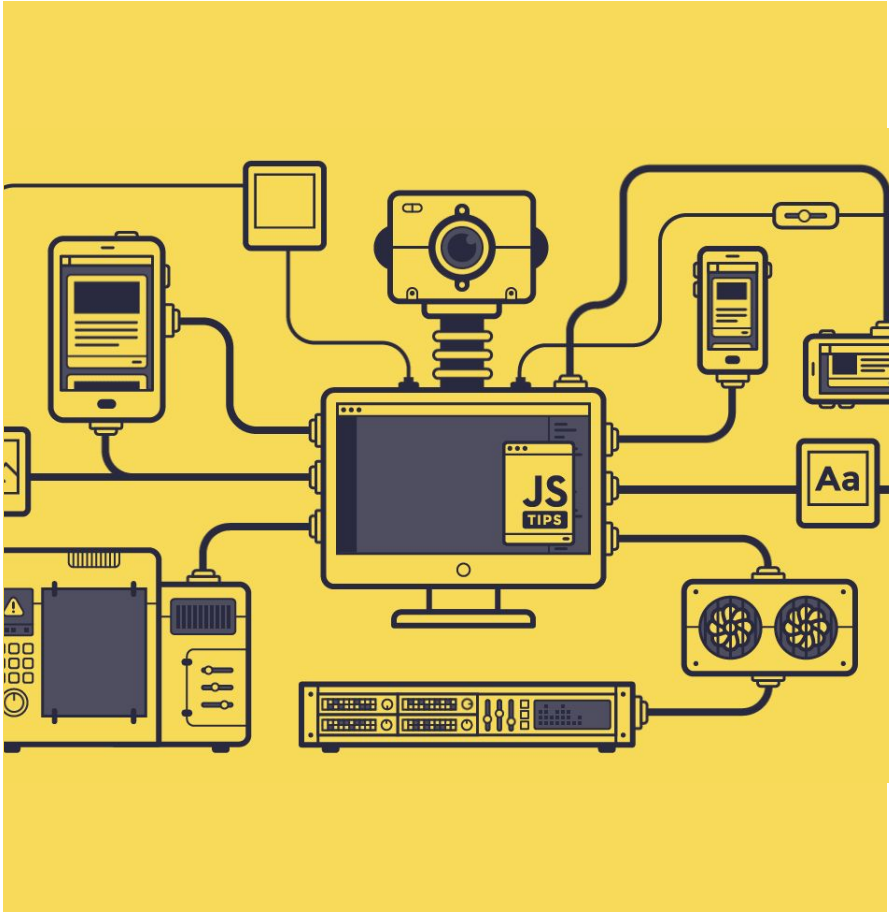
Interactive Development 100

Introduction to Web Programming

T2 | Deliverables & Project Brief

This Terms Project:

This term you will be introduced to the fundamentals of web programming by exploring Javascript! You will learn about data types, variables, conditionals, arrays, iteration, objects, and manipulation of the document object model. You will also be responsible for implementing your own front end for this terms project!



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Term Two Brief

Welcome Students!

Introduction

JavaScript is a lightweight, cross-platform, and interpreted scripting language that is well-known for the development of web pages. JavaScript is used for Client-side developments, and more recently as Server-side developments as well.

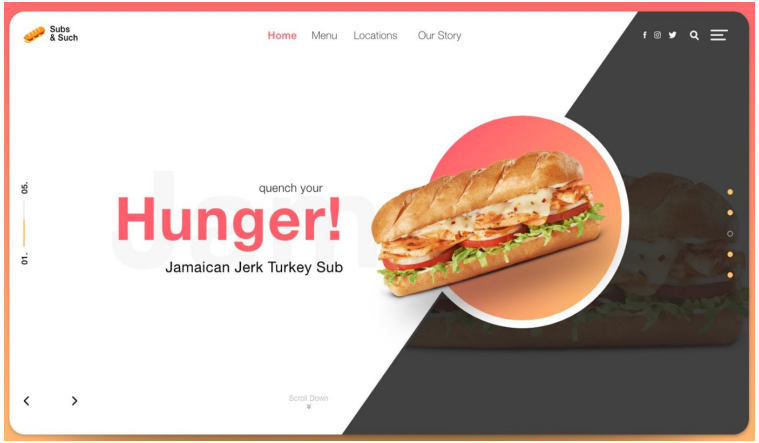
JavaScript is the most popular scripting language used in 2023. JS is utilized by almost all websites and is parent to the most popular web development frameworks such as React.js, Angular, Vue.js and Node.js.

