CHATBOT-BASED MUSIC RECOMMENDATION SYSTEM

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ABSTRACT

Technology has a great impact on every part of lives, which also includes our day-to-day habits. In present scenario, fields like artificial intelligence and machine learning are on great boom. With the help of advancement in these fields, large number of people are interacting through the system via chat bots and voice assistants. Considering above factors, this project is aimed to implement the Machine Learning based Chat Bot Song Recommender System that includes chat bot to assist user and recommend songs using the Natural Language Processing. In this paper we will discuss methodology, algorithms and the flow of the system

1 INTRODUCTION

Now-a-days, we all are living in the time where we know that nothing is certain. Same goes with our mind, at regular instances of time our mood, our choices and our priorities changes. Considering the constant changing behavior of human being we have developed our system. We have made our system considering that the humans experience frequently changes in their mood and somehow, at particular moment of time, frequently changing of mood would also result in change in mood of music of their choice.

Literature Survey

1.Title: "Conversational Agents in Recommender Systems: A Review"

Authors: Chien-Chih Yu, Hung-Yu Kao

Explanation: This comprehensive review explores the integration of conversational agents (chatbots) in recommender systems across various domains, including music. It discusses the impact of conversational interfaces on user engagement and the challenges associated with designing effective conversational recommenders.

2.Title: "Personalized Music Recommendation System Based on Hybrid Collaborative Filtering Algorithm with Improved User Profile"

Authors: Zhihong Liu, et al.

Explanation: The paper introduces a hybrid collaborative filtering algorithm for music recommendation and emphasizes the importance of an improved user profile to enhance personalization. It provides insights into combining different recommendation techniques to achieve better accuracy.

3 IMPLEMENTATION STUDY

EXISTING SYSTEM:

Users can ask Siri to play specific songs, artists, or genres from Apple Music Siri learns user preferences over time and suggests personalized playlists and recommendations Seamlessly integrates with Apple Music's extensive catalog and user library based and mobile platforms collaborative filtering and user behavior analysis to suggest playlists and new music based on listening history Enables users to share music recommendations and playlists on social media platforms Mobile app (iOS, Android)Allows users to control music playback and discover new music using voice commands Curates personalized radio stations based on user preferences and thumbs-up/down interactions.**:** Seamlessly integrates with Pandora's adaptive recommendation engine for continuous learning and music discovery.

Proposed System & algorithm

A proposed chatbot music system aims to revolutionize how users interact with music by leveraging advanced technologies like NLP, emotion recognition, and personalized recommendation engines. By focusing on user-centric design, continuous learning, and innovation in user interaction modalities, such a system can offer a transformative music discovery and listening experience. This framework serves as a blueprint for conceptualizing and designing a cutting-edge chatbot music system that meets the evolving expectations of modern users. If you have specific aspects or functionalities you'd like to explore further or need assistance with, feel free to ask!

