University of Westminster
School of Electronics and Computer Science

6MMCS001W Mobile User Experience Assignment Specification (2021/22)	
Module leader	Dr Daphne Economou
Units	Coursework 1 - Mobile App Design Coursework 2 - Mobile App Implementation
Weighting:	CW1 50% | CW2 50%
Qualifying mark	30%
Description	Use an authoring tool/JQuery Mobile to implement the mobile game
Covered Learning Outcomes	**Coursework 1** contributes to assessing the students' ability to plan and visualise a given concept using suitable prototyping techniques and applying mobile user experience principles of design (Learning outcomes 1, 2) **Coursework 2** contributes to assessing the students' ability to translate and implement the proposed design concept to a mobile web application that addresses specific application and platforms requirements (Learning outcomes 3, 4, 5)
Handed Out:	Sept 22nd 2020
Due Dates	**Coursework 1 - 4th of November 2021 13:00pm** **Coursework 2 - 12th of January 2022 13:00pm**
Expected deliverables	Submit on Blackboard the following components: 1 **in CW 1 - Mobile App Design** ○ **task flow diagram** (one file per group) ○ **style-guide** (one file per group) ○ **interactive prototype** (one file per group, or one for the ipad and one for the iPhone) ○ **report** (one file per group with individual team members' sections per assigned task) ○ link to youtube with a **video pitch** (one file per group) 2 **in CW 2 - Mobile App Implementation** ○ **implementation of the proposed mobile web app** (a URL to run via a web browser – one for the ipad and one for the iPhone); ○ link to youtube with a **video demo** (one file per group) ○ **report** (one file per group with individual team members' sections per assigned task)
Method of Submission:	Electronic submission on BB via a provided link in the assessment folder on BB.
Type of Feedback and Due Date:	Written feedback on the final CW submission will be provided within 3 weeks after the submission (the mark and comments on marking scheme form). All marks remain provisional until formally agreed by an Assessment Board.

BCS Criteria meeting in this assignment	2.1.1	Knowledge and understanding of facts, concepts, principles & theories
	2.1.2	Use of such knowledge in modelling and design
	2.1.3	Problem solving strategies
	2.1.4	Analyse if/how a system meets current and future requirements
	2.2.1	Specify, design or construct computer-based systems
	2.2.2	Evaluate systems in terms of quality and trade-offs
	2.2.4	Deploy tools effectively
	2.3.1	Work as a member of a development team
	2.3.2	Development of general transferable skills
	3.1.1	Deploy systems to meet business goals
	3.2.2	Defining problems, managing design process and evaluating outcomes
	3.2.3	System Design
	4.1.1	Knowledge and understanding of scientific and engineering principles
	4.2.1	Specify, deploy, verify and maintain computer-based systems

Assessment regulations

Refer to Part 3: Assessment regulations for taught courses of the guide for undergraduate students for a clarification of how you are assessed, penalties and late submissions, what constitutes plagiarism etc.

https://www.westminster.ac.uk/current-students/guides-and-policies/academic-matters/academic-regulations

Late submission of coursework

6.8 Where students submit coursework late but within 24 hours of the published deadline, the work will be marked, and ten marks will be deducted from the original mark, to a minimum of the pass mark (40% at undergraduate level, 50% at postgraduate level). For example, a piece of assessment awarded a mark of 70% would be reduced to 60% as a penalty for late submission. This also applies to students who have been granted an extension in accordance with their Reasonable Adjustment form, approved by Disability Learning Services.

6.9 If students submit coursework more than 24 hours after the specified deadline, a mark of zero will be awarded for the work in question.

6.10 Penalties for late submission of coursework do not apply if a claim of mitigating circumstances has been accepted through the Mitigating Circumstances process (see Section 11).

Guidance: Student Responsibilities –

- Students must check with the Module Leader in advance of the deadline if they are unsure of the correct procedure for the submission of coursework.

- It is a student's responsibility to ensure that they allow sufficient time prior to the deadline, to ensure any minor computer problems do not result in the late submission of coursework

- Students are advised to keep a copy of all coursework submitted for assessment. This requirement may be waived for particular types of assessment where this is not possible, e.g. practical work or in-class tests.

