

Mini Project 1: Spotify Clone

1. Introduction

1.1 Problem Statement

To create a simplified web-based version of a music streaming application that mimics core features of Spotify such as browsing songs, searching, and basic playback.

1.2 Objectives

- Design a responsive web interface similar to Spotify.
- Implement basic audio playback functionality.
- Include playlist and search UI features.

1.3 Scope of the Project

This project is limited to frontend implementation using HTML, CSS, and JavaScript with sample music and images. It does not include backend features like authentication or music streaming from a server.

2. Technology Stack Used

2.1 Programming Languages

- HTML
- CSS
- JavaScript

2.2 Libraries/Frameworks

- None

2.3 Tools and Platforms

- Visual Studio Code
- Web Browser for testing

3. System Architecture

3.1 Architecture Diagram

A simple client-side architecture with static assets and audio file playback.

3.2 Module Description

- Sidebar: Contains navigation and playlists.
- Main Content: Displays trending songs and a search bar.
- Footer: Shows current playing song with controls.

4. Dataset Description

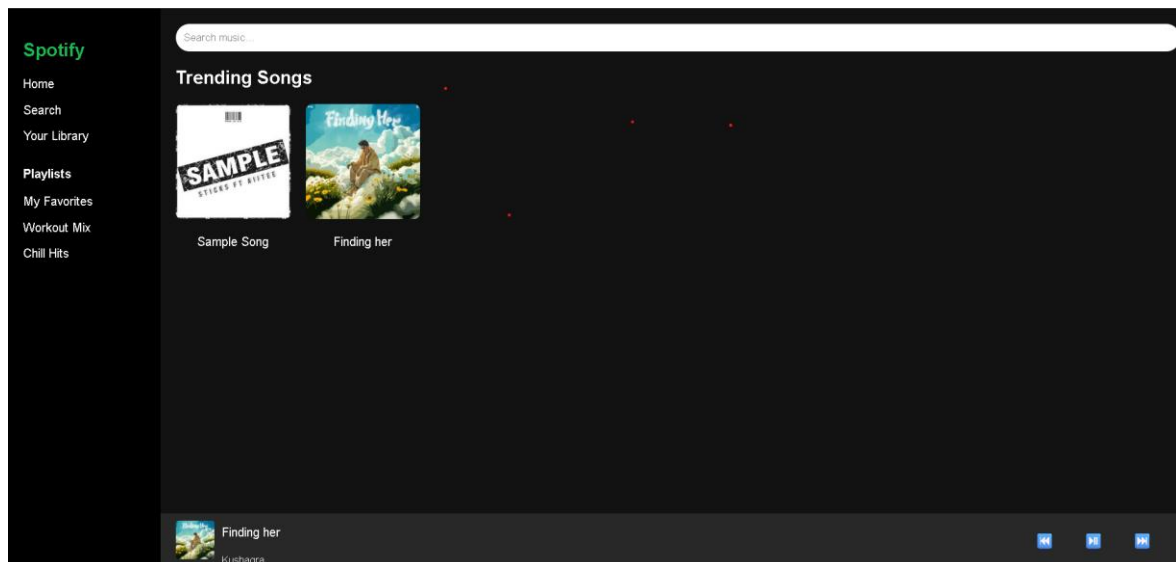
No external dataset was used. Sample songs and images were added manually.

5. Implementation

5.1 Code Flow Description

- index.html defines the layout of the app with song and playlist structure.
- style.css styles the layout using dark theme and flex layout.
- JavaScript (not shown) would control the audio play/pause functionality.

5.2 Screenshots of Execution



6. Results and Analysis

6.1 Output Samples

The interface mimics Spotify with basic working elements for a user-friendly experience.

6.2 Performance Evaluation

Works smoothly on modern browsers. No performance bottlenecks observed in testing.

7. Challenges Faced and Solutions

- Challenge: Making the layout responsive.
- Solution: Used flexbox and relative sizing to ensure adaptability.

8. Conclusion

The project successfully demonstrates a simple clone of Spotify using web technologies and provides a good foundation for adding more features in the future.

9. References

- Spotify Official Website
- W3Schools for HTML/CSS basics
- MDN Web Docs for JavaScript