

## Mobile User Experience 6MMCS001W

### Coursework 2 Report - Mobile App Implementation

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If specific team members did not contribute to the group submission, indicate those students' names in order to assess their submission files separately.

- Provide link/s to YouTube **video demo of the final application:**  
<https://youtu.be/rJHcYY2LEAQ>

## Content

Content	2
1. Design and implementation of mobile web app features	3
2.1 Eye-catching introduction	3
2.2 Incorporation of a short video	3
2.3 POI	3
2.5 Integration of google maps	4
2.5 List creation & sorting and filtering widgets	4
2.6 Booking form	4
2.7 Favourites list	5
2.8 Gamification (might need to be combined with 2.9)	5
2.9 System feedback	5
2.10 Scores & points gained (might need to be combined with 2.7)	6
2.11 Comments	6
2.12 Rating	7
2.13 AR	7
2.14 Differentiation between iPhone and iPad implementation	7
	8

## 1. Design and implementation of mobile web app features

In the sections below provide and explain the proposed design and the code you wrote to create the following main features and functionality of the mobile web app.

### 2.1 Eye-catching introduction

Our mobile web app has a design that's eye-catching and interesting. We kept the interface elements to a minimum with simple designs and easy contents.

In order to develop this app in a user-centered fashion, this stage was carried out by considering the basic principles of user experience (UX).

**Content prioritization** - We kept the interface elements to a minimum. Simple designs are what keeps the user engaged and at ease with the content. So, only essential content and functionalities are displayed. Our menu list has progressive disclosure and simple terminology so as to not confuse the users.

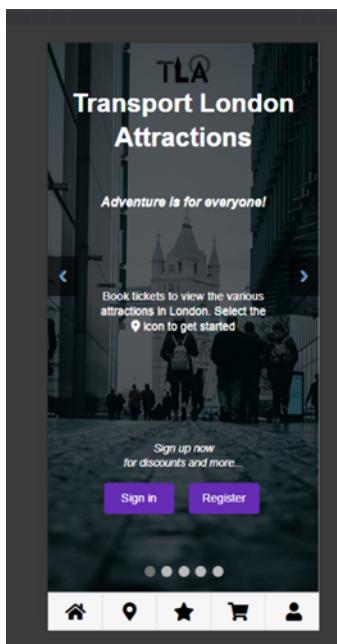
**Intuitive navigation** - Our app's navigation allows the users to intuitively navigate through the app via clear pathways and complete all primary tasks without requiring any explanations.

**Touchscreen target sizes** - We made interface elements big enough to capture touch screen actions with enough screen space. If action buttons are too close it results in the user making undesired actions.

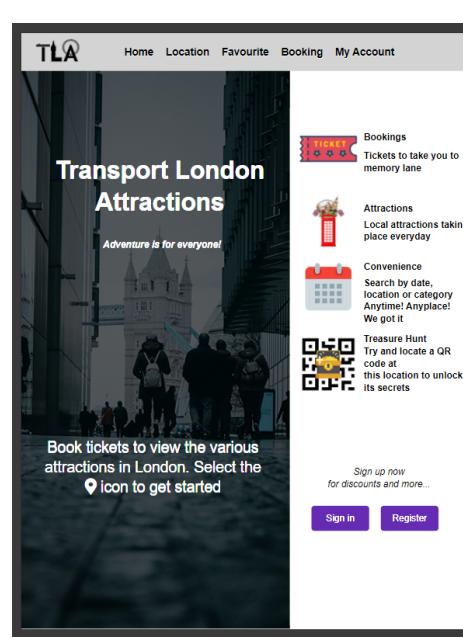
**Hand Position Controls** - Most people, mobile applications. We placed common features in easily accessible regions, while actions such as delete buttons are placed in areas harder to reach to avoid errors.

The app opens with an introduction page describing the purpose of the app which is to allow the users to explore and view various tourist attractions, do certain operations and allow them to book their desired attractions. It has a short description and an image with the option for users to sign in or register.

