Coursework 1

Kevin Falconer

40172641@live.napier.ac.uk

Edinburgh Napier University - Advanced Web Technologies (SET09103)

1 Introduction

The Radiohead Discography web application is a music cat-alogue containing information about the band, each album, and a section of the band's songs discography. The web application is designed to appeal to both fans of the band, who are looking to learn more about their favourite song or album, and to those beginning to gauge an interest in the band. The Radiohead discography is separated into three sections. Information, Albums, and Contact us. The Information section provides a basic biography about the band. Including such information as the band members, and musical genres.

The albums section of the Radiohead discography contains all of the information in regards to albums and songs. Once the user enters this section the application renders a web-page which displays each of the Radiohead albums. Along-side the name of the album there is also a small amount of information about each album, including the most streamed track, and the number of tracks. The title of each album is a clickable hyperlink which will take the user to a webpage dedicated to the album they have selected. The webpage contains more in depth information about the album such as the release date, run time, and the each track. Each track is also clickable, and using another hyperlink. The user can view a webpage for the specific song they have selected with a small amount information regarding the specific song they have clicked. This information includes the name, length of the song, and amount of Spotify steams. However this only applies to around ten songs in the Radiohead discography.

The final section of the Radiohead discography is contact us. This section allows users to input information such as their name and email, alongside a message. This section of the web application's key purpose is so that if users have spotted any inaccuracies with information listed on the web application or have general feedback regarding the web application.

2 Design

The design process for the Radiohead Discography web application started by creating mock ups and brainstorming ideas for the sort of feature's to include in the web application. As it was a catalogue of music I knew that information regarding albums and songs were essentials for the website. Whilst designing mockups I spent some time researching the sort of metadata which is presented on music discography website, so I had an idea of the sort of information I would display.

So prior to implementing the web application I had an idea for the web page's I would include and some of functionality.

The home and information route pages were very easy to implement as both pages were hardcoded with html. However the albums page was something I had a few ideas on how to implement. The two options I seen was to either hardcode the each album in HTML, which was an idea that I was not keen on implementing as it would not demonstrate any real skills in python flask except rendering HTML template's. The second option was to create a template for each album and initialize variables within the python file to display everything on the webpage. However I was also not keen on this option as it did not feel like much of an extension of the practical work. Whilst researching methods of implementing a HTML template using variables, I found an example of this being done using a JSON file. As JSON is something which was not covered in any of the workbook materials, I was keen on trying to implement this method to present the information for each album and song.

Whilst searching for methods on implementing the album page functionality, I decided to add a fourth section to the website as I felt that felt the web application lacked in functionality other than using JSON. This section called 'contact us' would be an example of using POST request's to allow the user to input their name, email and a message into form's. When the request was made I decided it would be a good idea to create a text file containing the name, email, and message to a directory stored locally in the static file to demonstrate understanding of requests and responses whilst also being an extension of the classwork. Alongside this I decided that I would include an error handler page allowing the user to return to the site if they input a wrong url extension.

3 Enhancements

Although, I was pleased with the outcome of the Radiohead Discography, there are areas which I would like to enhance. These enhancements include both sections already present in the web application alongside new features which I would like to implement.

The key area of the web application which I would like to enhance is the webpage's for each song in the Radiohead discography. Although there is information regarding each of the albums in the Radiohead discography, and some of the songs in Radiohead's discography, I was unhappy that I was unable to provide information about every song in Radiohead's discography due to time constraints.

Alongside the addition of webpages for each song in the Radiohead discography, each song webpage would include more information about the song, such who produced the song, and the song's lyrics. I would also include a song preview functionality for each song. This would allow the user to listen to a thirty second preview of the song, similar to what services such as Spotify and Soundcloud already provide in their web applications. Offering the user a better chance of discovering new songs by listening to them, rather than simply reading information about the song. The final aspect of the song webpage I would enhance would be the inclusion of a comments section. This would allow users to post comments about the song which would be stored on the webpage. With each comment having functionality so it could be up voted or down voted similar to reddit, and other music discography website's such as genius.

Other aspects of the web application I would like to enhance would be a search functionality in the navigation bar, allowing users to search for a specific song or album, rather than having to navigate through a variety of webpage's to find the song or album they are interested in. I would also like to add a genre's section of the web application. Within the section each album, alongside the genre would be listed. Each genre would be clickable, using the replicating the same hyperlink/JSON functionality as I did in the album section of the web application. With each genre having information regarding it and similar artists, which would allow the user a greater ability to discover new music.

Other small enhancements would include each message in the contact us section being saved and sent to an email rather than saved as a text file locally.

4   Critical Evaluation

Overall, I was happy with the overall outcome of the Radiohead Discography web application. The main bulk of the functionality for application was within the album section so I was really pleased that I was able to implement JSON to store all of the metadata about each album, and some songs. Although the JSON functionality worked as I planned, and I feel that the feature works well, I was unhappy that I was unable to implement an error handler page. This means that if the user goes to an extension or clicks one of the hyperlinks within an album, that they will be returned with an internal server error page.

Another feature I felt worked poorly, due to the lack of the functionality except a few clickable hyperlinks was the information page, as it was only a render html template.

5   Personal Evaluation

The experience of creating the Radiohead Discography web application has been an enjoyable one. Prior to starting the Advanced Web Technologies module, I had no previous experience programming in Python or using Python Flask, and it had been almost two years since I had used HTML so I found the task really useful in refamiliarizing myself with HTML,

and in ensuring that I had learnt, and was able to implement the python flask skills listed in the workbook.

The main challenge I faced during the coursework was the implementation of using JSON. I had previously had some experience using JSON, however it had to be implemented completely differently for the web application. There was one instance in which I really unsure how to implement JSON, however after getting in contact with Simon, and showing him my python code, he offered advice on how to resolve the issue which was successful.

Overall I feel that I performed well on the coursework and I found it really useful in testing my python flask skills and useful for learning more about the work covered in lab sessions.

References

Stack overflow: https://stackoverflow.com/

W3 Schools: https://www.w3schools.com/

Code Academy: https://www.codecademy.com/

Radiohead Wikipedia: https://en.wikipedia.org/wiki/Radiohead