Web Technologies Coursework Specification

Overview

The assignment for this module is a single project that is split into two parts. This document details both parts. The objective is to demonstrate your understanding of **client-side web development** and **mastery of HTML, CSS, & JavaScript**. You will achieve this by completing a project in which you **design, implement, and evaluate a web site on the topic of food. A good place to start is an online recipe site (perhaps with each recipe presented upon its own page) but you can interpret the topic more broadly if you have an idea for an interesting food oriented website**.

You should carefully consider the nature of the problem, and plan a set of pages, a visual design, and user interface elements that provides your users with a good experience. If appropriate you may also include additional features, functionality and make use of third-party & browser-based APIs as necessary to implement your project. As we are evaluating your core skills it is advisable at this stage not to use frameworks like react.js as this can obscure demonstration of your own JS skills. Your implemented site must be hosted and deployed within GitHub pages which provides reliable and free web hosting.

It is a good idea to research similar food oriented website that you can use as a benchmark against which to measure the functionality of your own and which might provide inspiration for how other developers have approached similar sites.

It is also advisable to discuss any ideas that you have for extensions to the basic requirements with your module leader during timetabled contact time, such as labs, as this is an opportunity for formative feedback to help you to perform well and to achieve a decent grade.

The first part of the assignment is a report which will focus on the features, analysis, design, and plan for implementation of your site & is worth 40% of the total mark for this assignment. The second part of the assignment is the implementation and deployment of your design and is worth 60%.

It is expected that what you design initially might well deviate from your final implementation and that techniques you discover later in the module might cause you to re-think or re-approach decisions or plan you have already made. You might even discover that your initial idea needs to be completely replaced with something more achievable. This is perfectly fine and gives you an opportunity for critical reflection in your final report.

Above all, this coursework should be fun, so use your imagination, and give your creativity a free rein. Invention and originality will be rewarded by the marking scheme. I hope you enjoy working on it.

Part #1

For this part of the assignment you will develop an idea for your online food site alongside a design and a plan for achieving an implementation of that design. These will be presented in a single report. You will likely want to develop a satisfying user experience, and utilise a visually pleasing design, so consideration of your users interactions with the site at this stage can be useful.

Before you begin, it is worth doing a little research into the kinds of features that existing online food sites support. Don't get too ambitious though as you have a limited amount of time and are probably looking at what teams of professional developers have achieved over a longer timescale. Remember that at this stage in your career your are learning about your own skills, about your ability to turn your ideas into effective implementations, and about how long it takes you to do these things successfully. As a rule it is worth having a simple, core plan containing just the essential,minimum viable functionality. Then you can supplement the core plan with more elaborate functionality in the situation that you make better progress than you expected, but allowing you to fall-back to something more achievable if you experience challenges along the way.

Your deliverable for this part of the assignment is a single, short, and well written PDF report. An appropriate target length for this report is a single document of no more than 8 pages of text in 12pt fontsize (images do not contribute towards the length guide). The size of the report is a function of your effort and work and you will not be penalised for going over the guide length by a reasonable amount. Your report must include the following:

1. A description of the food site that you are planning with enough background context for your reader to understand what you are trying to do.

2. A summary of any background research into other similar sites, or useful technologies, libraries, or APIs that you have investigated with a description of how this has contributed to your project idea and design.

3. A list of features and some discussion of why each feature is included.

4. Site organisation and navigation tree diagrams with associated discussion and explanation of how you plan to organise the pages that make up your site and how a user might typically navigate through those pages. NB. Your diagrams can be combined if that is a useful way to present the organisation and navigation for your site. These diagrams may be hand-drawn and scanned/photographed, or created using any image/diagram software as you think fit.

5. A sketch of an initial user interface for your site and some commentary on the motivation for your design, i.e. how does your design address the features you've listed. NB. Any designs can be hand-drawn and scanned/photographed for inclusion in your report.

6. (Optional) As appropriate: any additional sections that you deem fit to describe your project. For example, if you have decided to implement a particular

feature as an extension to the core requirements then this would be the place to report on it. Similarly if you intend to save data within the browser, then some description of the kinds of data that you intend to store, how you will store it, and how it will be structured, should be reported on.

Your report must be uploaded to Moodle by the deadline of 3**PM on Monday 27th February, 2023**.