iPhone



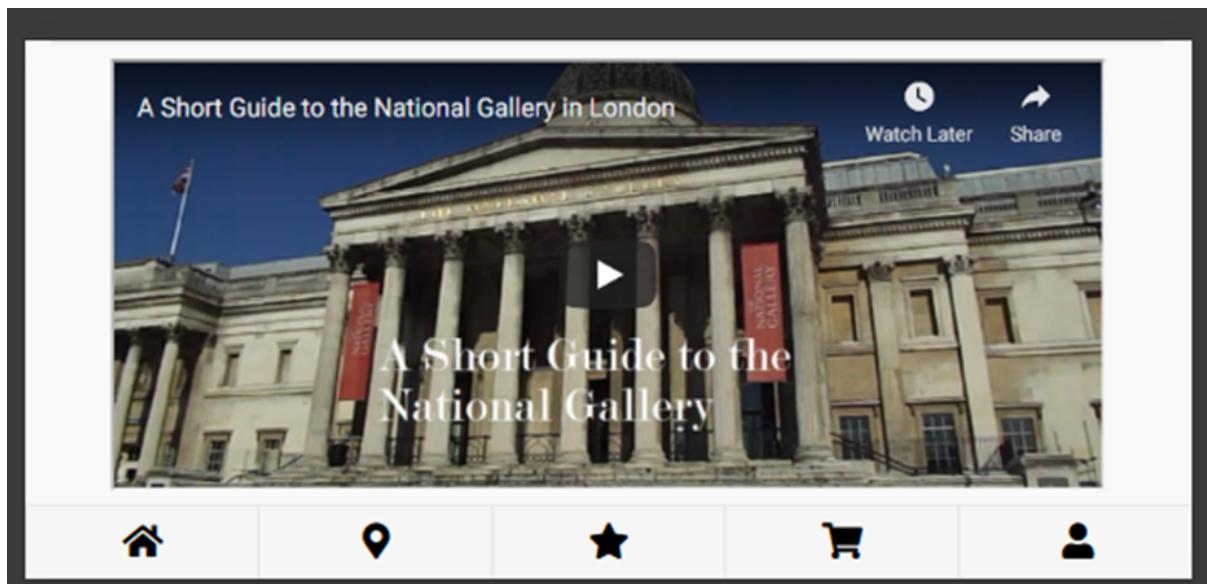
iPad



### 2.2 Incorporation of a short video

For iPhone - The video is incorporated in the middle of each poi page as a short guide or tour of that tourist attraction.

For iPad - The video is incorporated on the poi page as a short guide or tour of that tourist attraction.



### 2.3 POI

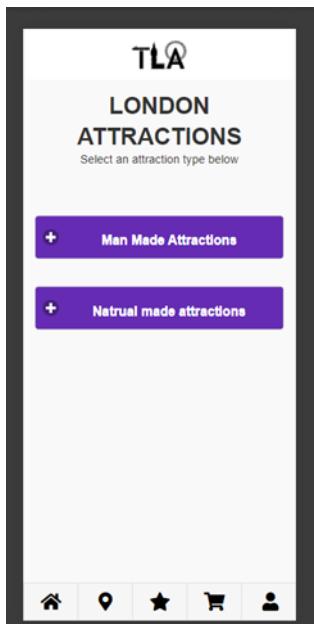
For iPhone – The Poi page can be accessed from the main menu of the app that is the location pin image option from the bottom navigation bar. The poi page opens with the name of the tourist attraction at the top, an image to represent the point of interest, and a short description of that poi. It also has options for the user to favorite, comment, share and rate this poi. The page also has a short video about that poi and the map image to find the location. At the bottom, the page contains options to open the camera and scan the QR code or to add to the booking.

For iPad – The Poi page can be accessed from the main menu of the app that is the location pin image option from the bottom navigation bar. The poi page opens with the name of the tourist attraction at the top, an image to represent the point of interest, and a short description of that poi to the right. The same page also has the options for the user to favorite or share this poi. Also, this poi page also shows the comment section to the right. So the user can easily add their comment without going to another page.

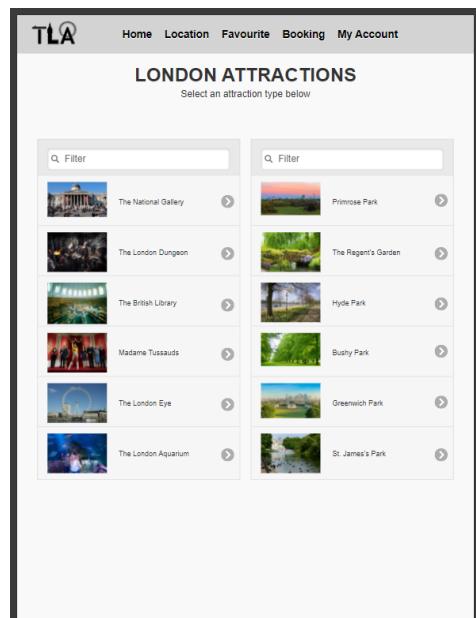
As you can see from the display on the iPad it is much different from the iPhone as we have also replaced the navigation from the bottom to the top of the screen for the iPad. Well then you may be curious as to why this was done. This was done to increase user friendly experience while also easily accessible for iPad which can also turn into computers.

