

Mobile Web Application Development

Session 1

1. Mobile Web Applications

- Open the URLs below. Decide whether each piece of software is a *website* or a *web application*.
 - [TFL](#)
 - [National Express](#)
 - [The Guardian](#)
 - [E-music Maestro](#)
 - [Riverford](#)
 - [NHS BMI Calculator](#)
- Open each web application URL simultaneously in desktop and mobile note any differences in the following:
 - Layout
 - Navigation
 - Typography
 - Textual content
 - Graphical content (images, icons)
 - Form design
 - Strength of branding
- Does the mobile version of the application work as well as expected? Or, are there any problems with it?

2. Mobile Web Application Design

(a) Read the case study information below.

(b) You have been commissioned to design the SeaSwan UI. Using the case study information provided below, create detailed mockups of the SeaSwan landing page and at least two other application pages.

A logo, some indicative images and textual content is provided for you in *session1resources.zip*. You should take a mobile first approach to design, starting with mobile, moving on to tablet and small notebook and finishing with desktop.

Use Microsoft Visio, [Lucid Chart](#) or a dedicated mockup tool (e.g. [Balsamiq](#), [Adobe XD](#)) to create your mockups.

Case Study

Bamako International Airport is situated on the opposite side of the mouth of the Bonobo River to Bamako City itself. To drive to the city from the airport, you must drive inland along the H21 freeway, cross the Weah Bridge and then drive along the H1 freeway back along the river to the city. The total distance for the road journey is 220 km. It takes around three to four hours to complete the journey. This can be much longer in the rainy season.

SeaSwan are launching a small vehicle (cars and vans) and foot passenger ferry service from the airport to the city. The ferry will reduce the travelling distance to 15km and the journey time to about 50 minutes. Ferries will leave from the airport to the city every two hours on the hour from 07:00 to 20:00. Ferries will leave from the city to the airport every two hours from 08:00 to 21:00.

Customers will be required to book their vehicle or their journey as a foot passenger using the SeaSwan web application.

To book a SeaSwan journey, customers must first create an account. To create an account they must provide:

- First name
- Surname
- Passport number
- Email
- Password
- Password conformation

If the customer already has an account, they must login using their email and password.

To create a booking, registered users travelling as foot passengers must provide the following information:

- Booking date
- Booking time
- Number of passengers crossing
- Single or return

To create a booking, registered users travelling in vehicles must provide the following information:

- Booking date
- Booking time
- Vehicle make
- Vehicle model
- Vehicle registration number
- Number of passengers in vehicle

- Single or return

Payment methods will be by PayPal only. Prices are as shown in the accompanying information document in the session 2 resources folder.

Customers should be allowed to update and cancel bookings as required.

Additional Exercises

1. Why Mobile First is Crucial for Business Success.

Read the following article on the importance of a mobile first approach for business success.

<https://developers.google.com/search/mobile-sites/mobile-first-indexing>

2. Mobile First Design and Implementation

Read the following articles on mobile first design and implementation.

https://developer.mozilla.org/en-US/docs/Web/Progressive_web_apps/Responsive/Mobile_first

<https://agentestudio.com/blog/mobile-first-design-full-guide>

3. CSS Frameworks

Read the following articles on CSS frameworks.

<https://www.smashingmagazine.com/2018/11/css-frameworks-css-grid/>