Musix

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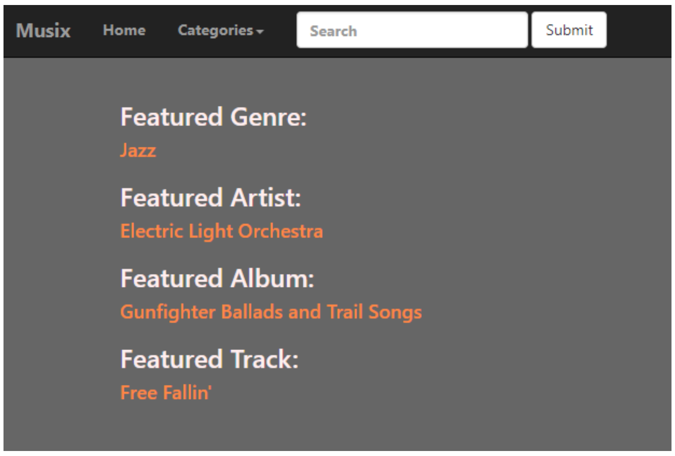
1 Introduction

Musix is a directory of information about music, including genres, artists, albums and tracks. It was written with the Flask framework, using Python. It utilised HTML, CSS and Javascript to provide content to the user. It allows the user to browse through information using links to each related page, and includes a search function to quickly find pages that contain specific information. There are specific pages for listing the genres, artists, albums and tracks, and each page on a specific entry details information and links to related pages.



Featured Genre:
Jazz

Featured Artist:
Electric Light Orchestra

Featured Album:
Gunfighter Ballads and Trail Songs

Featured Track:
Free Fallin'

Figure 1: The home page of Musix

2 Design

Musix was designed for ease of use, combining multiple elements to provide the functionality required by the user. It has a header bar for easy navigation, and the rest of the page is dedicated to content. The URL hierarchy has also been structured in a way that makes sense, and even allows the user to navigate and search using the URL bar.

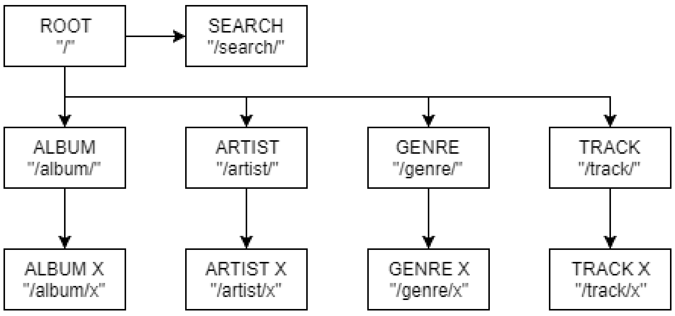
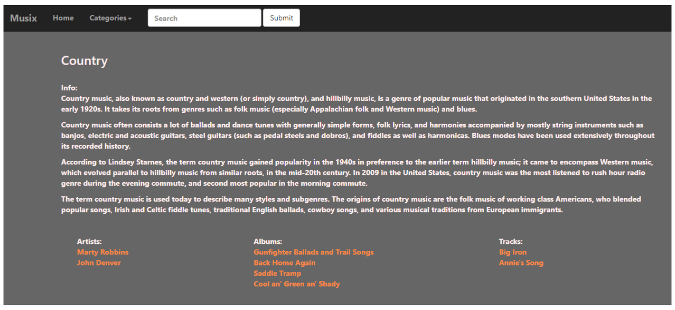


Figure 2: The URL structure

It dynamically populates the page with any information available, and in the absence of content, will redirect errors to a page explaining to the user what has happened. This allows more pages to be added by justupdating the JSON data files with more information, links will be generated automatically.



Country

Info:
Country music, also known as country and western (or simply country), and hillbilly music, is a genre of popular music that originated in the southern United States in the early 1920s. It takes its roots from genres such as folk music (especially Appalachian folk and Western music) and blues.