## Mobile User Experience

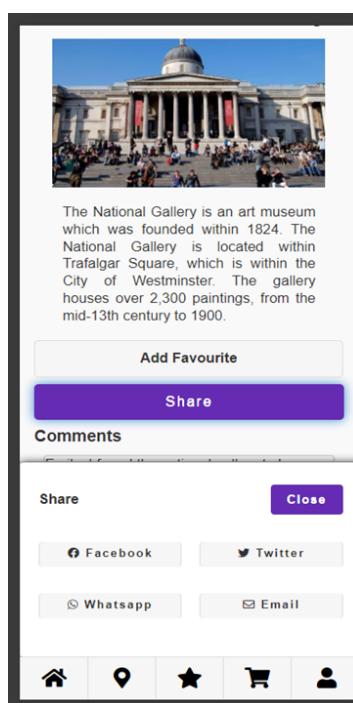
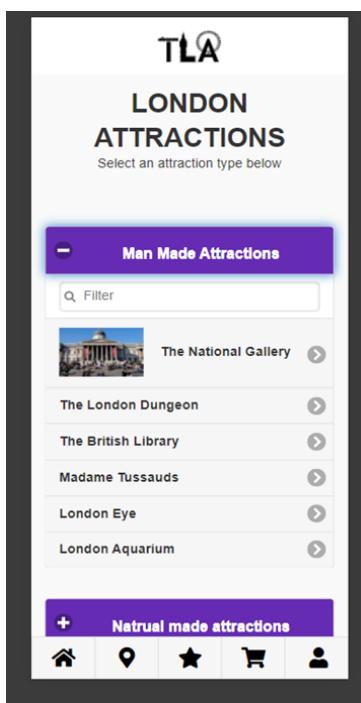
iPhone



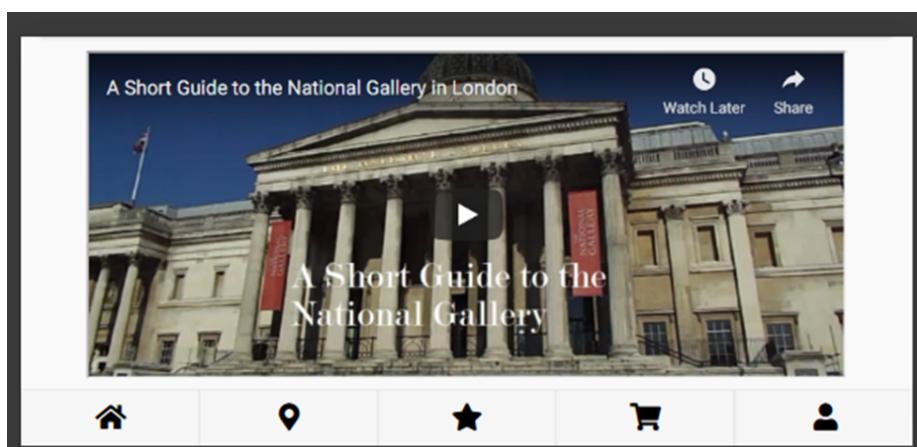
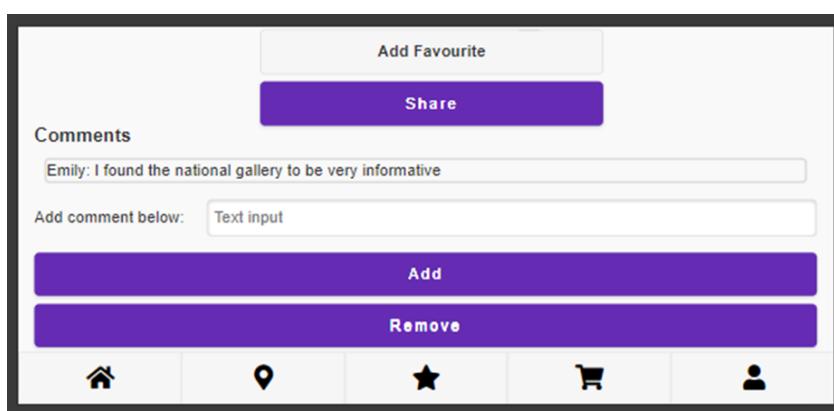
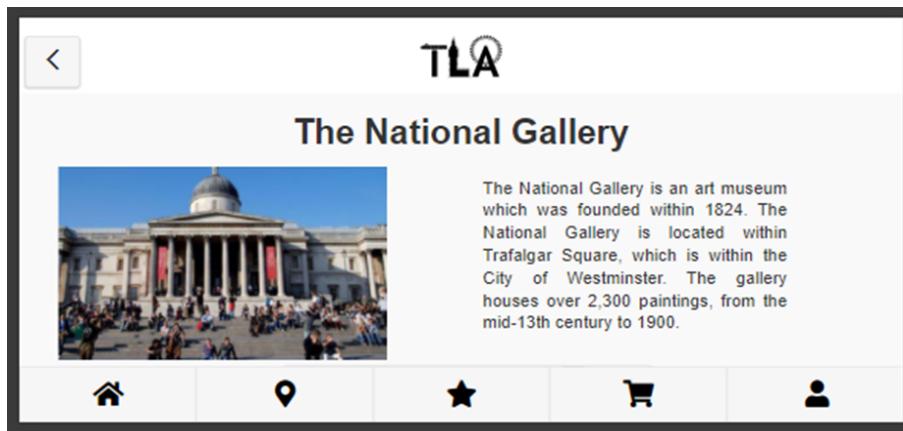
iPad

