Graded Unit project

Silicon Croft Website

# Planning

## 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 Silicon Croft and will also sell merchandise such as t-shirts, mugs and hoodies to users that will need to log in to access these services. They would also like me to set up a new server for them 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.

## 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.
* Database driven – easy addition, deletion, update by in-house staff, use a CMS
* 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.
* Customer accounts, purchase goods, make payments

## Aims

* TODO

## 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

* Blah blah blah
* TODO

## 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.
* 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 Linux on the development pc. Virtual box will be used as it is free and I am familiar with it.
* A suitable distribution of Linux will be required to install on the virtual machine. I will use Some random Linux as I am familiar with it.

### Procedure

1. As the company has not acquired the hardware they require to run the server as of yet a manual will have to be created to guide the in-house staff on setting up the server once they have acquired the hardware, a set of scripts will also be created to accompany the manual and automate as much of the process as possible.