The details should include the name and role that that student took for the coursework (e.g. John Smith, Student 1).
- Each page of the web site should include the title, logo at the top, and a link to the page editor (the person who created the page) at the bottom of the page.
- Create editors page

- Consistency of web style should be ensure through the website. (Re-use external style sheet created by Student 2)
- Feel free to use additional JavaScript to add interactivity and increase ease of navigation.

Student 4

- Create My list page
    - The information of the Mylist page will vary on the topic you choose
        - Fitness assistant application - Leader board summary of top points holders
        - Schedule assistant application – Best days
        - Legal assistant application – Past legal case vs risk data analysis
    - Create a well-formed XML file to store information of the above.(Minimum 10 items)
    - Use JavaScript to read and display the data from the XML file
    - Use CSS to display the XML information.
- Create JavaScript functionality to change the background and text color of the favorite page. (Use pulldown menus)
- Create a sign up form to subscribe for a personalized newsletter.
    - Compulsory form input fields (Name, email address)
    - JavaScript validation to check compulsory fields are filled and valid email address
    - If all information are correct , a pop up message should be given with below format "Dear Anne, you have successfully subscribed for a personalized newsletter"
- Consistency of web style should be ensure through the website. (Re-use external style sheet created by Student 2)
- Create editors page
- Feel free to use additional JavaScript to add interactivity and increase ease of navigation.

Part B

As you are preparing a website for a web based personalized system on a chosen topic of the given options, you are expected to apply UX and UI principles in the design and development of these web pages (Part A). Each coursework group will produce **ONE** report. You should justify your design choices with evidence where appropriate using the below given tools. In addition to that you are expected to conduct a research on existing systems related to your chosen topic in order to get to know about the features and the context. The evaluation of the developed website will be carried in the self-reflection section of the report. The report template can be downloaded from here. The following UX Principles must be implemented and will be marked from the evidence provided in your report with Justifications. ***Max: 1000 words***

[30 Marks]

- Introduction and Reference [2 Marks]
- Research on existing systems (related to chosen topic) [3 Marks]
- Technical Discussion [7 Marks]
- Navigation techniques [2 Marks]
- Color balance/Selection (appropriateness justified through color contrast test) [3 Marks]
- Typography (font style/size appropriateness justified) [2 Marks]
- Accessibility Techniques(Text, Tables, Forms, Images) [3 Marks]
- Accessibility test [1 Mark]
- Site Diagram [2 Marks]
- Self-Reflection [5 Marks]

Tools to use,

- Color contrast check -Colour Contrast Check - snook.ca

- Accessibility check -WAVE Web Accessibility Evaluation Tool (webaim.org)
- Site Diagram – MS Visio, ConceptDraw, OmniGraffl

Demonstration of the Website

You are expected to deliver a compulsory live demo of your web site. [10 Marks]

IMPORTANT INFORMATION

Each student should only complete the tasks allocated for one student (i.e., either student 1, student 2, student 3 or student 4). The students will not receive marks for completing tasks allocated to other students.

Task Allocation

Task	Student 1	Student 2	Student 3	Student 4
Part A				
Presentation Page	X			
Main Page, Navigation		X		
Sign up form	X			
Pull down menus (Background ,Text Color)				X
Buy Products Page			X	
Comments Form		X		
Font size change			X	
About Us Page			X	
JavaScript Quiz		X		
My List (Web Integration with XML)				X
External CSS files created		X		
Newsletter sign up form				X
Gallery Page	X			
External CSS used	X	X	X	X
Logo/Title	X	X	X	X
Editors Page	X	X	X	X
Additional Interactivity	X	X	X	X
Part B				
Implementation of UI/UX principles in web page	X	X	X	X
Report	X	X	X	X
Demo				
Live Viva defense	X	X	X	X