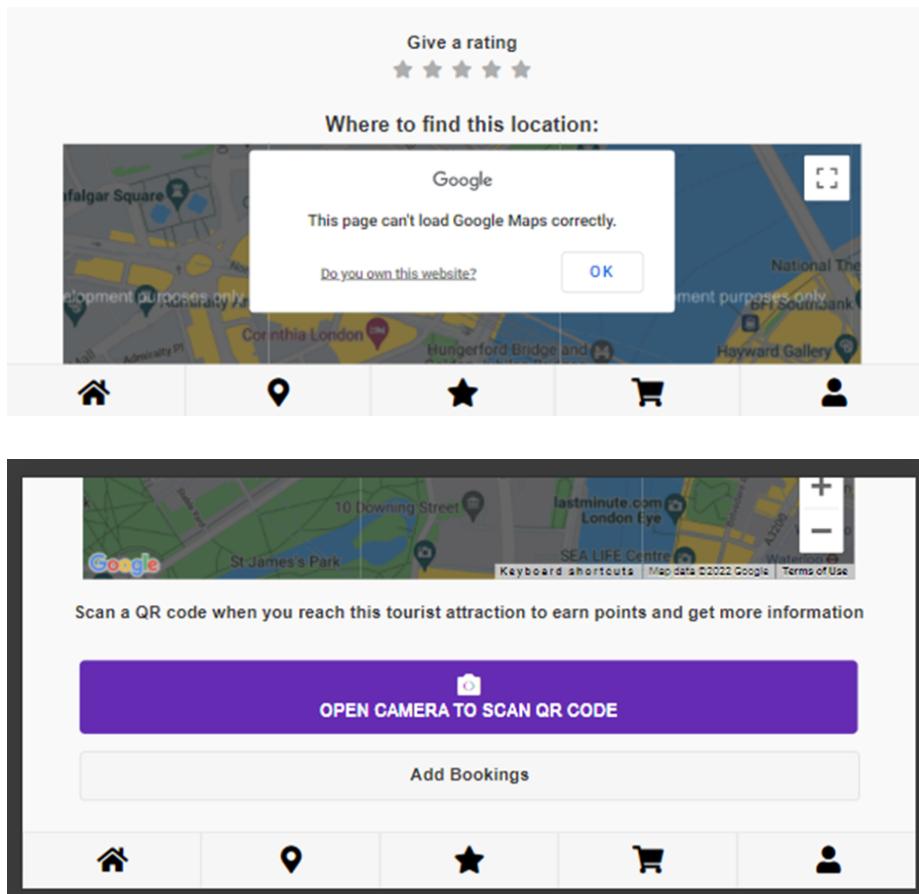


iPhone



iPad



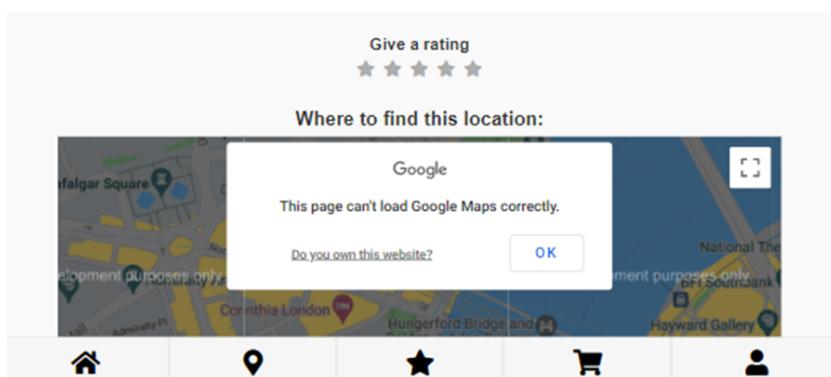


### 2.5 Integration of google maps

The google maps were integrated by using navigations codes which we were then able to copy the navigation codes and implement them into our code with the correct location

For iPhone - The map is integrated on each poi page. the user can scroll down to see a map showing the location of that tourist attraction. The user can also click and see the larger image of the map.

For iPad – The map is integrated on each poi page. The user can access the map which is present on the right side of the page. The user can also click and see the larger image of the map.



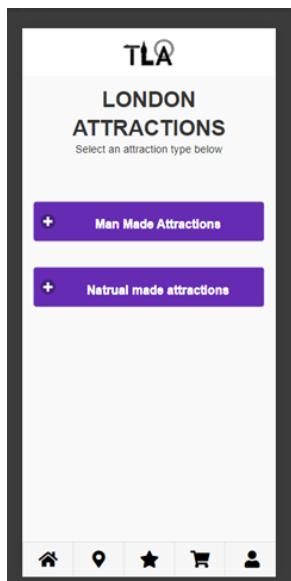
## 2.5 List creation & sorting and filtering widgets

For iPhone – The main menu has the options of poi in a scroll-down bar. For example, the “Man-made attraction” scroll down button contains and shows a drop-down menu with tourist attractions that are made by man. The scroll-down menu also contains a filter option for the user to search for a particular attraction.