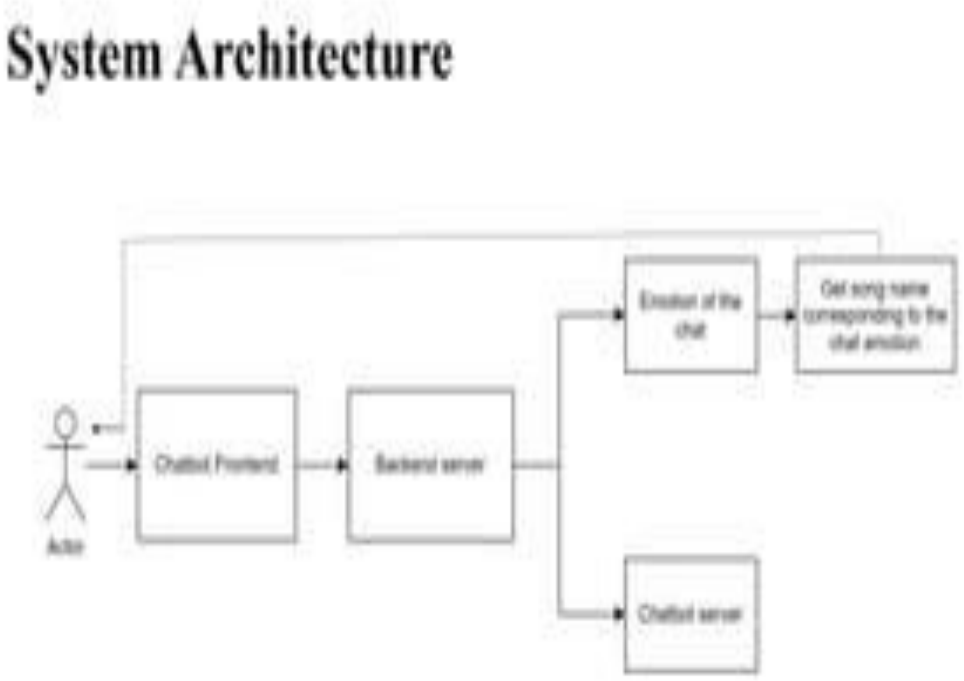


Fig:3.1 System Architecture

IMPLEMENTATION

SOFTWARE ENVIRONMENT:

The software environment for a chatbot music system encompasses all the necessary tools, technologies, and platforms required to develop, deploy, and maintain the system. Here's an overview of the key components and considerations for the software environment:

Software Environment for a Chatbot Music System

Development Frameworks and Languages

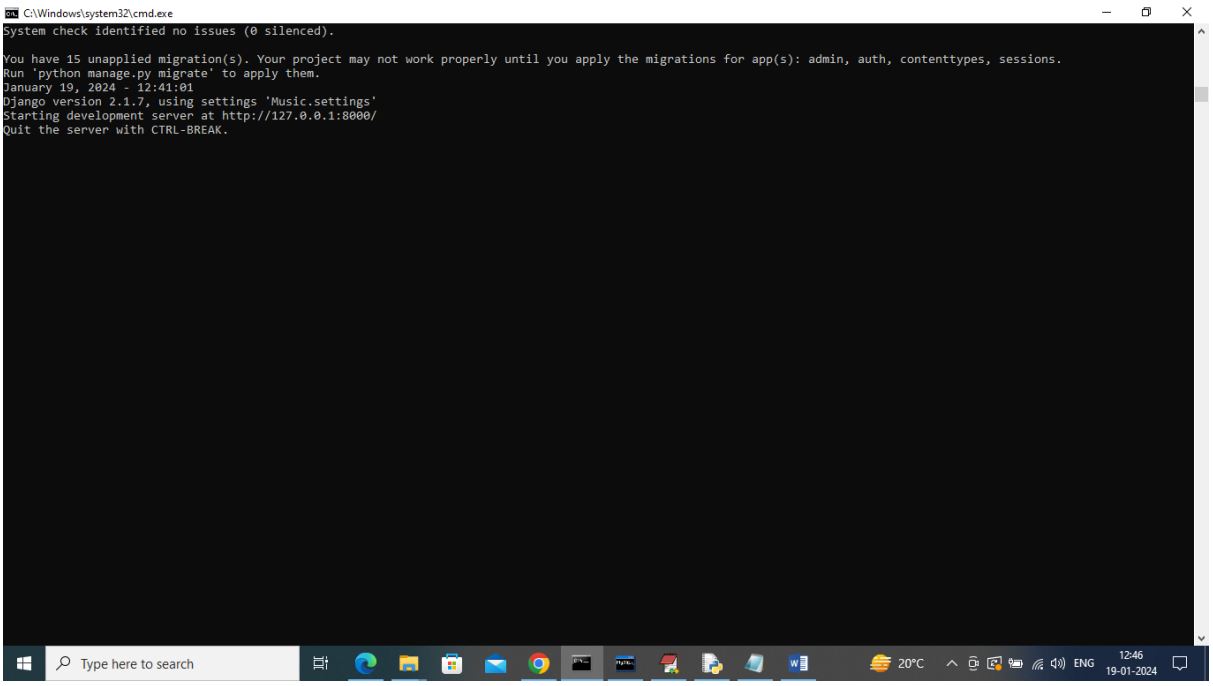
Common choices include Python for its robust NLP and machine learning libraries, JavaScript (Node.js) for server-side scripting, and Swift/Kotlin for mobile applications.

use frameworks like spaCy, NLTK, or Hugging Face's Transformers for natural language processing.

