Graded Unit project

Silicon Croft Website

# Action Plan

## Analysis of the Project Brief

### Project Brief

Mesomorphic is a small Shetland based software development company who create bespoke software for small and medium sized enterprises using modern development methodologies. They have asked me to create a website for an ongoing project that they would like to expand from a single page on their main website [https://www.mesomorphic.co.uk/siliconcroft](https://www.mesomorphic.co.uk/siliconcroft/) to its own website <http://www.siliconcroft.co.uk>. The website will be used to display information about the Silicon Croft project. They would also like to set up a new server for and install all software required to host the website in-house. They have a very restrictive budget and thus open-source software, and pre-existing solutions should be used where possible. The website must be responsive as a broad range of devices are used extensively in educational environments and the greater world, and the website needs to work well under all conditions. Although the company is based in software development some of their staff who will be adding content to the website will have little or no background in software.

I have been asked to clarify the requirements, identify and implement a suitable hardware and software platform, install and configure the software and set up a website prototype which the company can extend later.

### Problem Analysis

* The website must be responsive and able to function to a high standard on as many platforms as possible. If the website is not responsive, then it will not look as intended on all platforms and may even not function properly on some. Designing a responsive website from scratch is out of the scope of this project and thus careful selection of supporting tools and packages must be made to ensure the completion of the project on time.
* The website must be database driven and allow for easy additions, deletions and updates by in-house staff. As some of the staff adding content do not have a background in software or web development the process would have to be as simple as possible and thus a smart option would be to use a suitable Content Management System.
* Server set-up and software installation must be carried out in-house so should be straight-forward, third party installers don’t normally want to service if they didn’t set-up so most likely in-house maintenance which would suggest that commonly used software packages should be preferred to help in bug finding.

### Aims

* TODO
* Setup a server with all the necessary software to host a website, automating the process as much as possible.
* Create a manual to show how to setup the server and website and use any scripts created to simplify the process for in-house staff.
* Produce a responsive website that looks good and functions on as many platforms as possible

### Requirements

#### Functional

* Server set-up and software installation must be carried out in-house so a straightforward process and clear instructions must be provided.
* Website must be responsive and function to a high standard on a wide range of devices and web browsers.
* Website must be data driven and allow simple addition, deletion and updating of database entries by in-house staff.
* Website must be easy to use for all targeted audiences.
* The website should be designed and developed using up to date tools, technologies and techniques and, follow current web standards.
* Blah, Blah

#### Non-functional

* TODO
* Hardware
* Web server
* Software

#### Constraints

* The website must be completed and fully operational by 3rd May 2022.
* There is no budget for the project.
* As the client does not have the physical hardware to install the required software on to currently, it will be set up on a virtual machine where the prototype website will then be designed, created and tested.

### Key Factors

* The website must be responsive and support
* TODO

### Resources and materials

#### Hardware

* A computer that is powerful enough to run the virtual machine that is hosting the website alongside all other software required for the design and development of the project will be required however this is not a very high requirement especially as no significant network traffic will be accessing the website while it is being developed and all the other software has quite low requirements by modern standards. As my computer is of a reasonably high spec by modern standards it will have no problem running all of the software I will be using.
* A mobile device and a tablet to test the usability and responsiveness of the website on smaller devices and at different resolutions. The mobile will be an iPhone 8 Plus, and the tablet a Samsung Galaxy Tab A7, as these are the devices I have available.

#### Software

* A text editor will be required to produce source code and scripts, to edit configuration files and modify any other text files required. The text editor to be used is Sublime Text 3 as I have a licence and am familiar with it.
* A word processor will be required to produce this document as well as documentation for the setting up of the server and usage of the website.
* Virtualization software will be required to create and run a virtual instance of the server on the development pc. Virtual box will be used as it is free and I am familiar with it.

#### Procedure

1. A suitable hardware and software platform will have to be identified and chosen to be used as the server from which the website will be served.
2. As the company has not yet acquired the hardware they require to run the server, the server will have to be set-up using virtualization software and the website will be built and tested in this virtual environment.
3. A manual will have to be created to guide the in-house staff on setting up the server for when they acquire the necessary hardware and a set of scripts will also be created to accompany the manual and automate as much of the process as possible.
4. A prototype website will have to be created to show the core concept of the website and allow the company to extend it later as their needs change.
5. The implemented solution will have to be tested to ensure that it operates as expected.

### Information Sources

#### Official Websites

* <https://en-gb.wordpress.org/>
* <https://www.php.net/manual/en/install.windows.requirements.php#:~:text=PHP%20requires%20at%20least%20Windows,As%20of%20PHP%207.2>
* <https://mariadb.com/kb/en/mariadb-hardware-requirements/>
* <https://docs.microsoft.com/en-us/windows-server/get-started/hardware-requirements>
* <https://www.microsoft.com/en-gb/windows-server/pricing>
* <https://support.squarespace.com/hc/en-us/articles/206566687-Exporting-your-site>

#### Forums and Tech Help Websites

#### Client Supplied Information

### Analysis

* An initial meeting was held with the client to gain more information as to what they expected the outcome of the project to be and to ensure that we both had the same view of the final product.
* Official documentation was used as much as possible to determine what platform and software components would be most suitable for hosting and producing the type of website that is required by the client.

## Project Plan

### Timescale

The project will run from will run from 08/03/2022 until 03/05/2022 at which point it must be complete and all deliverables must be in the hands of the client. A gantt chart has been produced to show the expected schedule for each task and it’s individual assignments.

### Milestones and Deliverables

### Main Tasks

### Resources

* People
* Equipment
* Facilities
* Funding