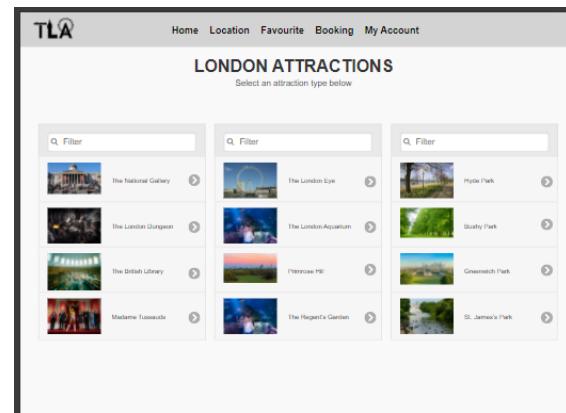
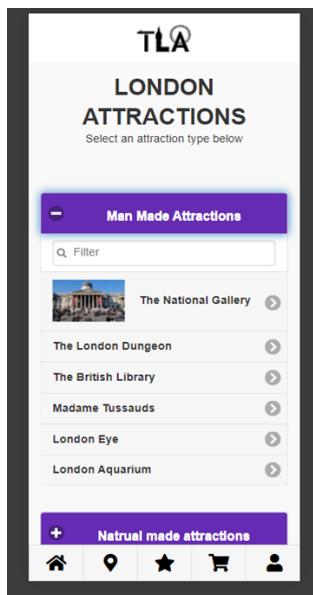
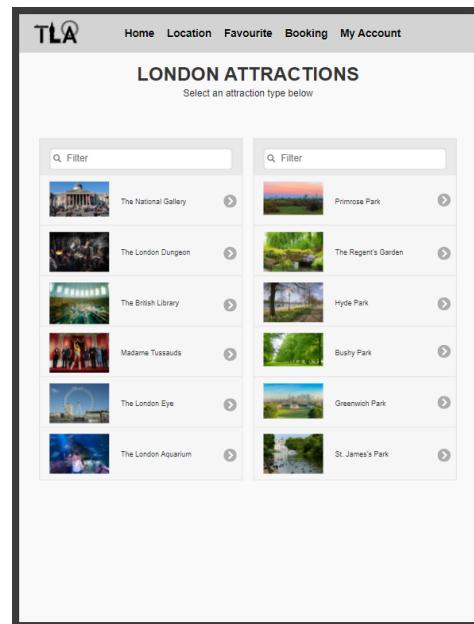
For iPad – The main menu does not have any scroll down button but all the options are displayed on the same page with images.

However, the user can still use filters for the poi on the iPad version.

iPhone



iPad



### 2.6 Booking form

For iphone - Within the booking page, the image used is a small size web server thumbnail image of the point of interest the user wants to book for. This is accompanied by the name of the point of interest. On this screen the user is making a booking so the main goal of the task the user is set to do is by a train ticket therefore the size of the image is not an important aspect of the page. Although if the user wants to know what they are about to purchase then a thumbnail image can be seen of the attraction which is clear enough for the user to tell what attraction they are purchasing.

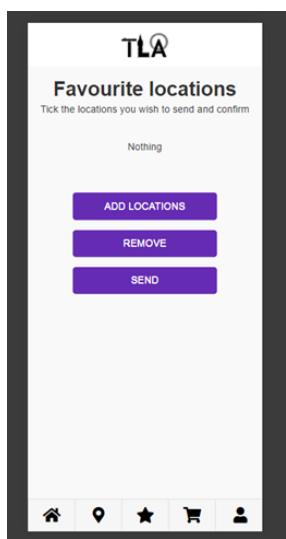
For ipad - Within the bookings page the thumbnail image is used to show the attraction the user has added to their booking cart. This image is the smallest image used and has the dimensions of x by x .

### 2.7 Favourites list

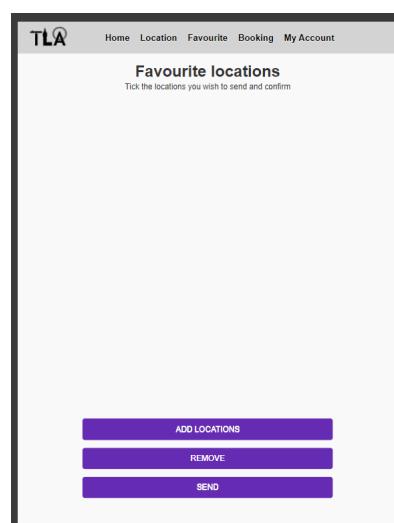
For iPhone - The user is able to favorite his/her desired tourist attraction from the poi page of that attraction by clicking on add to the favorite button above the share button. The user can then go to the favorite page by clicking on the star button from the bottom navigation bar. On the favorites page, he/she can see the name of the poi displayed, they can add more locations, remove that particular poi or send it through email.