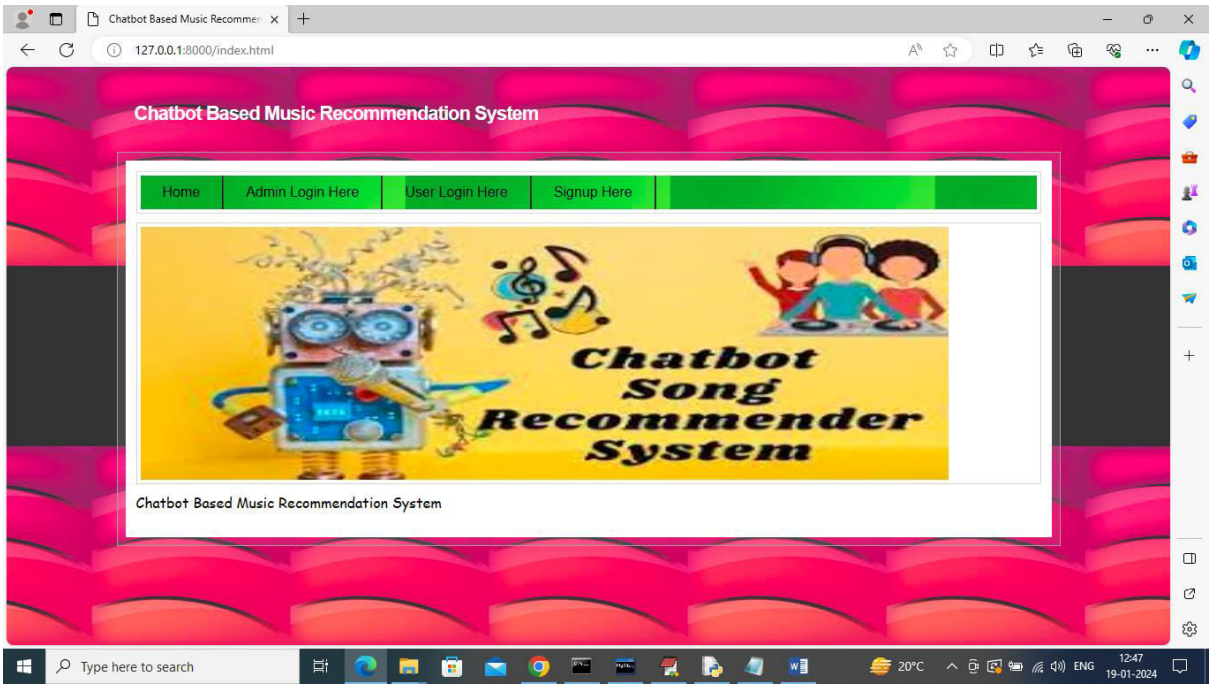
5 RESULTS AND DISCUSSION

1. SCREENSHOTS

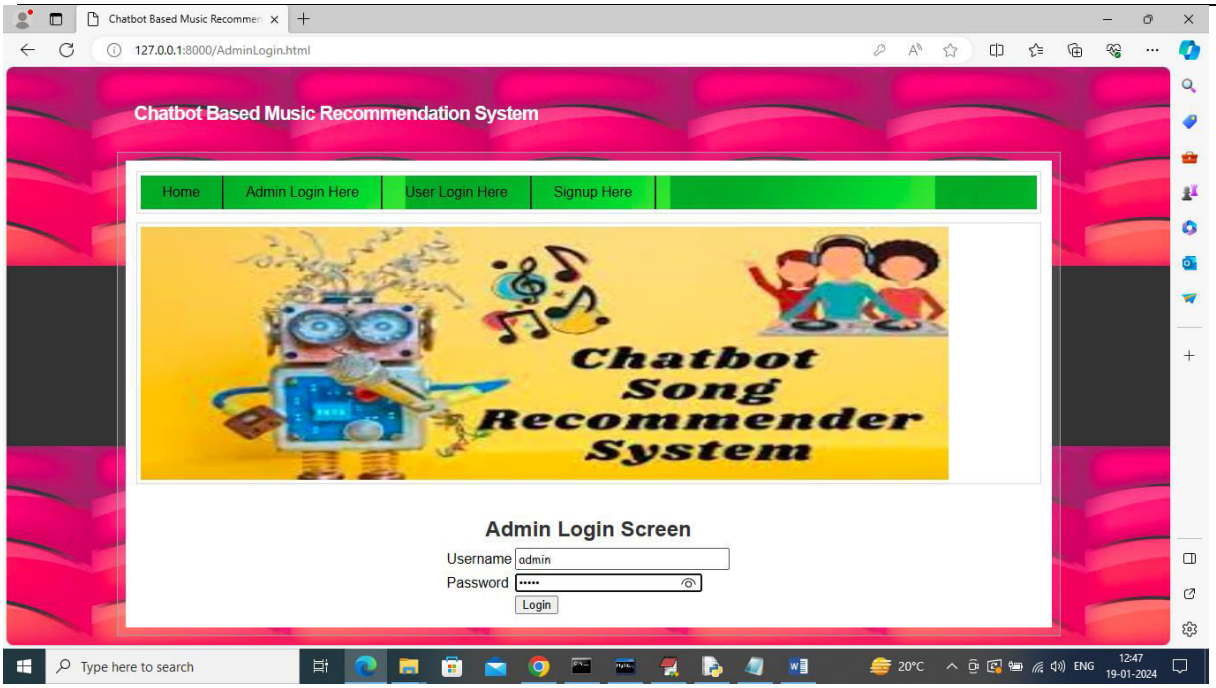
To run project double click on ‘run.bat’ file to start python server and then will get below page