- It is the student's responsibility to ensure that, where assessed coursework is returned as part of the teaching and learning process, they have received all relevant work, and to advise the Module Leader of any discrepancy.

Contents

Coursework (CW) briefs

Concept One – Home service for home cooked food delivery / DIY / pet temp hosting

You have been hired by an agency trying to develop an app promoting start-up businesses related to offering the following services (focus one the following list):

- **home cooked food delivery**
- **DIY**
- **pet temp hosting**

The main concept of those start-ups is to connect people/neighbours in need of a service with others that could offer a service working from home or working near the area they live.

Concept Two – Train mobile web app

You have been hired by a train operating company to develop a treasure hunt mobile web application. Your client is one of the biggest train operating companies that links London with the South-West and West of England. The network has trains that go to some of the most interesting, historic tourist points of interest in the country. They have hired you to develop an application that allows passengers to learn about these spots using the app through play. The end goal is to encourage them to visit these destinations in their leisure time and inspire passengers to share their experiences with other potential passengers.

Concept Three – Marketing mobile web app

You have been hired by an agency responsible for the marketing campaign of various products in a large supermarket. The company is responsible for the marketing strategy within store as well as online. You have been hired to develop a mobile web app to support the products promotion and to incentivise customers to proceed to a purchase. The mobile web app should also offer tools for customers to find information about the products and share information about the products.

Concept Four – Marketing mobile web app

You have been hired by the City of London to promote a site, for example the “Barbican Centre”. Such a site may include various points of interest for which information needs to be provided. This information could be historical or about events or services offered in the site. The app should also allow booking tours, or events offered/run at the site and share information about those events.

In all the above mentioned concepts your objective is to design a working prototype of a mobile web app that:

- allows people to find information about the services offered and proceed with orders and bookings;
- provide the opportunity to advertise services offered;
- offers tools to allow communication between the people/business offering services and customers;
- offers the option to share information about the offered services;
- incentivises customers/users to use the offered services and being active users of the app.

Mobile web app requirements

The CW deals with gathering requirements, organising content and proposing a design solution for the required application and implementing the proposed mobile web application.

The **mobile web app requirements specifications** include the following user interface (UI) features and functionality:

1. integration of eye catching introductory information about the mobile web app;
2. provision of detailed visual information about a list of Points of Interests (POIs) (a POI can be an object; a person; a place etc.) containing at least a title, image, description of a POI;
3. list creation;
4. integration a sorting and filtering widget;
5. incorporation of google maps;
6. creation of a favourites list;
7. email to a valid email account favourite items;
8. incorporation of a short video;
9. integration of a booking facility (the booking should contain all the steps to submit the form to Pay Pal, Stripe or other online payment method carrying all the correct calculations of the data that has been submitted in the booking form and it should indicate the progress of completing the booking form);
10. incorporation of AR;
11. incorporation of gamification to increase user motivation, engagement and satisfaction;
12. implement points/scores recording;
13. integrating a tool to allow sharing comments about products;
14. rating and sharing information about POI.

Emphasis will be stressed on:

- the application of mobile user experience principles;
- the data structure to support discoverability;
- the proposed interaction style to support good usability;
- system response and user feedback;
- aesthetics and following the business brand.

Team members responsibilities

The CW is a group based involving groups of **4 team members** all responsible for designing and implementing a prototype that runs smoothly on an iPhone and an iPad.

In terms of responsibilities of team members the following rules apply:

- the group needs to work together and propose a design solution that runs smoothly following the same look and feel on both iPhone and iPad devices;
- each team member will be responsible for the design and implementation of specific features of equal technical difficulty;
- the main design considerations should be on iPhone portrait and iPad landscape layouts;
- differentiations in the UI between the two devices is expected in order to make best utilisation of the different screen sizes of the devices;
- adaptation of the UI to different orientation of the devices is also expected;
- each team member will be responsible for the adaptation of the features they have been allocated to run smoothly to both devices (iPhone, iPad) and for both devices orientations (portrait, landscape).