For iPad - It's pretty much the same as iPhone. The user can favorite his/her desired tourist attraction from the poi page of that attraction by clicking on add to the favorite button. The user can then go to the favorite page by clicking on the star button from the bottom navigation bar. On the favorites page, he/she can see the name of the poi displayed, they can add more locations, remove that particular poi or send it through email.

iPhone



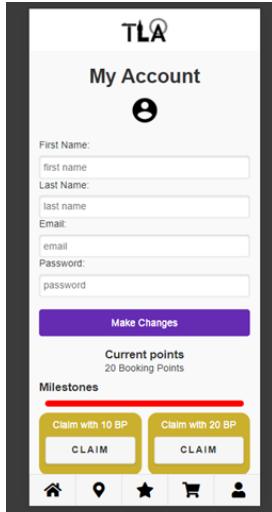
iPad



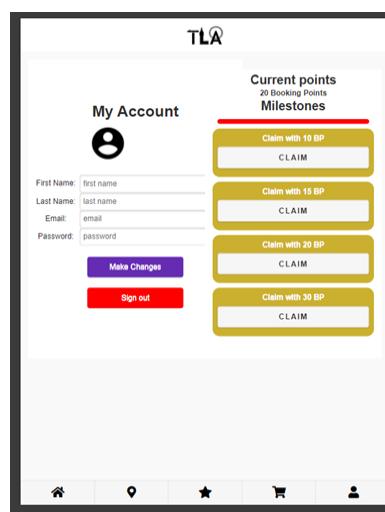
### 2.8 Gamification (might need to be combined with 2.9)

The way we implemented gamification in our treasure hunt mobile app design is that we added a point system for the bookings made by the user and when a user goes to a particular location they would need to locate a QR code to scan and gain points which then allows them to claim discounts. Gamification using both the booking feature and QR code feature with the help of the built-in phone camera to achieve this.

iPhone

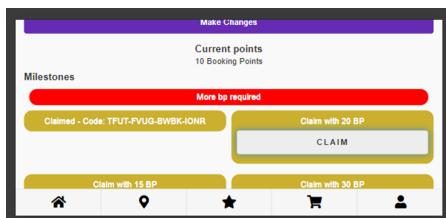


iPad

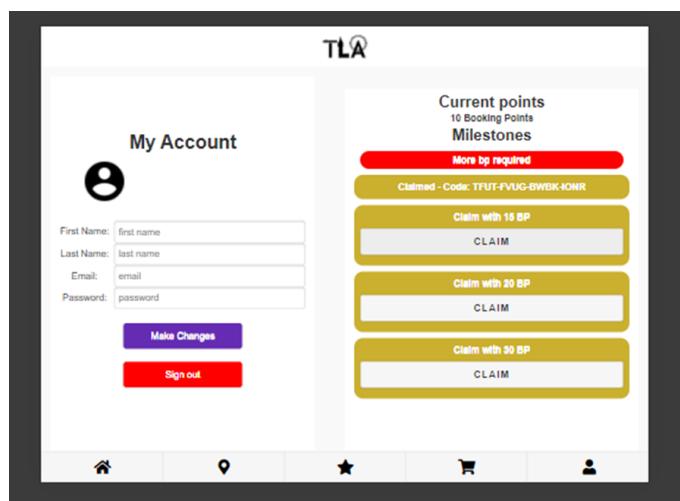


Orientation change

iPhone



iPad



### 2.9 System feedback

In our proposed design we have implemented a couple of systems that respond to user action for example, on the booking page, we implemented a system response where if a user does not pick a date or a type of ticket it will alert a small message below saying warning: please select date and please pick a ticket. This will tell the user that they are doing something

wrong within the process of booking a ticket therefore the user can now book without having any errors or missing information.

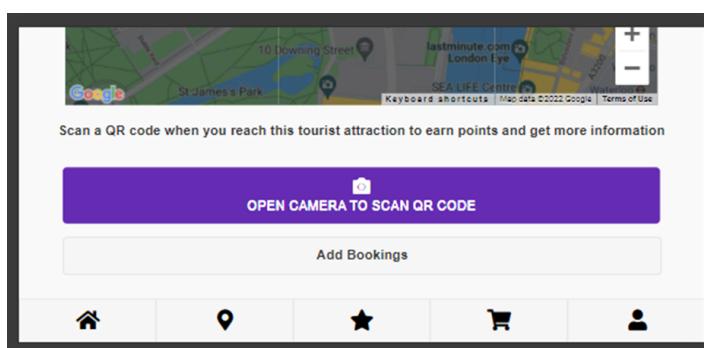
Furthermore, we implemented pop-up messages on the login page telling the user that there is an issue with the way they entered the information than telling them to click the continue button so it will allow the user to try again and this will be the same as for the forgot password. Another pop-up used would be on the comment page as it tells users to click on the confirm password if they are sure to reply, delete, edit or post a comment based on the locations.