Part #2

You must implement your planned site from part #1 using HTML, CSS, and JavaScript. You may use any other technologies such as libraries, frameworks, third-party APIs, and browser APIs as appropriate. However your entire site must be deployed through GitHub pages. When you have used tools, libraries, or APIs other than pure HTML, CSS, and JavaScript written by yourself, you must be able to justify why you used them rather than creating a solution for yourself. Remember that this assignment is evaluating your skills on these core technologies and that use of readymade code (libraries/frameworks) can leave you with less opportunity to demonstrate what you can do.

Your deliverables for this part of the assignment are the following:

1. A public deployment of your site using the GitHub pages hosting feature.

2. A zip archive containing the complete source code and all resources for your site submitted to Moodle.

3. A short (approximately 4 pages in 12pt fontsize) PDF report that covers the following:

    A. Clearly identifies the URL (web address) of your deployed site.

    B. Explains the differences between your initial plan as outlined in part #1 and your final implementation. There is no penalty for deviating from your initial plan, that is part of the learning and skill development process.

    C. Describes any features that you would add or improve to enhance your project, given more time, and what you now know.

    D. Reflects upon the challenges you faced and achievements you made during this assignment.

4. A short, approximately 3-5 minute, screencast with voice-over of you demonstrating the features of your site (see the "Demonstration Screencast" section below for more details).

Your zipped sourcecode, report, and screencast must all be uploaded to Moodle by the deadline.

The deadline for part #2 of the assignment is 3**PM on Monday 24th April, 2023.**

Demonstration Screencast

Because of the size of the class, and the online nature of our learning environment this year, we cannot easily do the regular, face-to-face, demonstrations of our work. So this time we will produce short screencast recordings of our running software.

A screencast is simply a video recording of your screen as you interact with your web-app. This should include a voice-over of you describing what you are doing and why your app works the way it does. Screencasts are straightforward to record on most major platforms, Windows 10 includes the game DVR feature and Mac OS enables screen-recording via the QuickTime Player application. A free, cross-platform solution, with more functionality is the Open Broadcaster Software (OBS Studio[1]). Instructions for producing your screencast will be posted to Moodle to support you in producing this.

Note that one of the normal goals of the demos is to establish that the work you've submitted is your own, but it is also a useful mechanism to avoid misunderstandings and help ensure that your work is marked accurately. As a result we may, exceptionally, ask some students to demonstrate their work live through WebEx.

Feedback

Feedback is very important to your learning process. During the duration of this module you will experience feedback using a variety of modes and at various times. The most common type of feedback that you will get is verbal feedback during timetabled contact time. The aim of this is to help you to improve your practical skills and to help you to think critically about your progress. This is why attendance at lab sessions is important as these provide a great opportunity to discuss your ideas with teaching staff in a less pressurised context. You will also get some written feedback after your hand-ins along with your grade. Generally this is more brief than the verbal feedback you will have already received, and is primarily aimed at helping you to see what you did that helped you to achieve your grade. There may also be suggestions for improving things that you should consider in the context of your work. Under ideal circumstances you will receive written feedback via Moodle within three working weeks of the submission deadline. However you will also receive verbal feedback during contact time throughout the trimester. Verbal feedback is as important, sometimes more-so, than written feedback, and should neither be discounted nor disregarded. If you have specific things that you want feedback about then it is critically important that you ask for that feedback.

Grade Guide

The marking schemes are devised so as to reward those who go beyond the core taught material by integrating their own self-directed learning and discoveries. As

[1] https://obsproject.com/

a general rule, the more functionality, the better the mark, however your functionality should be consistent with a cohesive overall design, professional presentation, and pleasing user experience. Note that, because this is a project, rather than a mere test of your capabilities, you have significant leeway for what you include in your final submission (beyond the specified requirements). The following grade guide gives you a coarse description of how to interpret your overall percentage grade (for the entire module). When interpreting your feedback, please don't think in terms of "where did I lose marks?" or "did I get marked down for that?" but instead you should consider that you start off with nothing and incrementally approach perfection. A better question to ask yourself is "what could I have done to improve my work?" or "how could I refine what I have done to mark it even better?". Thinking critically about our achievements ourselves is how we develop a professional sense of the quality of our work, rather that relying on external validation of whether it is good enough. Projects like this are designed to encourage that kind of reflection and professional development. The following scale will give you some idea of the overall grade bands:

0-40% There are a number of ways to achieve a mark in this band, but generally you will either have failed to create a working practical implementation to a minimal standard in either part of the project, or have failed to submit a report that is written to an acceptable standard in either part of the project, or some combination of both.

