



Initial Plan

Theatre Company Website and Backend

CM3203 - One Semester Individual Project

Credits: 40

School of Computer Science

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Project Description

This project is centered around building custom website features for a client, more specifically an Amateur Dramatics group. The groups current website is deployed using WordPress which lacks proper implementation of a few features that they need. Currently, their website uses available features to create approximations of the desired behaviours but that makes it hard to maintain and update, especially as some pages have been broken by deprecated dependencies.

The main development aims of the project are:

- Custom Image Gallery for Google Photos images.
- Improved Show Archive page with full show details.
- Blog page and editor.
- Members only web-portal

My personal aims for the project are:

- Practise writing code for a production environment rather than prototypes.
- Improve writing documentation for a project.

Project Aims and Objectives

- Custom Image Gallery
 - To replace the broken Picasa galleries on the current website
 - Load images from the clients Google Photos storage
- IMDb-style Show Archive
 - Consolidate data from individual web pages and old show programmes into a database.
 - Store and display over 130 past shows spread across 47 years.
 - include cast & crew and ability to see which shows a person was in.
- Blog Page
 - Posts stored in database
 - intuitive editor (WYSIWYG)
 - ability to upload and convert Word documents
- Members only web-portal
 - Resource sharing
 - rehearsal/event scheduling
 - announcement collation

Work Plan

Supervisor Meetings

Weekly supervisor meetings have been arranged for every Wednesday morning.

Weekly Goals

Week	Goals	Details
1	Initial plan	Initial Plan Deliverable by 7/2/22
2	Research + Setup	
3	Continue Setup	incl. server deploy for prod and dev versions
4	Build base pages	migrate existing code and static pages
5	Show Archive	
6	Blog	incl. WYSIWYG editor
7 (R)	Image Gallery	
8	Portal	Events/Rehearsal Scheduling
9	Portal	Resource Hosting/Sharing
Easter 1	Finish up Portal	
Easter 2	Data entry	
Easter 3	Data entry	
10	Final Report	
11	Final Report	
12	Final Report	Final Report Deliverable by 13/5/22

Research plan

- Explore examples of web portals to find improvements that can be made on existing products.
- Research database types to find the best fit for this use case.
- Ensure the chosen technologies will be able to cope with the clients current website traffic.

Technologies

For the webapps backend, I will be using the Python-based Flask micro-framework along with various associated libraries for connecting to the database, handling web-sockets, and verifying forms. I've chosen Flask for my backend as: I have lots of experience using it; it is lightweight and modular compared to alternatives like Django; it has great performance

and has been used by many high-traffic websites such as Reddit, Netflix, Trivago, Patreon, AirBnB and Uber (see <https://stackshare.io/flask>).

For the database, I will either use PostgreSQL or MongoDB. I've previously used PostgreSQL databases with flask projects however it's static schema nature tends to slow development. On the other-hand, MongoDB has a dynamic schema which allows for flexibility in development, but I've not previously integrated a NoSQL-type database into a flask project which could pose some initial difficulty. As part of my research phase, I will explore the different pros and cons of each database before decided which of the two is best suited to the specifics of my project.

For the front-end, I have only got experience in using HTML, CSS and vanilla JS however I would like to use this project as an opportunity to learn a javascript framework and utilise that to improve the overall look and feel of the website. From my prior research, I've decided to learn and implement Vue.JS as it is recommended for beginners and is lightweight as to run faster on the users browsers.

For hosting the project, I will be using a Ubuntu VPS (virtual private server). I've chosen to host on Ubuntu as it has I have experience using debian-based operating systems and Ubuntu has much more up-to-date packages than Debian itself. On top of that, Ubuntu has a huge range of tutorials and a large community around it.

Ethics

As my project has a real-world client, I will have to get ethics approval for the client interviews and questionnaires. I will also have to make sure I securely store private data such as email addresses and passwords for the portal login system. Another ethical consideration for the project is including a privacy notice to describe what and how any personal data is being collected, used and stored. I will also have to make sure that any personal data is processed according to GDPR regulations and guidance from the Information Commissioner's Office (ico.org.uk)