The team members' responsibilities are listed below:

- two team members will be responsible for proposing a design solution for the iPhone app;
- two team members will be responsible for proposing a design solution for the iPad app.

Specifically:

- Student 1 iPhone portrait;
- Student 2 iPhone landscape;
- Student 3 iPad portrait;
- Student 4 iPad landscape.

The general responsibilities of the team members are also portrayed in Table 1 bellow:

Tasks, devices & device orientation	Student 1	Student 2	Student 3	Student 4
Proposing a design solution iPhone	x	x		
iPhone portrait	x			
iPhone landscape		x		
Proposing a design solution iPad			x	x
iPad portrait			x	
iPad landscape				x
Smooth integration of design and features in both devices and devices orientation	x	x	x	x

Table 1 **Team members' responsibilities for the design and implementation of the CW mobile web app. The column on the left shows the tasks the teams members are responsible for. Some task responsibilities are shared between team members.**

All the group members will be responsible for:

- content collection (images, text, video);
- organisation and editing of content;
- requirements gathering for the application;
- correct integration of the proposed features to the different devices and orientation of devices;
- consideration of gamification;
- careful consideration of system response and user feedback.

Content used for the project (images, video, logos, icons etc.) can be found on the web and should be clearly referenced.

Table 2 below indicates the list of features and functionality of the mobile web app to be completed by each team member and tasks that the members are responsible for. Those are later explained in detail.

Table 2 The x indicates the tasks each team member is responsible to complete at the CW.

	Student 1	Student 2	Student 3	Student 4
CW 1 - Mobile App Design				
Task flow diagram	x	x	x	x
Style-guide header - footer – background [0.5]; colour swatches [0.5]; typography [0.5]; emphasis classes [0.5]; buttons [0.5]; lists [0.5]; forms [0.5]; photography [0.5]; bars [0.5]; icons [0.5]	x	x	x	x
Interactive prototype				
Design of eye catching introductory information about the mobile web app	x			
Navigation to different parts of the app		x		
Provision of detailed visual information for a list of Points of Interests (POIs) (a POI can be an object; a person; a place etc.) containing a title, image/s, lengthy description, other information related to this item see:			x	
favourite POI	x			
comments for POIs (read/write comments)		x		
rating of POIs (item/list)			x	
gamification to increase user motivation, engagement and satisfaction and user notification (show points/scores gained)				x
Incorporation of google maps			x	
Process for creating and amending a favourites list and emailing it	x			
Process for creating/reviewing/replying to comments		x		
Process for rating, areas for displaying rating			x	
Gamification process				x
Display the POI as list & integration a sorting (consider the use of thumbnail, title, description)				x
Design of a booking form containing all the steps up to submitting the form to online payment (consideration of booking options)	x			
System feedback				x
Incorporation of video in the app			x	
Incorporation of QR/ AR		x		
Integration of features in all devices & orientations - interactive prototype	x	x	x	x
Video pitch for design	x	x	x	x
Report - how Mobile UI principles per member's tasks are covered	x	x	x	x
Presentation/viva (confidence/performance/ability to answer questions)	x	x	x	x

	Student 1	Student 2	Student 3	Student 4
CW2 - Mobile App Implementation				
Implement a screen with the eye catching introductory information about the mobile web app	x			
Implement the navigation mechanism to different parts of the app		x		
Implement 3 pages per team members providing detailed visual information for a list of Points of Interests (POIs) (a POI can be an object; a person; a place etc.) containing a title, image/s, lengthy description, other information related to this item see:	x	x	x	x
Integrate a UI element to show favourited POI	x			
Integrate comments for POIs (read/write comments)		x		
Integrate a UI element to show rating of POIs (item/list)			x	
Integrate a UI element to support gamification (e.g. show points/scores gained)				x
Integration of google maps			x	
Implement the process for creating and amending a favourites list and emailing it	x			
Process for creating/reviewing/replying to comments		x		
Implement the process for rating, areas for displaying rating			x	
Implement the gamification process				x
Display the POI as list & integration a sorting (consider the use of thumbnail, title, description)				x
Implement a booking form containing all the steps up to submitting the form to online payment (consideration of booking options)	x			
Implement system feedback in at least 5 screens				x
Incorporation of video in the app			x	
Implement the QR/ AR feature		x		
Integration of features in all devices & orientations - interactive prototype	x	x	x	x
Challenging tasks				
Email to a valid email account favourite items	x			
Real time calculation of points/scores				x
Real time recording of comments		x		
Real time recording of rating			x	
Video demo for the implementation	x	x	x	x
Report - implementation of allocated tasks per team member	x	x	x	x
Presentation/viva (confidence/performance/ability to answer questions)	x	x	x	x