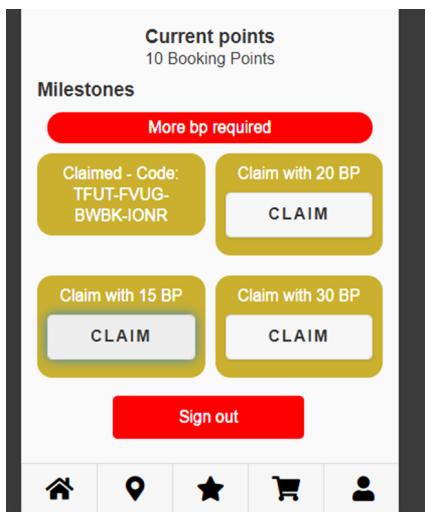
Moreover, we have implemented one popup on the account page as it tells the user if they are sure if they want to save the changes that have been made to their account, for example, first name, last name, email, and password. In our treasure hunt application, the user can normally visit the location page home page but for them to make a booking, add comments, add to favorites, and have access to my account page they are required to sign up so when the user tries and access the page it will display a prompt/ pop up to the user that they don't have access to that particular feature yet unless they have an account. Within the pop up it contains 2 buttons, one where it takes the user to the login page and another button that takes the user to the signup page

### 2.10 Scores & points gained (might need to be combined with 2.7)

In our gamification, the way it works is that for every booking made you will gain 5 points. Furthermore, when a user gets a ticket to a particular location they have the challenge to find a QR code and scan it to gain another 5 points along with more historic information about the place. In addition, for every 10 points made they will receive a 50% discount code which they can apply to their next booking.

We made the user aware of this feature within our home page which is what the user first sees when they open our treasure hunt app. This shows the user an image and a description of a QR code treasure hunt to gain points. Moreover, on the home page, it also informs the user by giving them an option to sign up if they want to make a booking and get points. Another way the user will know about this is that when they create an account with our mobile treasure hunt app they will have access to my account page where they can see the total amount of points they have made and make their discount claims there.





### 2.11 Comments

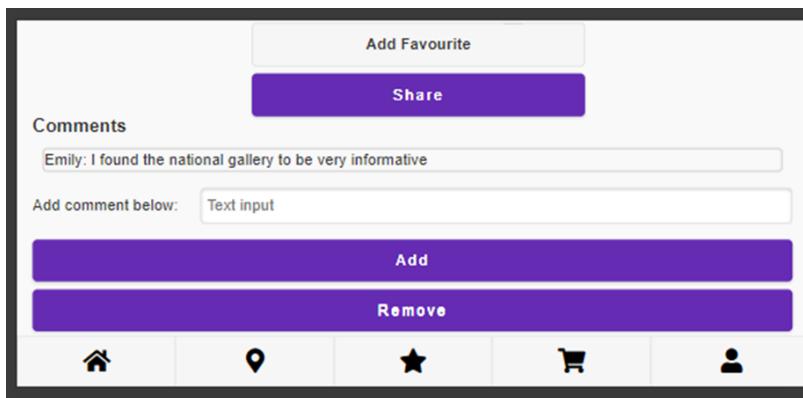
For iPhone – The comment page is present on the poi page when the user scrolls down.

The comments are displayed in this manner – username, the comment description, and the option to add comments. The user can add or remove a comment as desired.

For iPad – The comment page is present on the poi page when the user scrolls down.

The comments are displayed in this manner – username, the comment description, and the option to add comments. The user can add or remove a comment as desired.

iPad



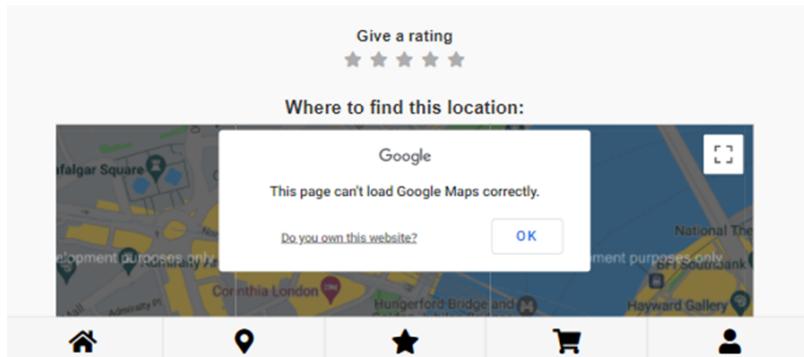
### 2.12 Rating

The users can give ratings to a poi on the poi page whether it's an iPhone or iPad.

