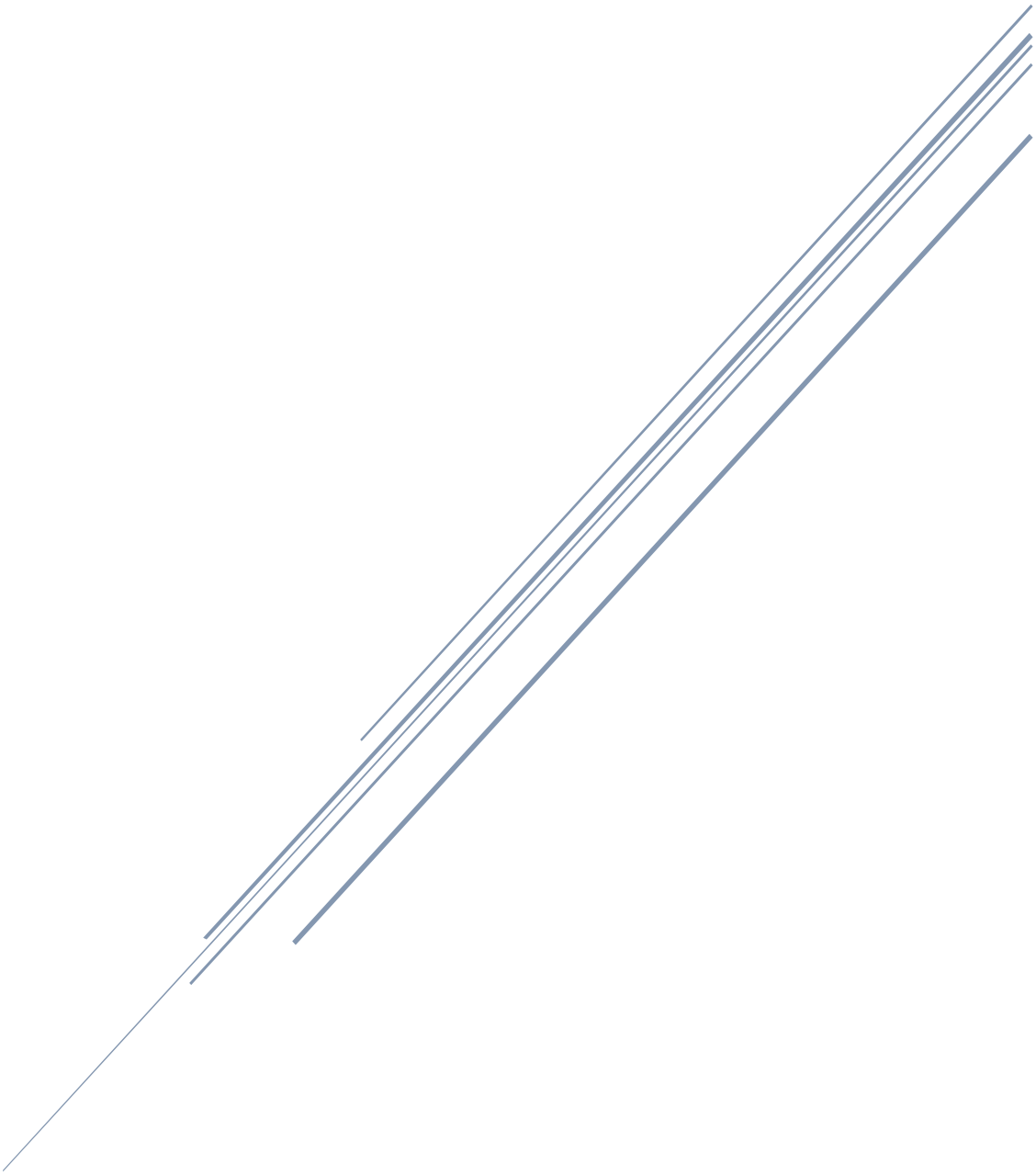
USING LEVINUX AND PYTHON FLASK TO IMPLEMENT A WEB APP

ADVANCED WEB TECHNOLOGIES



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1 Introduction

This web application has been created to showcase some of the vinyl records I have in my collection. I have included a small number of artists and added small number of albums and singles, to give you an idea of how the completed site will look and function.

2 Design

Before writing any code I started by designing the different pages that the web application would have. I then had to design the URL structure in a way that would ensure the site was easy to navigate.