CW deliverables - What & how to submit

Coursework 1 - Mobile App Design

Coursework 1 – the mobile web app design consists of the following components:

1 **task flow diagram** (one file per group)
2 **style-guide** (one file per group)
3 **interactive prototype** (one file per group, or one for the ipad and one for the iPhone)
4 **video pitch** (one file per group as link to youtube)
5 **report** (one file per group with individual team members' sections per assigned task)
6 presentation & viva

Those are explained below in detail.

The submission is all electronic on Blackboard.

Due to Blackboard technical limitations (not allowing multiple attempts for a group submission) **the assessment link will be set as individual submission to allow multiple attempts**. **However, all the team members are expected to upload/submit the coursework files as listed above as a group**. **If each team member submits only the part of the prototype capturing the features they are responsible for, the prototype and the flow of tasks to be completed by the user will not be comprehensible**. These group files will have to be submitted 4 times one for each team member, so there is record for on-time submission for the registry. Please **do not zip the files** as it adds tremendous amount of time to download and assess all the documents.

UI flow/Task flow diagram

The UI/task flow diagram is a step before creating a wireframe that demonstrates the navigation structure through the different screens/nodes of the app and clearly identifies the UI elements that enable this interaction.

Submit the UI/task flow diagram as .doc or.pdf. If the diagram is split in different pages use annotation that shows of flow of pages.

Information about the creation of a task flow diagram have been covered in week 2-3 of the module.

Style guide of UI elements

All the team members will have to work together to create a style-guide for the proposed mobile web app that needs to be kept consistently.

The style-guide should specify the appearance of the main UI elements:

- header - footer – background, provide information about the use of colours, font size elements to be included in those UI elements (e.g. menu, logo, other)
- colour swatches, provide the hexadecimal code and where and how they will be used
- typography, provide the font family, sizes, style and decoration of fonts and where and how they will be used (e.g. headings, buttons, main body etc.)
- emphasis classes, provide guidelines for how emphasis will be achieved, e.g. with change of colour, with border, shadow etc.
- buttons, provide information about the style, size, colour, typeface, states (active, inactive etc)
- lists, provide information about the style, size, colour, typeface, states, different types of lists (e.g. list in menu, list of products)
- forms, provide information about the colour, typeface for form elements (e.g. labels, input field, buttons), input style, buttons style

- photography, provide information about the sizes, style, cropping, variations (thumbnail of an image, large size of an image, sizes in iPhone (any variations in orientations), sizes in iPad (any variations in orientations))
- bars, provide information about the style, colour, text, states
- icons, provide information about the library, sizes, icon images if any

Submit the style-guide as .doc, .pdf or a link to a style-guide (if you have used online tools to create it).

Information about the creation of a style-guide is covered in week 2-3 of the module.

Interactive prototype

An interactive prototype is a polished version of a wireframe, which forms a skeletal framework of a web page/node or/else a screen blueprint. An interactive prototype is created by replacing the wireframe place holders with real content (e.g. images, text) and interaction (that demonstrates UI elements response to user interaction, navigation, transitions).

There are various tools that can be used to create an interactive prototype. You can use Axure (available in https://appsanywhere.westminster.ac.uk/), Adobe XD or other online prototyping tools as long as the working files and the final output are accessible.

You can access some interactive prototypes in the following URL https://proto.io/en/demos/

The interactive prototype should **be read in conjunction with the flow map** to clearly indicate the navigation through the app.