For iPhone – The rating stars are present at the bottom of the poi page. It is represented by five grey stars so the user can highlight the number of stars according to their liking. The stars then turn to yellow once it is highlighted.

For iPad – The rating stars are present at the bottom left of the page with the same methodology as for the iPhone.

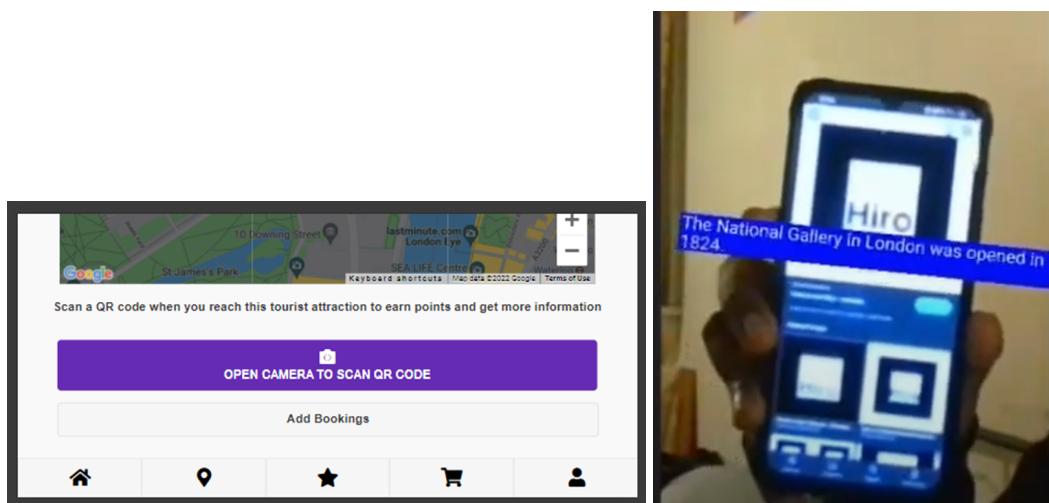
iPad



### 2.13 AR

For iPhone - The AR is implemented on the poi page. The user can see a button to open the camera and scan the QR code which they can find on that tourist attraction. This is to get interaction from the user in a fun and interesting way. When the user clicks on this button, the browser then asks the user to allow the browser to access the camera. After giving permission, the user can hover the camera over the QR code to get a text. The scanning of QR codes can be further used to claim discounts during booking.

For iPad - The AR for iPad is the same as for the iPhone. The user can see a button to open the camera and scan the QR code which they can find on that tourist attraction. This is to get interaction from the user in a fun and interesting way. When the user clicks on this button, the browser then asks the user to allow the browser to access the camera. After giving permission, the user can hover the camera over the QR code to get a text. The scanning of QR codes can be further used to claim discounts during booking.



## 2.14 Differentiation between iPhone and iPad implementation

**Explain the differences in the code of the implementation of the different design features in the two devices, when and where there is a difference.**

The design between the iPad and the iPhone is best tailored for the user experience. The iPhone design displays a simplistic form utilizing all areas on the user's screen. This allows for an attractive aesthetic appearance on the user interface to keep the user interested in the app. The iPhone buttons are sized in an equally distributed way to allow the user to properly select a button and not confuse the system on what is being selected. The iPhone can scroll down if there is an extension of information to provide the user or requires the user to enter in information to continue. As the iPhone size is a minimalistic and small device we have provided the user with easy and accessible navigation buttons which are placed at the bottom of the screen. The user can quickly go to any page effectively and efficiently.

The iPad is created in a way to please the user aesthetically as the iPad is a large device meaning the pages and contents on the iPad will be tailored to the iPad's size. The buttons on the iPad are much larger than compared to the iPhone version their sizes are different. iPad pages will be able to multiple pages and content on one screen compared to the iPhone version. For instance, if you view the comment section for the iPhone you can see that it is below the POI section which requires being scrolled down to as there is not enough space for both POI and comment section to be on one screen. This is why on the iPad version the POI and comment section are merged onto one screen as the size is big enough to allow it while having a tailored sizing of the buttons. There is also the quality of the pages to mention as the screen is large on the iPad compared to the iPhone there may have been some expectancy on the quality of images to be reduced however, If we increase the quality of the image on the iPad compared to the iPhone then there should be no obvious difference between the images on both devices. There is also an obvious desktop appearance as although the iPad is large enough to allow a design to look like that there is also the consideration of connecting a mouse and keyboard to the iPad which can allow a user to use the iPad as a computer.

In conclusion, the designs on each device have small changes for the better as they improve the user experience and interface. Both devices ensure the quality of use will be maintained and allow the user to access the application equally as efficiently and effectively.