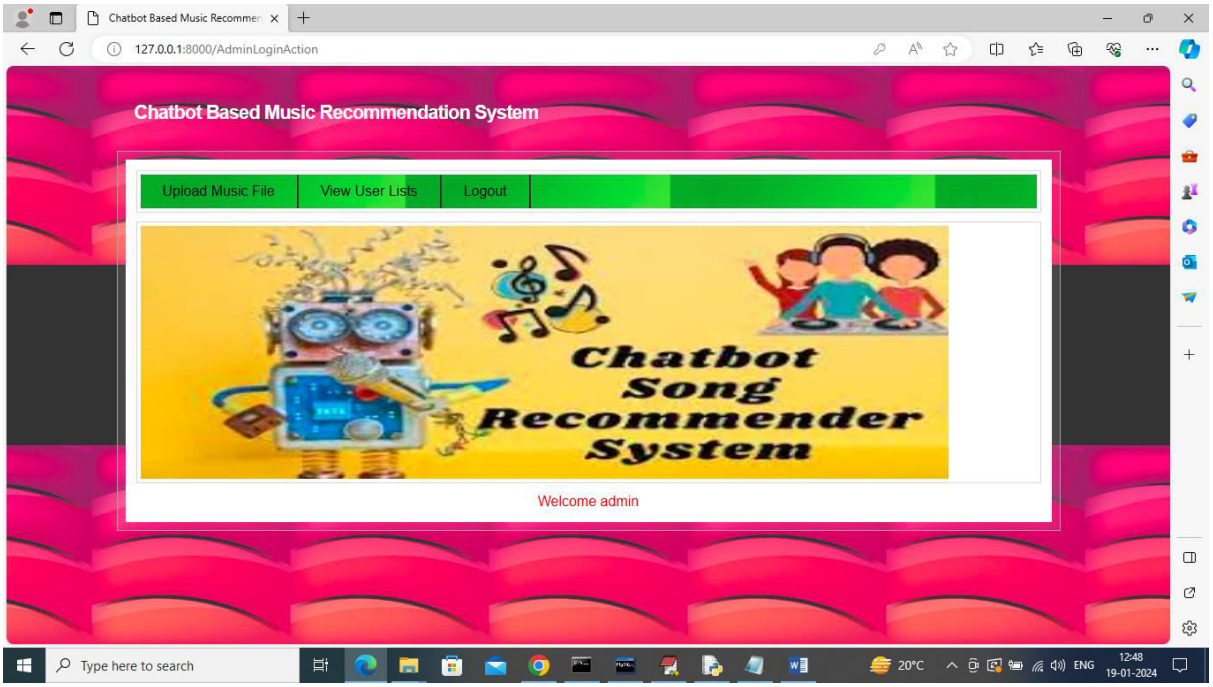
In above screen python server started and now open browser and enter URL as http://127.0.0.1:8000/index.html and then press enter key to get below page



