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In collaboration with Staffordshire University

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| |  |  | | --- | --- | | **Module Title:** | Web Development and Operating Systems | | **Module Code:** | COMP40004 | | **Attempt:** | First Sit | | **Group or Individual:** | Individual Assignment | | **Assignment Number**: | 2 of 2 | | **Assignment valid until:** | April 2024 | | **Assignment Title**: | Digital Portfolio | | **Weighting:** | 60% | | **Assignment set by**: | Jose Rojas | | **Assignment verified by:** | Fraser Harrison | |

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| |  |  | | --- | --- | | **Date Issued to Students:** | 01/05/2023 | | **Submission Date and Time:** | See Canvas module homepage for submission date | |  |  | | **Method of Submission:** | Canvas Submission | |

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| **Learning Outcomes to be assessed:**   1. Design, program and test a web application using current web standards, and in doing so address target audience and device in the process so that this works effectively for mobile and offline use 2. Implement and test event driven applications using current coding standards and practices |

# Assessment Brief:

The overall purpose of this assignment is to produce a Digital Portfolio to showcase to potential employers your technical skills in the development of web applications. Consequently, this assignment has been divided into 3 major tasks to facilitate the following:

# Your progression through the different stages of designing and implementing a software system.

# Keeping you accountable for your own progress.

# Marking of the assignment.

# This division of the assignment will help you navigate through the various stages of the project, stay on track with your progress, and ensure as accurate an evaluation as possible.

These are the 2 major tasks that conform this assignment:

* Task 1 – HTML and CSS
* Task 2 - JavaScript

# Task 1 - HTML & CSS - 30% of this module

This task is further divided into 2 sections.

**Section 1 - HTML**

Develop a Digital Portfolio (i.e. , a website) in plain HTML with at least the following 4 pages:

1. Home
   1. Introduction
      1. Your name
      2. Personal Brand Statement: What you do? How you do it? What differentiates you from others in the field?
      3. A brief introduction about yourself including a sentence or two about your background and interests.
   2. Navigation: A clear and easy-to-use navigation menu that allows visitors to quickly access the other pages of the portfolio.
   3. Branding: Consistent branding elements, such as a logo, color scheme, or font, that reflect the creator's personal brand.
   4. Visuals:
      1. A nice-looking picture of you
      2. Eye-catching visuals, such as a background image or slideshow, that engage visitors and make the page visually appealing.
   5. Latest updates: A field indicating the last time the digital portfolio was updated.
   6. Social media links: Links to the creator's social media profiles, if applicable.
2. My Interests
   1. Focus on at least one of your interests and provide some information on the same (350 words).
   2. Use at least one image and one video to illustrate your interest.
3. My Field
   1. Focus on at least one of your interests within the CS field and provide some information on the same (350 words)
   2. Use at least one image and one video to illustrate your interest.
4. My Projects
   1. You will add your JavaScript projects (Task 3 below) to this section at a later date.

Your Digital Portfolio must be hosted online in Firebase and include each one of the following HTML elements where and as appropriate:

1. Menu
2. Headings
3. Subheadings
4. Anchors to different sections within the page
5. Quotes
6. Unordered list
7. Ordered list
8. Tables
9. Images
10. Videos

***Section 2 – CSS***

Create an appropriate CSS stylesheet to enhance the design of your Digital Portfolio developed in Part 1 so that it reflects your expertise with HTML and CSS. It’s crucial your Digital Portfolio accurately reflects your technical skills, capabilities and potential in the computer science/IT field.

Your CSS stylesheet must make use of at least each one of the following elements:

1. Use of external and/or internal style sheets
2. Proper use of selectors (e.g., element, class, ID, attribute)
3. Proper use of CSS box model (e.g., padding, margin, border)
4. Use of CSS to create a responsive design (e.g., media queries)
5. Use of CSS to create and position page elements (e.g., divs, spans, text)
6. Proper use of CSS to style text (e.g., font-family, font-size, font-weight)
7. Use of CSS to create and style lists (e.g., unordered, ordered, definition)
8. Use of CSS to style hyperlinks (e.g., color, text-decoration, hover effects)
9. Use of CSS to style tables (e.g., border-collapse, table-layout, caption)
10. Use of CSS to add background images and color to page elements

**Submission**

Your Digital Portfolio including both HTML elements and CSS stylesheet should be accessible online on the date Task 1 is due.