The URL structure I designed is in five levels as follows;

Level 1

The home page.

root /

Level 2

The artist, album and single selection screen.

/artists/

/albums/

/singles/

Level 3

This screen will display all the albums by the selected artist.

/artists/<artist_name>

Level 4

This screen will display information about the selected album.

/artist/<artist_name>/<album_name>

Level 5

This screen will display information about the selected single.

/artist/<artist_name>/<album_name>/<single_name>

For example, a URL to a single might read – '/artists/biffy_clyro/puzzle/folding_stars'

The reason I designed the URL structure in this manner is because it is descriptive. By reading the URL it is easy to know that we are looking the single Folding Stars from the album Puzzle by the artist Biffy Clyro.

The above routings are in the file “index.py”

I have used Bootstrap and a library called flexslider along with some custom CSS, in the file “static/css/vinyl.css” to style the application.

The application uses a configuration file to store the host settings, “etc, defaults.cfg”

All activity within the application Is logged including page visits and errors in the “var/loggin.log” file, the only custom error page at the moment is 404 page not found.

3 Enhancements

I would improve the web application by doing the following;

- Using a database to store the information about different vinyl’s that I have in my collection.
- Add functionality to add a new record to the database from the application, that would then display as appropriate on the site.
- Make the site more dynamic by adding meta data and allowing users to sort and filter the artists, albums and singles selection screens by year, genre and name.
- Add the ability to search the site for the artist, album, single, year or genre that the user would like to view, by allowing the user to type into a search field.
- Improve the error handling; at the moment the site handles a 404 page not found error.
    - I would hope to add full error handling and logging to log an error when it occurs.
    - Also making these error pages’ fun and engaging would be of benefit, for example allowing user to play knots and crosses.
- I would also like to add pagination to the albums and singles pages once the tables get to a certain length or there are 12 tiles per page.
- The albums and singles pages would benefit from being in the same style as the artist’s page with tile style buttons.

4 Critical Evaluation

This web application demonstrates a good use of Python flask to display static files using HTML templates. The application benefits from logging, each time a user visits a page this is logged and if an error occurs this is also logged. This application would benefit greatly by using a database to store the data displayed.

I feel that this application meets the requirement of the coursework as I put a lot of thought into the URL hierarchy and feel the response is appropriate and does make good use of templates to generate HTML and makes good use of static files.

I feel that this application is also very intuitive and any user would be able to use it without instruction.

The once area I feel my coursework really falls down in is the use of git hub. The way I work Is not to commit to a repository and I have forgotten to do this regularly. So a large part of the history in my development is missing from the git repository. I personally like to complete piece of work before showing it to anyone, this is why I forgot to commit my work regularly. This will not happen in coursework 2 as I do understand the value in committing regularly to git.

5 Personal Evaluation

Having never worked using a Linux environment before I learned a lot during this coursework. I now have an understanding of basic Linux commands and feel more confident using the Levinux environment although I understand there is still a lot I am unsure of and need to learn. I used some online resources to help me use the Linux environment, referenced below.

I had also never written any Python code before and starting to write this in the practical classes was big learning curve, I feel as though I have easily picked up the basics of using Python Flask and if I continue to study this I feel I could improve in the next course work by using more the advanced features of Python Flask.

Coding in Vim was very different to the way I usually write code using Notepad++. Vim does not afford the luxury of copy and paste or undo. Old habits really do die hard as these keyboard commands produce some interesting results in Vim, for example causing the editor to crash and having to recover the file I was working on. I feel though I have a handle on Vim and am now more confident using it.

6 References

I have used bootstrap to style my application available here - http://getbootstrap.com/

On the Album and Single pages I have used FlexSlider which is a simple image carousel available here - http://flexslider.woothemes.com/

The images used in the FlexSlider carousel are images of my vinyl taken by me and images used in the artist's page were sourced online and are only used to give the idea of how I wanted this prototype to look and would not be used if this application were to made public.

Although not used in the application I did do some further reading on python flask, http://flask.pocoo.org/, particularly around error handling as this something I tried to implement.

I also consulted the following for tips and advice using linux;

Linux.com - https://www.linux.com/learn/how-move-files-using-linux-commands-or-file-managers

Askubuntu.com - http://askubuntu.com/questions/217893/how-to-delete-a-non-empty-directory-in-terminal