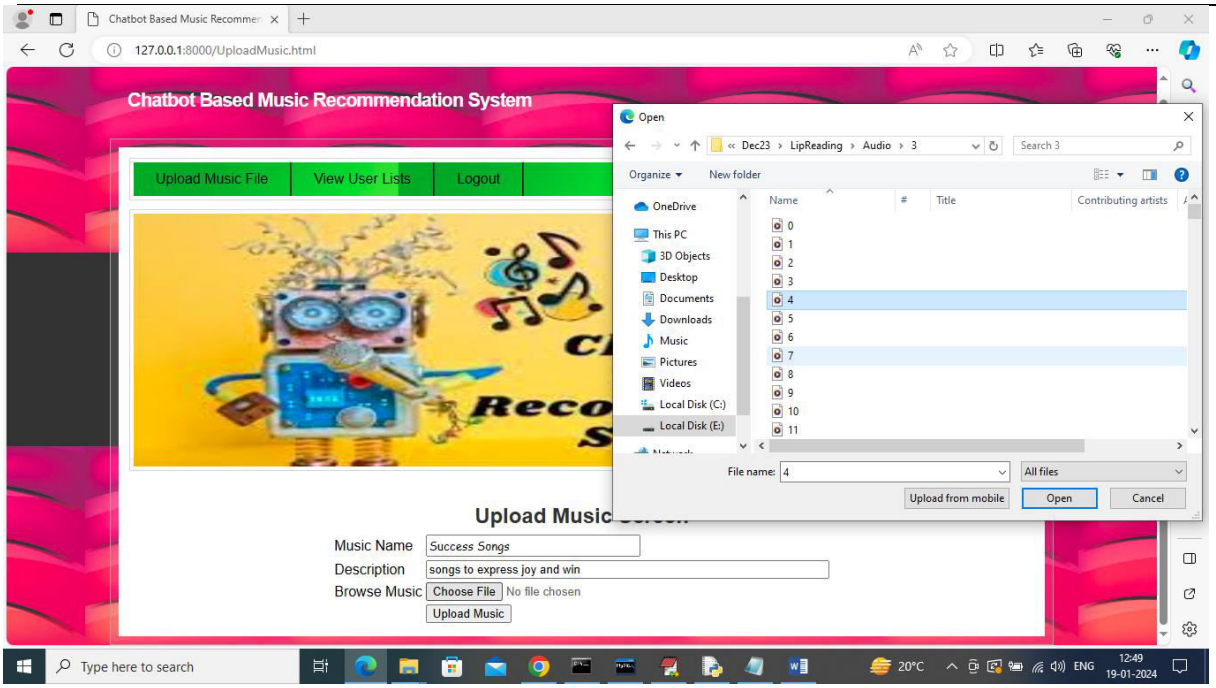
In above screen click on ‘Admin Login Here’ link to get below long page



