Project Report: Music streaming Platform

Introduction

To provide users with a seamless experience when seeking for, listening to, and managing music, a web-based software known as the Music Streaming Platform project was developed. This research focuses on how blockchain technology is being utilised for data storage and security and provides a general overview of the project's objectives, technical design, implementation details, and long-term ambitions.

Objects of the Project

The following are the project's main goals for the music streaming platform:

1. User-Friendly Interface: Design a simple and eye-catching user interface that makes it simple for people to explore and play music.

2. Music Catalogue: Create a sizable music library with a diverse selection of songs, albums, and performers.

3.User Accounts: Manage user accounts by registering users.

4.Playlist management: Give users the ability to assemble and control playlists of their preferred tunes.

5. Blockchain Integration: Apply blockchain technology to the storage and distribution of data and of royalties.

Layers:

The three-tier architecture that supports the Music Streaming Platform includes:

Application Layer

1.HTML, CSS, and JavaScript are all used in the creation of the frontend.

2.The Flask web framework was used to build the web application, which offers a responsive and interactive user interface.

Business layer

This layer deals with business logic, server-side processing, and blockchain interaction.

Information Layer

User account information, the music library, playlists, and user-generated material are saved in a database, and copyright and royalty data are securely maintained using blockchain technology.

Application Specifics

Music Library

Song metadata, such as title, artist, genre, and album information, is used to create an extensive music catalogue.

Playback of music

HTML5 audio components with controls are used to playback music.

Blockchain Integration

1.Copyright and royalty data are securely stored using blockchain technology.

2.On the Ethereum blockchain, smart contracts are used to control ownership rights, monitor usage, and guarantee just pay for producers and artists.

3.Blockchain transactions that provide security and transparency are used to pay authors and artists.

Upcoming Features

Future work is planned for the following features:

1. facial Detection for Database Matching: Use facial recognition to improve user identification and security.

2. Advanced Search and Data Analytics: Give consumers access to more robust search tools and details about their listening preferences.

Conclusion

By utilising blockchain technology for safe data storage, copyright protection, and equitable payment to artists and producers, the Music Streaming Platform initiative seeks to provide customers a feature-rich and delightful music streaming experience. It aims to become a top platform for music lovers with its intuitive UI, sizable music library, and upcoming upgrades.

Github repo: https://github.com/cypher-2000/Music-Streaming-Platform

Video link :
https://drive.google.com/drive/folders/1H9C5rGyHWX2bTc0_Ru3jO3WW_4niJNNv?usp=sharing