Country music often consists a lot of ballads and dance tunes with generally simple forms, folk lyrics, and harmonies accompanied by mostly string instruments such as banjos, electric and acoustic guitars, steel guitars (such as pedal steels and dobros), and fiddles as well as harmonicas. Blues modes have been used extensively throughout its recorded history.

According to Lindsey Starnes, the term country music gained popularity in the 1940s in preference to the earlier term hillbilly music; it came to encompass Western music, which evolved parallel to hillbilly music from similar roots, in the mid-20th century. In 2009 in the United States, country music was the most listened to rush hour radio genre during the evening commute, and second most popular in the morning commute.

The term country music is used today to describe many styles and subgenres. The origins of country music are the folk music of working class Americans, who blended popular songs, Irish and Celtic fiddle tunes, traditional English ballads, cowboy songs, and various musical traditions from European immigrants.

Artists:	Albums:	Tracks:
Marty Robbins	Gunfighter Ballads and Trail Songs	Big Iron
John Denver	Back Home Again	Annie's Song
	Saddle Tramp	
	Cool an' Green an' Shady	

Figure 3: Page layout with info

The data is also designed to be structured in a way that is both efficient, keeping redundant data to a minimum, and easy to search for. It also allows links to be created even if the target page does not exist, allowing easy identification of pages that need to be populated with information.

3 Enhancements

Musix has enough elements for navigating the site and finding content, however there are some interactive features that could be added. This could include a user account system, allowing people to comment on each page, give a rating to the topic, and suggesting edits to the information. In addition, an admin user would allow the site maintainers to remotely add, remove or update content while the site is running.

Another interactive feature would be allowing users to create playlists of their favourite music, or based on their preferences. Pages could also benefit from the inclusion of other media, such as embedded audio and video for listening to music and watching music videos, and pictures of the artists or album covers.

Searching could also be improved by adding a fuzzy search option, allowing the user some mistakes while still return relevant information, or suggesting pages based on prediction.

Additionally , Musix could add some styling options, allowing the user to switch between a light and dark theme, increasing readability in the daytime and nighttime.

More information could also be added about each item, such as the track BPM, number of sales, awards won etc. It could also have a feature where users can upload information themselves, allowing faster growth of the website.

4 Critical Evaluation

Musix has a simple URL hierarchy. I believe this works very well as it won't be confusing for users and it allows pages to be generated dynamically. I am particularly pleased with the HTML templates, as all the hyperlinks on a page are dynamically generated with the information given in the JSON data files. This allows the website to scale based only on what data is available in the JSON files, no other URL paths need to be hard coded. There is a down side to this, where a typo in the information would break the hyperlink, making it unable to find the page referenced. However, since editing the data is down to the maintainers, there's little room for large scale errors as it should be more consistent.

I also think that the simplistic style of the website elements allow the user to focus on what's important instead of being distracted by complex navigation and irrelevant content. The colour scheme is basic enough to distinguish individual elements, with strong colours used to highlight important features such as hyperlinks.

Searching works well enough, displaying all relevant pages that contain the term searched for. Although the search algorithm could be improved and it won't show anything if the term has a typo.

The biggest issue I currently see Musix facing is the amount of time to load the JSON data files, as they can become very large very quickly. There also isn't a particularly easy way to edit them or add/remove elements of the data objects.

5 Personal Evaluation

I feel that I performed adequately, being able to apply what I've learned about python and flask for routing requests, jinja templating for allowing dynamic HTML pages to be generated for the user, and producing a simple and efficient way of storing the data that the web app displays. I also feel that I managed well with what python knowledge I have to deal with all the data, collecting all the relevant information and managing to search through it all. I ran in to some trouble getting a nice interface to fill with content, choosing to settle for a simple, though functional, design with the help of bootstrap[1] and W3Schools[2]. However, I definitely could have spent more time branching out my knowledge of HTML/CSS. Opting to use bootstrap[1] did, however, allow me to have a consistent style, both visually and structuring my HTML pages.

References

[1] "Bootstrap," *HTML/CSS/JS Library*.

[2] "W3schools," *Online web tutorials*.