In addition, you must submit through Canvas a document containing:

1. Sitemap: A visual representation of your Digital Portfolio's structure, showing the hierarchy of pages and how they relate to one another.
2. Wireframe: A simplified visual representation of the pages in your Digital Portfolio, showing the layout, structure, and basic navigation without the details of color, graphics, or content.
3. PageSpeed Insights: Evaluate your Digital Portfolio using PageSpeed Insights (<https://pagespeed.web.dev/>) and report the results on these four metrics: performance, accessibility, best practices, and SEO. All four metrics should score above 90.

# Task 2 - JavaScript - 70% of this module

This task is further divided into 3 sections.

***Section 1 - Beginner Level***

Identify three existing JavaScript projects and incorporate them wholesale into your Digital Portfolio. All three projects should be hosted on your site under the My Projects page. For each project the following information should be included on your website:

1. Name
2. Description
3. Reference to original source code (author, website, date)
4. Last modification date

IMPORTANT: Any project that is non-functional will automatically receive 0 points across all criteria.

**Submission**

All three projects in Section 1 - Beginner Level should be accessible online and fully functional on the date this section is due.

***Section 2: Intermediate Level***

Identify two existing JavaScript projects. For each project modify three elements of its design and three elements of its functionality. Both projects should be hosted on your site under the My Projects page. For each project the following information should be included on your website:

1. Name
2. Description
3. List and describe the three cosmetic modifications you made to the original project
4. List and describe the three functionality modifications you made to the original project
5. Reference to original source code (author, website, date)
6. Last modification date

IMPORTANT: Any project that is non-functional will automatically receive 0 points across all criteria.

**Submission**

Both projects in Section 2 - Intermediate Level should be accessible online and fully functional on the date this section is due.

***Section 3: Expert Level***

The goal of this section is to develop a software system of your choice that utilizes JavaScript and incorporates its most important concepts to showcase the extent of your technical skills. The software system should have 3 features or functions. The software system should meet the functionality, creativity, user interface, and error handling requirements described in the rubric. You should host this system in your Digital Portfolio under the My Projects page and include the following information:

1. Name
2. Description: provide a clear description of the system’s purpose, its three main functions and, if necessary, instructions to use them
3. Last modification date

**Submission**

The project developed in Section 3 - Expert Level should be accessible online on your Digital Portfolio and fully functional on the date this section is due.

In addition, documentation (see rubric below) of your software system should be submitted via Canvas.

# Guidance Notes

1. Do not include your name anywhere on your assignment.
2. Your assignment should be written in a font size of 12.
3. You must include a correctly formatted Reference List on a separate page at the end of your essay. This must only include references to work which you have directly cited in your essay.
4. You must include your accurate word count at the end of your assignment.
5. Use standard margins for the assignment and 1.15 line spacing.
6. Only **Microsoft Word** files should be used for assignments. Please allow time for conversion to these formats if required.
7. When you upload your file for submission you must name the file by your full student number in the following format: ‘HANXXXXXXXXX’
8. For submissions requested as a report, you may wish to include a cover sheet and contents page
9. The marking scheme that will be used to mark your work is shown at the end of this document in Appendix 1.

**Submission Procedure**

You are not required to print and submit a hard copy of your work, as all submissions are carried out electronically through Canvas. Please ensure you do not wait until the last minute to carry out your submission; computer problems can happen any time and this will not be accepted as an excuse for late submission. This includes internet connectivity issues. When you submit your assignment, it is in your best interests to save and/or print a copy of your online submissions receipt to prove that you have submitted your assignment on time.

If you feel that you can’t submit your assessment on time, you should speak to your module leader who will help you to work out how you can hand-in on time.

If unexpected circumstances which you could not have planned for have happened, you may be able to claim for exceptional circumstances to be taken into account. There is more information [here.](about:blank)

If you have no exceptional circumstances and you do not submit you will fail the assessment. If you submit within 1 week of the submission deadline we will mark your work as late, meaning the maximum mark you can achieve is the basic pass mark and this will count as your first attempt. If you are taking a re-sit assessment, late submissions will not be accepted.