40-49% Work in this grade band is considered to be up to an overall, acceptable, but minimal standard and constitutes a bare pass of the module. Practical implementations will cover at least the core requirements in each part and reports will be written to a minimally acceptable standard of content and presentation.

50-59% Work in this grade band is work that has achieved a good standard. This means that there is evidence that you are applying some depth of knowledge to the goals that you set out to achieve and are developing ambition in relation to what you build.

60-69% To achieve a mark in this band you will have produced work that is to a very good standard. As a rule, **most students will achieve in the mid to upper end of this grade band**. This indicates that you are developing significant depth in your understanding of the domain as a whole, as well as significant technical understanding of underlying technologies. You will also be developing reliable critical faculties that enable you to realistically appreciate what you have achieved and how it can be improved.

70-100% A submission in this mark band represents excellent work. Above 80% you should consider your work to be exceptional, and above 90% your work is exemplary and tending towards perfection. To achieve a mark above 70% you will have integrated and extended the lab work covered in class to offer an excellent level of functionality, both in terms of the number of features and their quality of implementation. Your reports will explain your thinking, in relation to both design and implementation, with clarity . To achieve above 80% then you should be aiming to exceed the taught content of the module and introduce ideas and findings from your self-directed learning.

You should think strategically about how to approach this assignment. The grade guide is cumulative, i.e. to get a higher grade, you must also have achieved the functionality required to attain a lower grade. A lower-risk strategy is to identify the core features that you think will attract a pass mark then aim to complete those features as soon as possible. Once you believe that you've secured some work at the pass level then you should iterate over your working solution to improve those features and try not to break things.

Try to avoid accusations of plagiarism:

- Do not copy and paste text from the Internet.
- If you use code from the internet, please acknowledge it in comments in the code and also in the report.
- After reading reference material, lay it down where you cannot see it and write your own interpretation in your own words.

Indicative Marking Scheme (Part #1)

Topic	Criteria	Marks
Core Criteria	A description of your site together with a summary of any background research & exploration of how this relates to your site	**/25**
	* List of features * Navigation tree * Initial UI sketch & commentary * Implementation Plan	**/55**
Above & Beyond	**The following is indicative:** Design of features that go beyond the idea of the core online food oriented topic. For example, use of sound, graphics, data-storage, external data sources, APIs, or extending the food remit to include elements of entertainment, education, serious games, &c.	**/20**
	Total	**/100**

Indicative Marking Scheme (Part #2)

Topic	Criteria	Marks
Core Criteria	Working implementation and subsequent deployment of your planned design. This includes the development & integration of an appropriate user interface & associated user experience.	**/65**
	A report containing: * Explanation of differences between initial plan and final submission * Description of features for enhancement * Reflection upon challenges faced * Reflection upon achievement made	**/15**
Above & Beyond	**The following is indicative:** The implementation of any features that go beyond the idea of the core online food oriented site. For example, your use of sound, graphics, data-storage, external data sources, APIs or extending the food remit to include elements of entertainment, education, serious games, &c.	**/20**
	Total	**/100**

1. Module number	SET08101/401
2. Module title	Web Tech
3. Module leader	Dr. Simon Wells
4. Tutor with responsibility for this Assessment	Dr. Simon Wells
5. Assessment	See attached descriptor for details
6. Weighting	**Part #1 (40%) | Part #2 (60%)**
7. Size and/or time limits for assessment	See attached descriptor for details.
8. Deadline of submission Your attention is drawn to the penalties for late submission	**Part #1 is due at 3PM on Monday 27th February 2023** **Part #2 is due at 3PM on Monday 24th April 2023**
9. Arrangements for submission	See attached descriptor for details
10. Assessment Regulations	This assessment is subject to the University Regulations**.**
11. The requirements for the assessment	Please see attached descriptor for details
12. Special instructions	None
13. Return of work	We will aim to provide **provisional** marks & feedback to you within three **working** weeks. Grades are then moderated and agreed at university level and finalised after the trimester is complete.

14. Assessment criteria	Please see attached. With reference to the module descriptor, part #1 of this assessment covers aspect of learning outcomes **LO1 & LO2** and part #2 covers aspects of learning outcomes **LO1, LO2, LO3, & LO4**. **LO1:** Describe Internet and World Wide Web technology standards **LO2:** Identify and apply an appropriate web page development methodology **LO3:** Demonstrate competence in the use of authoring tools & markup languages. **LO4:** Demonstrate competence in Client-Side and Server-Side programming