Stockify Report

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1 Introduction

Stockify is a web-based application that forms a collection of varied musical artists and allows users to explore songs released by these artists.

The web app presents the user with artwork of albums and artist photographs to help identify music and genres based on those that perform in certain categories.
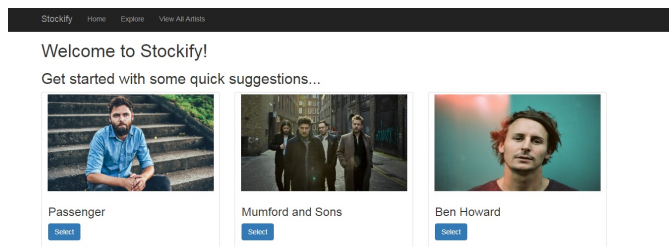

Figure 1: **Stockify Home Page**

2 Design

The website is designed to re-use html templates, placed in the static folder, to cut down on repeated code. The template uses variables for key words, such as "genre" and "artist", so as to allow one template to run multiple pages, displaying varied information. This is also utilised in the form of variables for links to other pages throughout the site.

At first, the user is presented with some quick artist suggestions, to allow them to jump straight to an artist's work and bypass further filtering in order to find them. Should the desired artist not be displayed, or if perhaps the artist is unknown, the user may proceed to either the "explore" or "all artists" pages.

"Explore" starts a user off at the top of the hierarchy, filtering their chosen genre. Once selected, artists within this type of genre are displayed. The user can further their search for songs by filtering the artist's albums. Should the user know the artist they are looking for, however are unaware of the genre, they may simply display all artists available and select the desired option.

Within the static directory is the "dictionary.json" file, that holds all information to be displayed on the website, so as to allow easy alterations to be made to the artists or their music and have a site-wide affect instantly.

It should be noted that for demonstration purposes, the number of genres, artists, albums, and songs displayed are kept to a lesser number, however with the use of variables and loops set up within the templates and methods within the python file, this number is free to grow and display as many options as is needed.

3 Enhancements

Having evaluated this application, it would appear that perhaps broader ways of filtering songs may be implemented, such that should the genre, nor artist, be known, the song may still be found. Including more meta data about the individual songs would allow further filters from the home page that could collate multiple artists and albums on the basis of this data, eg. songs longer than 4 minutes, albums with more than 15 songs, etc.

There is room for information about the artist, or indeed the individual albums, to be stored in the dictionary and be displayed alongside the image. For songs this could be linked to by clicking on the song title, which could display a small pop-up message describing some useful or merely furthered information about the song itself.

4 Critical Evaluation

Learning how to utilise a json file to create a dictionary that can be read in and searched through has allowed me to create a web app that relies on variable data instead of merely hard-coding the artist's work into the html files.

The app can easily be adapted to accommodate a large amount of categories without much work at all. The use of variables creates an efficient method of re-using templates and keeps the size requirements close to a minimum.

5 Personal Evaluation

Looking for a better alternative to hard-coding artist information into my web app, I investigated the use of JSON files within the python code. Originally, I had set up my dictionary starting at "albums" and having a separate file
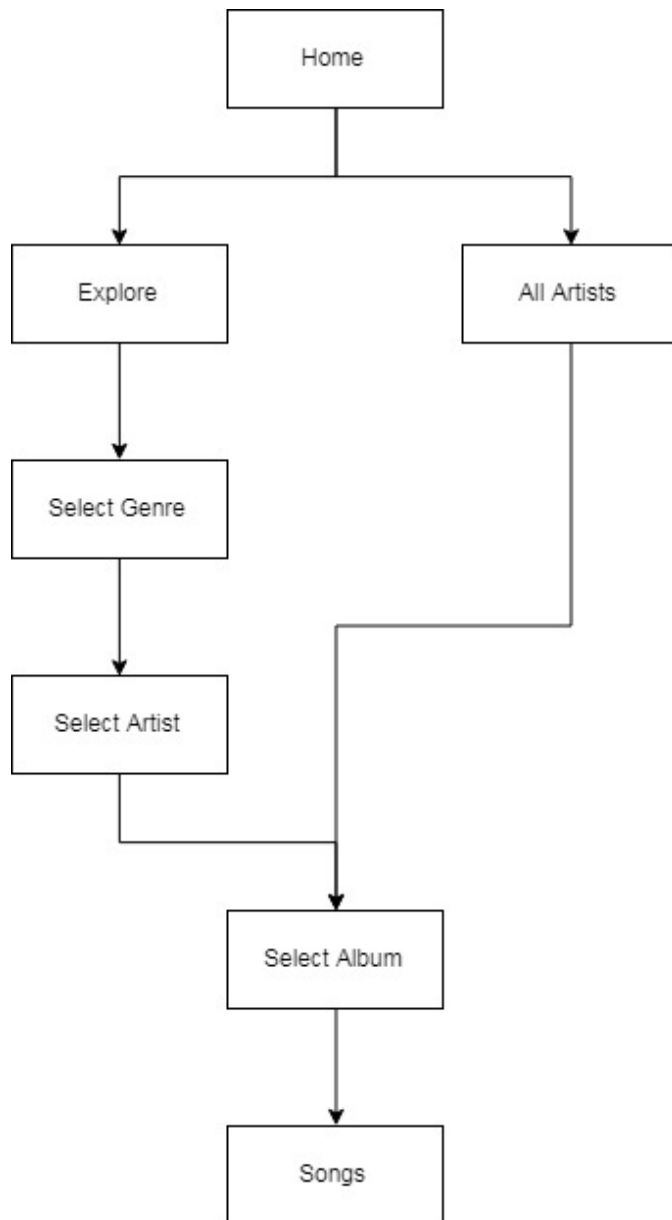
Figure 2: **Stockify URL Hierarchy**

for each artist, however soon realised that this would cause problems not only with fetching songs following other routes, but did not help the hard-coding situation with genres and artists.

Once the base work was implemented and the web app performed the necessary features, I reworked my code to incorporate methods that further cut down on code repetition. This is when variable names were introduced to the routes to allow for exponentially greater scalability.

In order to keep track of time with this project, I incorporated an agile approach, focusing on small features that one by one came together to form the basis of the working solution. Once the base work was there, improvements were made to code to allow for higher efficiency and beater readability.

I am happy with my external reading that has given me the knowledge and skills to implement better ways of performing the same tasks, such as that with JSON files and reading url variables.

References

Bootstrap layout - https://getbootstrap.com/

Images used throughout website:

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