Please see the Staffordshire university regulations [here](about:blank) for more information

**The Maximum word limit is shown on the front cover of the assignment.**

You must provide an accurate word count at the end of your assignment. This word count must be placed before your reference list and should include all the written content of your assignment **excluding** the words used in any cover pages, contents pages, titles, sub-titles, reference list and appendices.

In the assignment, in addition to the word limit, you may make sensible use of tables, images of academic models, diagrams, figures and student-created graphics such as Word-Art etc. without penalty up to a maximum of 30% of the stated word limit of the assignment as shown on the front cover. In no circumstances must your overall use of words in these tables, models etc. exceed this maximum 30% limit. **If a marker feels that you have used tables simply to avoid the word count, they may count these words as part of your word count.**

A sliding scale of penalties for excess length will be imposed according to the amount by which the limit has been exceeded.

1-10% excess no penalty

11-20% excess 10% reduction in the mark

21-30% excess 20% reduction in the mark

>30% excess  the work will be capped at a pass i.e. 40%

NB. None of the above penalties will be used to change your mark that is above the pass mark, to one that is below the pass mark. Therefore, the *maximum penalty* for exceeding the word limit will be a reduction to a pass grade.

Please note that students’ work is regularly checked to ensure that the stated word count matches to what has actually been submitted.

# Academic Misconduct and Plagiarism

BUV follows Staffordshire University policy on academic misconduct and takes suspected cases of academic misconduct, including plagiarism very seriously. The penalties are severe and can in some cases result in a student not being allowed to continue their studies. Plagiarism can happen in any type of assessment where you are given the questions or tasks in advance.

The Staffordshire University policy on Academic misconduct can be found [here](about:blank): and you are strongly encouraged to familiarise yourself with this.

You will have committed academic misconduct if you commit any of the following:

* [Plagiarism](about:blank)
* [Self-Plagiarism](about:blank)
* [Collusion](about:blank)
* [False Declaration](about:blank)
* [Fabrication or Falsification of Data](about:blank)
* [Bribery or Intimidation](about:blank)
* [Contract Cheating](about:blank)
* [Examination Misconduct](about:blank)

Please see [here](about:blank) for a detailed explanation of these terms or click the individual links above.

All work completed at BUV must be written in English directly by the submitting students. You must not, for example, write your work in Vietnamese, and then use online software to translate your completed work into English. This misrepresents the amount of effort you have put into completing your assessment. The use of online paraphrasing tools to assist with your writing is also forbidden. Any transgressions will be regarded as academic misconduct.

If Academic Misconduct is proven by the university, then typical punishments include:

* The grade for your assessment, being reduced to zero with the right to resubmit.
* The grade for the whole module or supermodule being reduced to zero with the right to resubmit.
* Failure of the entire level of which you are currently studying with a requirement to re-start the level at the next opportunity
* Failure of the award and/or termination of your studies at the University. Your ability to reapply and enrol again at the university may also be restricted, normally for two whole academic years.

BUV encourages you to refer to appropriate academic sources, as long as you reference these correctly, and do not use too much material from the original source.

You must use the Harvard referencing system for all your assignments, unless you are told otherwise by your Module Leader. If you do not know how to do this, please follow the guidelines given at this web-site address: [http://www.staffs.ac.uk/support\_depts/infoservices/learning\_support/refzone/harvard/](about:blank)

BUV employs Turnitin to assess all submissions for potential academic misconduct. This software highlights to the examiners in detail where material may have either been copied directly or paraphrased from a source with correct citation.