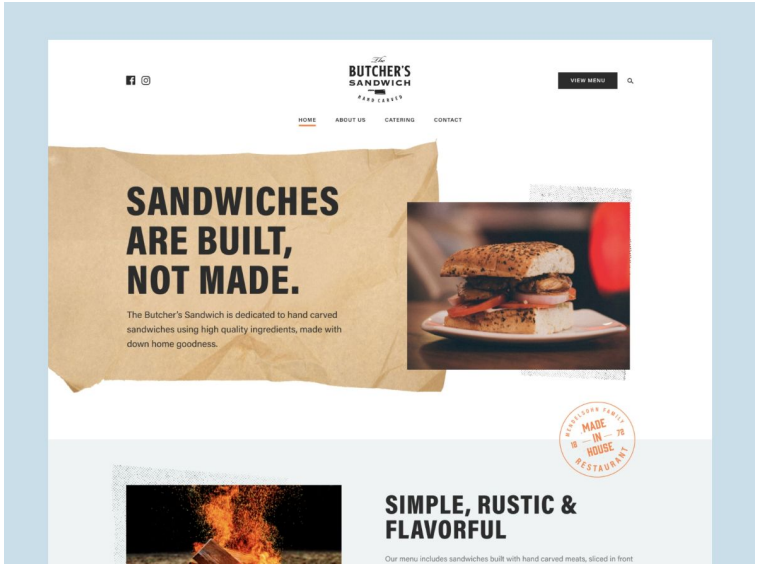
The aim of this term is to introduce students to the basic principles of JavaScript, by having students create a multiple-page functional website that utilises JS. Students will be required to create their own design/wireframes and bring them to life using HTML and CSS.

In addition to these skills, students will also explore Bootstrap components in order to create clean front end implementations. Students will be required to create their own front end designs for this term.

What You Will Learn:

- ❏ Fundamentals of Javascript
- ❏ Dynamic Markup
- ❏ Data Processing & User Inputs
- ❏ DOM Manipulation





Getting Started

Project Brief

Project Theme & Context:

This term you will take on the responsibilities of a junior web developer in a small web agency that has just landed the project to develop a website for “SuperSubs”, a new online submarine sandwich ordering service. You have been tasked with design and implementing the overall UI and Functionality for the application. The USP for this application is the ability to allow the user to build their own custom Submarine Sandwich from a variety of different breads, toppings, sauces and beverages! Users will also be able to see their order and apply discount codes in order to reduce the overall cost of the order.

Project Requirements:

Building off the skills you learnt last term, you will be responsible for the implantation of your own markup and styling. This means that you will need to design your own user interface, as well as include a branded component for the SuperSub brand. In order to implement your front end, you will need to utlise Bootstrap for both Layout and simple UI components.

The overall objective of this term is to explore Javascript functionality, which means there will be minimal focus on the front end implementation. However, your front end implementation must be clean, minimal and showcase good User Experience practices.

For the SuperSub brand, you can implement a simple Logo and color pallete.

Features & Functions

Project Specifications

The structure of your final sites must represent the following:

[1] Homepage

The Home page must consist of a header image with textual content and two UI buttons that will lead to different sections.

[1.1] About Us Section

After the header you will need to add an “About Us” section, which outlines to the user what the site is about and how to use it.

[1.2] Subs of the Month Section

This section should showcase the latest Sub Creations made by users! You will need to create 8 dummy Subs.

[2] Build A Sub Page

This page will allow users to create a custom Submarine sandwiches by selecting a Base Bread, a minimum of 5 Toppings and a minimum of 1 sauce. The user should be able name their creations and also add multiple sandwiches! The user should also be able to see the total order cost.

[3] Checkout Page

The order from the Sub Builder page should be carried over the checkout page, and the user should be able to add a coupon code that reduces the overall cost by a certain percentage.

Your Must Haves

Project Breakdown

For your final submissions, **each page** of your application must contain...