You should also provide **precise information/annotation about the interaction style and the UI response to user actions** where information is not included in the style-guide and cannot be captured by the prototype.

Two interactive prototypes should be submitted:

1 iPhone portrait;
2 iPad landscape.

Each team member will be responsible for designing the features of the application they have been allocated and all students. All team members will be responsible for integrating those components to the device they are responsible for.

Video pitch of design

A short video demo (maximum 2 minutes) of the interactive prototype will be created demonstrating the full functionality of the app with narration to explain the rational of the design.

Report

One report per group will be submitted. The scope of the report is to allow the team member to:

- provide justification of how the proposed design solution addresses mobile UX principles;
- highlight the differentiations between the iPhone and the iPad versions to make best use of the screen estate.

A report template will be provided on BB to help you with the expected structure of the report.

Presentation & viva

The project will be presented by the team members during a **viva** (oral examination) which is compulsory.

The students will present the interactive prototype, they will explain the design rational and provide clarifications of how design principles have been applied to best satisfy the concept and the coursework requirements.

Feedback of the design and suggested improvements to the design before moving to the implementation will be provided by the module team during the presentation.

Coursework 2 - Mobile App Implementation

Implementation

The Mobile App Implementation submission consists of the following components:

1 **implementation of the proposed mobile web app** (a URL to run via a web browser – one for the ipad and one for the iPhone);
2 link to youtube with a **video demo** (one file per group)
3 **report** (one file per group with individual team members' sections per assigned task)
4 **presentation & viva**.

For the implementation of the proposed mobile web app will be using **jQuery Mobile**. Other languages (PHP) can be used to implement required features (mainly the challenging tasks).

Each team member is responsible for the implementation of the main features that they have been allocated to design. All team members are responsible for the correct integration of all features of the device and the orientation of the device they are responsible for.

Feedback of the implementation will be provided by the module team during the presentation.

Those are explained below in detail.

The submission is all electronic on Blackboard.

Due to Blackboard technical limitations (not allowing multiple attempts for a group submission) **the assessment link will be set as individual submission to allow multiple attempts**. **However, all the team members are expected to upload/submit the coursework files as listed above as a group**. **If each team member submits only the part of the prototype capturing the features they are responsible for, the prototype and the flow of tasks to be completed by the user will not be comprehensible**. These group files will have to be submitted 4 times one for each team member, so there is record for on-time submission for the registry. Please **do not zip the files** as it adds tremendous amount of time to download and assess all the documents.

Report

One **report** per group will be submitted. The scope of the report is to allow the team members to:

- provide technical details of how the proposed design solution and allocated features have been implemented using jQuery Mobile and other web technologies;
- highlight the differentiations in the implementation between the iPhone and the iPad versions.

A report template will be provided on BB to help you with the expected structure of the report.

Video demo

A short video demo (maximum 2 minutes) of the implemented mobile web app demonstrating showing the full functionality of the app and its adaptability to different devices and orientation.

Presentation of the design

The project will be presented by the team members during a **viva** (oral examination) which is compulsory. The students will have to explain technical questions about the implementation of the tasks they have been allocated. They will also explain how the feedback they received during CW1 led to updates to the final implementation. Feedback will be provided by the module team during the presentation.

Marking

The success of the project depends very much an all team members working well together and contributing equally to the project.

All team members have been allocated tasks of equal level of difficulty and provided that all tasks are met team members should receive a common CW mark. However, a detailed marking system has been developed to allow individual marking and to introduce objectivity and fairness for the contribution of individual team members to the group coursework.

See the detailed Coursework Marking scheme at the end of the document.

Expected feedback

To assist of the smooth development of the CW and allow the provision of formative feedback that can help improving the proposed design of the mobile web app certain components will be submitted progressively as Logbook items forming the basis for formative feedback and providing the opportunity to be corrected before the final submission:

- **Logbook item 1: Task flow diagram – week 3**
- **Logbook item 2: Style guide – week 4**
- **Logbook item 3: Interactive prototype – week 5**

Formative feedback will be provided during tutorial time by the tutor and at the presentation of the 1st part of the CW which is the proposed design.