**Appendix 1: HTML & CSS Marking Rubric**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Marking Criteria** | **0-39** | **40-49** | **50-59** | **60-69** | **70+** |
| HTML components\* (30%) | 0-39 | 40-49 | 50-59 | 60-69 | 70+ |
| CSS components\*\* (55%) | 0-39 | 40-49 | 50-59 | 60-69 | 70+ |
| Sitemap (5%) | No visual representation of the Digital Portfolio's structure is provided. | A basic visual representation of the Digital Portfolio's structure is provided, but it does not show the hierarchy of pages or how they relate to one another. | A visual representation of the Digital Portfolio's structure is provided that shows the hierarchy of pages, but does not clearly show how they relate to one another. | A detailed visual representation of the Digital Portfolio's structure is provided that shows the hierarchy of pages and how they relate to one another, but may be missing some details or could be more visually appealing. | A comprehensive visual representation of the Digital Portfolio's structure is provided that shows the hierarchy of pages, how they relate to one another, and is visually appealing and easy to understand. The sitemap may include additional features such as annotations or links to pages. |
| Wireframe (5%) | No visual representation of the Digital Portfolio pages is provided. | A basic wireframe is provided that shows the layout, structure, and basic navigation of the pages in the Digital Portfolio. However, the wireframe may be missing key components or may not be easy to understand. | A wireframe is provided that shows the layout, structure, and basic navigation of the pages in the Digital Portfolio, and includes some additional details. However, the wireframe may be missing some important details or may not be fully consistent with the final design. | A detailed wireframe is provided that shows the layout, structure, and basic navigation of the pages in the Digital Portfolio, and includes all the necessary details. The wireframe may also include notes or annotations to help clarify certain elements of the design. | A comprehensive wireframe is provided that shows the layout, structure, and basic navigation of the pages in the Digital Portfolio, and includes all the necessary details. The wireframe is also designed with attention to usability and accessibility, and may include additional features such as alternative text descriptions or keyboard navigation options. The wireframe is easy to understand and is consistent with the final design. |
| PageSpeed (5%) | The Digital Portfolio scores below 50 on all four metrics (performance, accessibility, best practices, and SEO) as reported by PageSpeed Insights. | The Digital Portfolio scores between 50-69 on all four metrics as reported by PageSpeed Insights. There are significant issues with the website's performance, accessibility, best practices, and/or SEO that need to be addressed. | The Digital Portfolio scores between 70-89 on all four metrics as reported by PageSpeed Insights. While there may be some minor issues with the website's performance, accessibility, best practices, and/or SEO, the overall score is decent. | The Digital Portfolio scores above 90 on three out of the four metrics as reported by PageSpeed Insights. There may be some minor issues with one metric that need to be addressed. | The Digital Portfolio scores above 90 on all four metrics as reported by PageSpeed Insights. The website performs well in terms of performance, accessibility, best practices, and SEO. It is fast, user-friendly, and optimized for search engines. |

\*See HTML – Score Table for details

\*\*See CSS -Score Table for details

**HTML - Score Table**

|  |  |
| --- | --- |
| **Criteria** | **Points** |
| 1. Website contains at least 4 pages (Home, My Interests, My Field, My Projects) | 10 |
| 2. Website is online | 10 |
| 3. Menu | 10 |
| 4. Headings and Subheadings | 10 |
| 5. Anchors | 10 |
| 6. Quotes | 10 |
| 7. Unordered list and Ordered lists | 10 |
| 8. Tables | 10 |
| 9. Images | 10 |
| 10. Videos | 10 |
| Total | 100 |

**CSS Score Table**

|  |  |
| --- | --- |
| **Criteria** | **Points** |
| 1. Proper use of selectors (e.g. element, class, ID, attribute) | 10 |
| 2. Proper use of CSS box model (e.g. padding, margin, border) | 10 |
| 3. Use of CSS to create a responsive design (e.g. media queries) | 10 |
| 4. Use of CSS to create and position page elements (e.g. divs, spans, text) | 10 |
| 5. Proper use of CSS to style text (e.g. font-family, font-size, font-weight) | 10 |
| 6. Use of CSS to create and style lists (e.g. unordered, ordered, definition) | 10 |
| 7. Use of CSS to style hyperlinks (e.g. color, text-decoration, hover effects) | 10 |
| 8. Use of CSS to style tables (e.g. border-collapse, table-layout, caption) | 10 |
| 9. Use of CSS to add background images and color to page elements | 10 |
| 10. CSS styles are consistently applied to all elements across all pages | 10 |
| Total | 100 |