A Navigation Bar

Each page should have a navigation bar located at the top of the screen, oriented horizontally. It must contain the logo to the left, which should also link to the home page, followed by navigational links for the site. To the right there should be a search bar. This navigation bar should be implemented as a Bootstrap Navigation component.

A Footer

Each page should contain a uniform footer section, which must contain three distinct footer wells. The left well should contain the application logo, the middle well should contain the copyright for the application, and the right well should contain the social media icons and links to the the relative social media home pages.

Application Metadata

Each HTML file must contain metadata information for your application. This will include the site title, keywords descriptions and authors details.

The following is a breakdown for the specific website pages...

On The Homepage

- ❑ The Home Page must consist of a header image of a featured image.
- ❑ The header should include interaction buttons that act as secondary navigation.
- ❑ The Homepage must contains a “About Us” section.
- ❑ The Homepage must contains a “Subs of the Month” section. This section will showcase dummy content of some of the most recent user made subs, showing the Sub Name, Image, and components of each sub.

On The Build A Sub Page

- ❑ The Build A Sub Page will allow users to create their own sandwiches.
- ❑ The user should be able to name their Subs before adding them to the order
- ❑ Each sub must contain a BASE Bread, the user should be able to select from a minimum of 3 different bread options.
- ❑ Each sub must contain a minimum of 5 Toppings, chosen from a minimum of 20 topping options.
- ❑ Each sub must contain a minimum of 1 sauce, selected from a minimum of 5 sauce options.
- ❑ Each option added to the sub should have an associated value that add to the total of the Sub Cost.
- ❑ The user should be able to add multiple sandwiches.

On The Check Out Page

- ❑ The Order details should be stored in local storage and displayed on the Checkout page.
- ❑ Users should be able to add a coupon code at checkout which will reduce the amount by a certain percentage.

Last But Not Least

Technical Requirements

Your SuperSub website should meet the following requirements:

- ***Own Front End Implementation:***

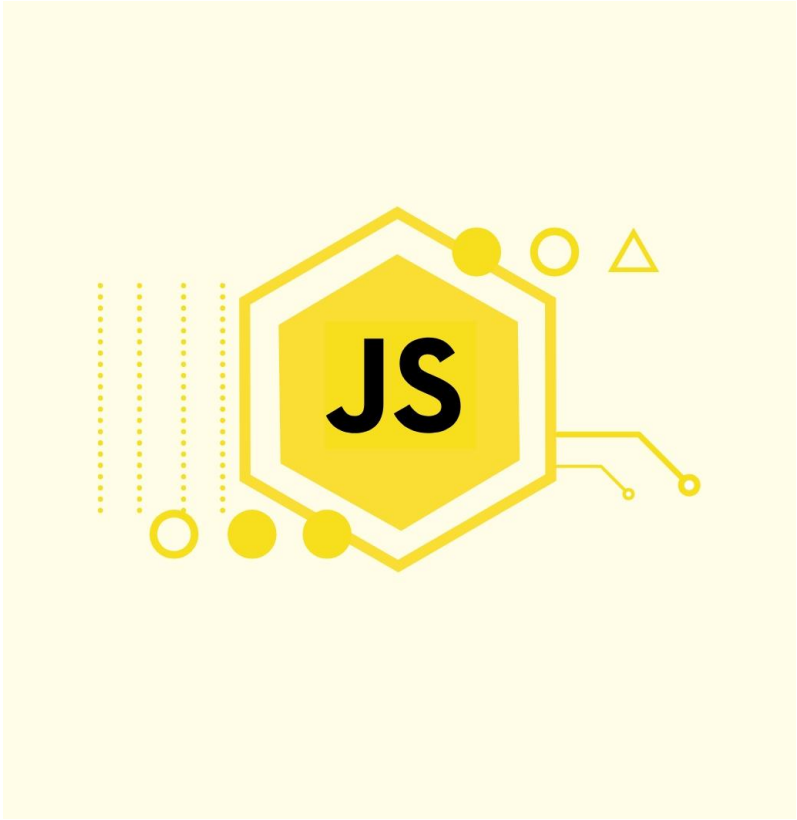
This term you will be responsible for creating your own front end design. While you may implement any design of your choosing, you MUST use Bootstrap in order to create the layout and design components.

- ***Branded Component:***

While the focus of the term will not be on the visual styling of your application, you will need to implement some basic branded components for Super Sub. You should include a logo, images, textual content as well as some basic color palette.