Expected feedback on the final submission will be as follows:

- **Instant feedback during** the **viva** (that can be recorded)
- **Detailed marking** on allocated tasks **based on the coursework marking scheme**
- **Overall constructive feedback** to help students understand area the CW could be improved further electronically on BB.
- **There will be also sessions to receive feedback on your designs by experiences UX designers acting as mentors for this module.**

The detailed Coursework Marking scheme at the end of the document.

Coursework 1 Marking scheme

The Coursework 1 will be marked based on the following marking criteria:

	Student 1	Student 2	Student 3	Student 4
CW 1 - Mobile App Design				
Task flow diagram	5	5	5	5
Style-guide header - footer – background [0.5]; colour swatches [0.5]; typography [0.5]; emphasis classes [0.5]; buttons [0.5]; lists [0.5]; forms [0.5]; photography [0.5]; bars [0.5]; icons [0.5]	5	5	5	5
Interactive prototype				
Design of eye catching introductory information about the mobile web app	5			
Navigation to different parts of the app		5		
Provision of detailed visual information for a list of Points of Interests (POIs) (a POI can be an object; a person; a place etc.) containing a title, image/s, lengthy description, other information related to this item see:			5	
favourite POI	5			
comments for POIs (read/write comments)		5		
rating of POIs (item/list)			2.5	
gamification to increase user motivation, engagement and satisfaction and user notification (show points/scores gained)				5
Incorporation of google maps			2.5	
Process for creating and amending a favourites list and emailing it	5			
Process for creating/reviewing/replying to comments		5		
Process for rating, areas for displaying rating			5	
Gamification process				5
Display the POI as list & integration a sorting (consider the use of thumbnail, title, description)				5
Design of a booking form containing all the steps up to submitting the form to online payment (consideration of booking options)	5			
System feedback				5
Incorporation of video in the app			5	
Incorporation of QR/ AR		5		
Integration of features in all devices & orientations - interactive prototype	8	8	8	8
Video pitch for design	2.5	2.5	2.5	2.5
Report – how Mobile UI principles per member's tasks are covered/clarity/depth/structure/presentation	7	7	7	7
Presentation/viva – confidence/performance/ability to answer questions	2.5	2.5	2.5	2.5
CW1 Prototype total rated	**50**	**50**	**50**	**50**

Coursework 2 Marking scheme

The Coursework 2 will be marked based on the following marking criteria:

	Student 1	Student 2	Student 3	Student 4
CW2 - Mobile App Implementation				
Implement a screen with the eye catching introductory information about the mobile web app	5			
Implement the navigation mechanism to different parts of the app		5		
Implement 3 pages per team members providing detailed visual information for a list of Points of Interests (POIs) (a POI can be an object; a person; a place etc.) containing a title, image/s, lengthy description, other information related to this item see:	2	2	3	2
Integrate a UI element to show favourited POI	3			
Integrate comments for POIs (read/write comments)		3		
Integrate a UI element to show rating of POIs (item/list)			3	
Integrate a UI element to support gamification (e.g. show points/scores gained)				3
Integration of google maps			4	
Implement the process for creating and amending a favourites list and emailing it	5			
Process for creating/reviewing/replying to comments		5		
Implement the process for rating, areas for displaying rating			5	
Implement the gamification process				5
Display the POI as list & integration a sorting (consider the use of thumbnail, title, description)				5
Implement a booking form containing all the steps up to submitting the form to online payment (consideration of booking options)	5			
Implement system feedback in at least 5 screens				5
Incorporation of video in the app			5	
Implement the QR/ AR feature		5		
Integration of features in all devices & orientations - interactive prototype	8	8	8	8
Challenging tasks				
Email to a valid email account favourite items	5			
Real time calculation of points/scores				5
Real time recording of comments		5		
Real time recording of rating			5	
Video demo	5	5	5	5
Report – implementation of allocated tasks per team member /clarity/depth/structure/presentation	7	7	7	7
Presentation/viva – confidence/performance/ability to answer questions	5	5	5	5
CW2 Implementation total rated	50	50	50	50