**Appendix 2: JavaScript Marking Rubric**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Criteria** | **0-39** | **40-49** | **50-59** | **60-69** | **70+** |
| Beginner Level\* (15%) | 0-39 | 40-49 | 50-59 | 60-69 | 70+ |
| Intermediate Level\*\* (15%) | 0-39 | 40-49 | 50-59 | 60-69 | 70+ |
| Advanced Level – Functionality (10%) | The system does not perform the intended functions accurately or is missing significant features and capabilities. | The system partially performs the intended functions accurately, but with some errors or inconsistencies. | The system performs the intended functions accurately and consistently, with only minor errors or issues. | The system performs the intended functions accurately and efficiently, with no major errors or issues. | The system not only performs the intended functions accurately and efficiently, but also includes additional features or capabilities that enhance its overall performance and usability. |
| Advanced Level – Creativity (10%) | The system shows no evidence of creative or innovative thinking. | The system includes some creative or innovative features, but they are not fully developed or are limited in scope. | The system demonstrates creativity and innovation in some areas, with well-developed and unique features or capabilities. | The system demonstrates advanced creativity and innovation, with multiple unique and well-developed features or capabilities that enhance its overall performance and usability. | The system not only demonstrates exceptional creativity and innovation, but also introduces new ideas or approaches that have the potential to significantly impact the field or industry. |
| Advanced Level – User Interface (10%) | The user interface is confusing, cluttered, and unappealing. | The user interface is generally functional but has some navigational and design inconsistencies and could be more visually appealing. | The user interface is intuitive and easy to navigate, with consistent design elements and a visually appealing color scheme. | The user interface is highly intuitive and engaging, with consistent and visually stunning design elements and an outstanding color scheme. | The user interface is exceptional, with an intuitive and elegant design, consistent and visually stunning design elements, and a perfect color scheme that enhances the overall user experience. |
| Advanced Level – Error Handling (10%) | The system does not handle errors gracefully and the error messages are confusing or unhelpful, leading to a poor user experience. | The system handles some errors gracefully but not all, and the error messages may be inconsistent or lack clarity, leading to a fair user experience. | The system handles errors gracefully with clear and concise error messages that are consistent throughout the system, leading to a good user experience. | The system handles errors exceptionally well, providing helpful and informative error messages that guide the user towards resolving the issue, leading to a very good user experience. | The system handles errors flawlessly, with intuitive and user-friendly error messages that seamlessly integrate with the overall user experience, leading to an excellent user experience. |
| Advanced Level – Documentation (25%) | The documentation is incomplete, unclear, or does not contain wireframes, a description of the system and its three main functions, or operation instructions. | The documentation is partially complete, but lacks detail or is difficult to understand. | The documentation is complete and contains clear and concise wireframes, a description of the system and its three main functions, and operation instructions (if necessary). | The documentation is exceptionally detailed, with clear and comprehensive wireframes, a detailed description of the system and its three main functions, and well-written operation instructions (if necessary). | The documentation is flawless, with detailed and user-friendly wireframes, a concise and clear description of the system and its three main functions, and intuitive and easy-to-follow operation instructions (if necessary). |
| English Writing (5%) | Writing is difficult to understand due to frequent errors in grammar, spelling, and punctuation. | Writing is generally understandable, but contains some errors in grammar, spelling, and punctuation that can sometimes impede comprehension. | Writing is generally clear and understandable, with occasional errors in grammar, spelling, and punctuation that do not significantly impede comprehension. | Writing is clear and well-organised, with only minor errors in grammar, spelling, and punctuation that do not detract from the overall quality. | Writing is clear, concise, and effectively communicates the intended message without any errors in grammar, spelling, or punctuation. |

\*See Beginner Level – Score Table for details

\*\*See Intermediate Level – Score Table for details

**Beginner Level - Score Table**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Criteria** | **Project 1** | **Project 2** | **Project 3** | **Total** |
| 1. The project is functional | 15 | 15 | 16 | 46 |
| 2. Name | 4 | 4 | 4 | 12 |
| 3. Description | 5 | 5 | 5 | 15 |
| 4. Reference to original source code (author, website, date) | 5 | 5 | 5 | 15 |
| 5. Last modification date | 4 | 4 | 4 | 12 |
| Total Beginner Level | 33 | 33 | 34 | 100 |

**Intermediate Level - Score Table**

|  |  |  |  |
| --- | --- | --- | --- |
| **Criteria** | **Project 4** | **Project 5** | **Total** |
| 1. The project is functional | 15 | 15 | 30 |
| 2. Name | 3 | 3 | 6 |
| 3. Description | 3 | 3 | 6 |
| 4. List and describe three cosmetic modifications | 12 | 12 | 24 |
| 5. List and describe three functionality modifications | 12 | 12 | 24 |
| 6. Reference to original source code (author, website, date) | 3 | 3 | 6 |
| 7. Last modification date | 2 | 2 | 4 |
| Total Intermediate Level | 50 | 50 | 100 |