- ***Sandwich Order Visualisation:***

As the user constructs their Sub of choice, you will need to provide a way to showcase what options they have selected. You may do this by creating a simple UI elements, or you may choose to make a more elaborate visualisation using images.



Practice What You Learn

Homework Tasks

Each week you will be required to complete a series of exercises and tutorials that will reinforce the skills you learnt that week. You will submit these task on Canvas!

- **Task One:** Data Type Exploration
- **Task Two:** Loops & Logic || Bootstrap Components Tutorial
- **Task Three:** Creating Custom Functions
- **Task Four:** Working with Arrays & Objects
- **Task Five:** Dom Manipulation || Bootstrap Components Tutorial

These homework tasks will not be a marked component for the term. It is your responsibility to work through the given tutorials and exercises. These task will directly contribute to the success of your final submission.

Don't Miss Hand In

Hand In Timeline

In addition to the homework tasks, you will also be required to showcase your final submission progress, as well as demonstrate your skill development through formal assessments. The following outlines the deadlines for these major assessments:

Progress Assessments:

Progress assessments requirement will be outline by your lecturer a week before submission:

- Progress Assessment One 19/05/23
- Progress Assessment Two..... 04/06/23

Formal Assessments:

Formal Assessment take place in Week 4 & Week 8 of each term. This may take the form of an in class assessment, or a specific homework based assessment.

- Formal Assessment One 19/05/23
- Formal Assessment Two..... 15/06/23

Final Submission:

Final Submission will take place on Canvas, with a link to your final project repository.

- Final Submission..... 19/06/23

Check Your Submission

Hand In Requirements

At the end of each term, you will be required to hand in a series of Final Deliverables. These submissions will be uploaded to Canvas!

[1] Final GitHub Repository Link

Link

Your final application will be submitted via a link to your term project GitHub Repository. You must ensure that your repository is set to public! If your Repository is not accessible, your submission will not be accepted.

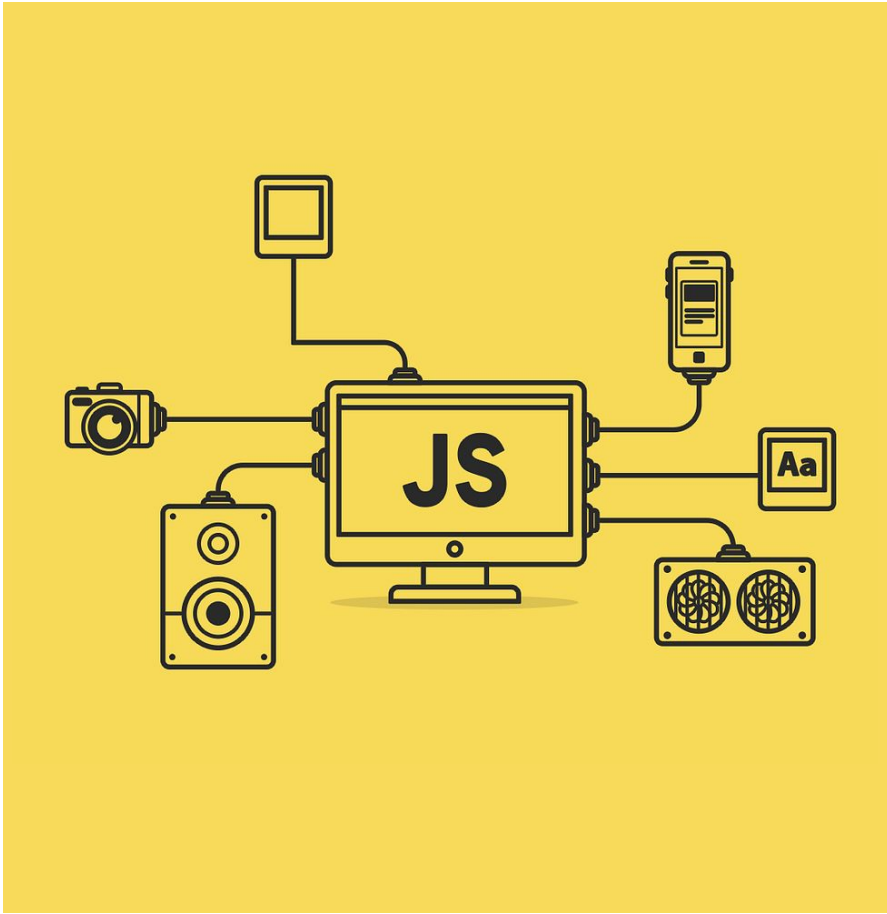
[2] Demonstration Walkthrough

MP4 | Less Than 250Mb

At the end of each project you are to conduct a video walkthrough of your site, in which you highlight important features and functionality outlined in your brief. You are required to verbally explain your user journey as you navigate through your features and functionality. This should be no longer than a 5-10 minute video.

For this submission you will be graded on how well you have showcased to your lecturer that you have (1) implemented the requirements stipulated by the brief, and (2) you have a good understanding of the work we have covered during the term.

A reminder that all final submission require a signed plagiarism declaration document. Your project will not be marked without it.



Assessment Summary

Mark Breakdown

The following is a breakdown of the mark weighting for your assessments over the course of the term:

Final Project Submission..... 55%

- Repository Administration.....20%
- Application Files.....80%

Demonstration Video.....20%

Formal Assessments.....15%

- Formal Assessment One.....50%
- Formal Assessment Two.....50%

Progress Assessment.....10%

- Progress Assessment One.....50%
- Progress Assessment Two.....50%

A reminder that Term Two will constitute 25% of your final year mark.

Assessment Based On

Assessment Criteria

The following is a breakdown of the assessment criteria for this term. These are the attributes and skills that your lecturer will be assessing in order to generate your final term mark:

You will be assessed on the following:

- Interpret Brief Requirements and Implement outlined features and functionality.
- An understanding of the fundamentals of programming, such as variables, data types, iterations and functions.
- An understanding of the DOM, and how to utilise JavaScript for DOM manipulation
- How to use the CLI to navigate through the OS, in order to create, delete and edit files and directories.
- How to utilise basic form elements to capture user information, process data, and output values to the DOM.
- Utilise Browser developer tools in order to debug and inspect elements.

End Of The Course

On Completion

At the end of each term, you will be required to hand in a series of Final Deliverables. These submissions will be uploaded to Canvas!

What you should be able to do

- Implement the application functionality as stipulated by both the Brief and Theme.
- Implement functionality that implies a sufficient understanding of the fundamentals of programming.
- Showcase the ability to update values and styles on the DOM based on user interactivity.
- Show significant ability to Navigate the OS using only the CLI?
- Implement significantly complex form elements that allow for data capture and processing?
- Effectively utilise developer tools in order to target, update and debug Markup, Styling and JS.

Lecture Breakdown

Course Schedule

Please see the following course schedule for a breakdown of your lecture content for each week.

WEEK 1 (24/04 - 28/04) - Online	
Introduction & Briefing	In this week's lecture, we will be conducting an introduction to the term as well as a taking a look at the brief requirements your projects.
WEEK 2 (01/05 - 05/05) - Online	
Introduction to Javascript	In this week's lecture, we will cover the basic principles of Javascript. We will be exploring Data types as well as how to use the console for debugging and testing.
WEEK 3 (07/05- 12/05)- Online	
Control Flow and Loops	This week we will be taking a look at the fundamentals of Javascript based logic control. We will explore If/Else Statements, For Loops and While Loops
WEEK 4 (14/05 - 19/05) - Online	
Javascript Functions Formal Assessment One	In this week's lecture we will look at how to create your own custom Javascript functions. You will also be writing your first formal assessment for the term!

WEEK 5 (21/05 - 26/05) - Online	
Arrays, Objects & Iterations	In this week's lecture, we will further explore Arrays and Object structures as well as how to utlise them within your projects.
WEEK 6 (21/05 - 26/05) - Online	
DOM Manipulation	This week, we will take what you have learnt so far, and use these skills to manipulate data, styling and structure on the DOM.
WEEK 7 (04/06 - 09/06) - Online	
Local Storage & Session Storage	In our final weeks class, we will be looking at how to create semi-persistent data using the browsers Local and Session Storage.
WEEK 8 (11/06 - 07/06) – Online	
Formal Assessment Two, Submission of Projects	In this week, we will conclude the course schedule and write our summative assessment. You will also be submitting your final projects for the term.