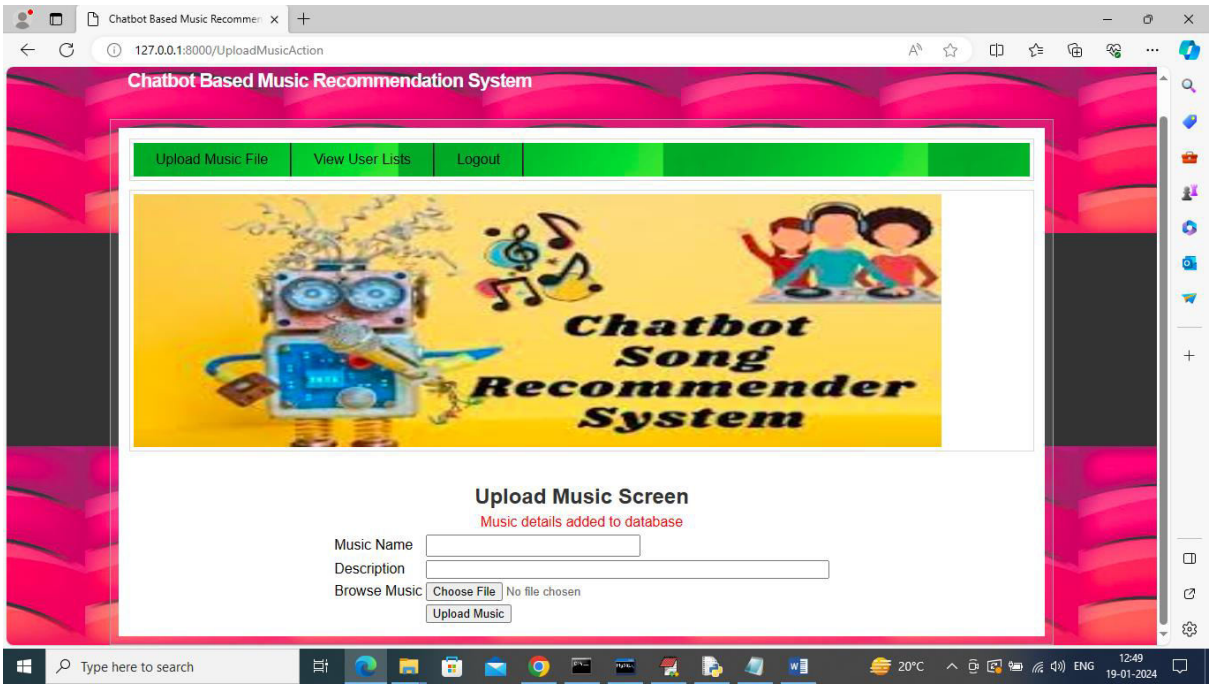
In above screen admin is login and after login will get below page



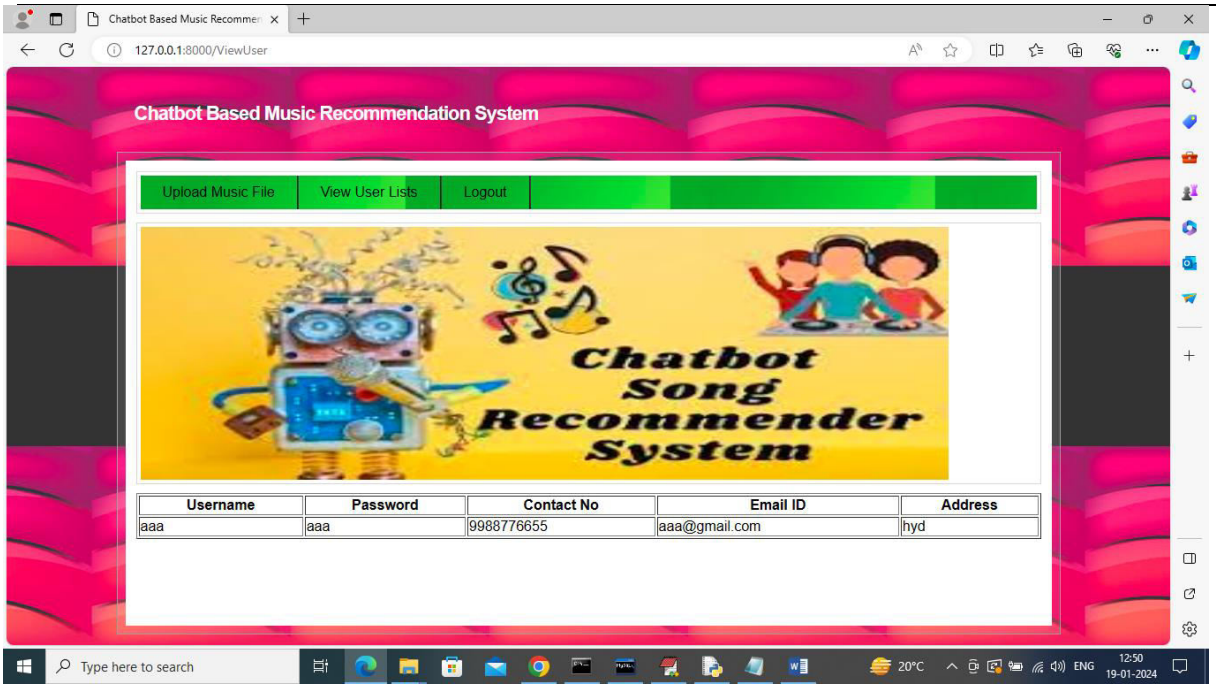
In above screen click on 'Upload Music File' link to get below page



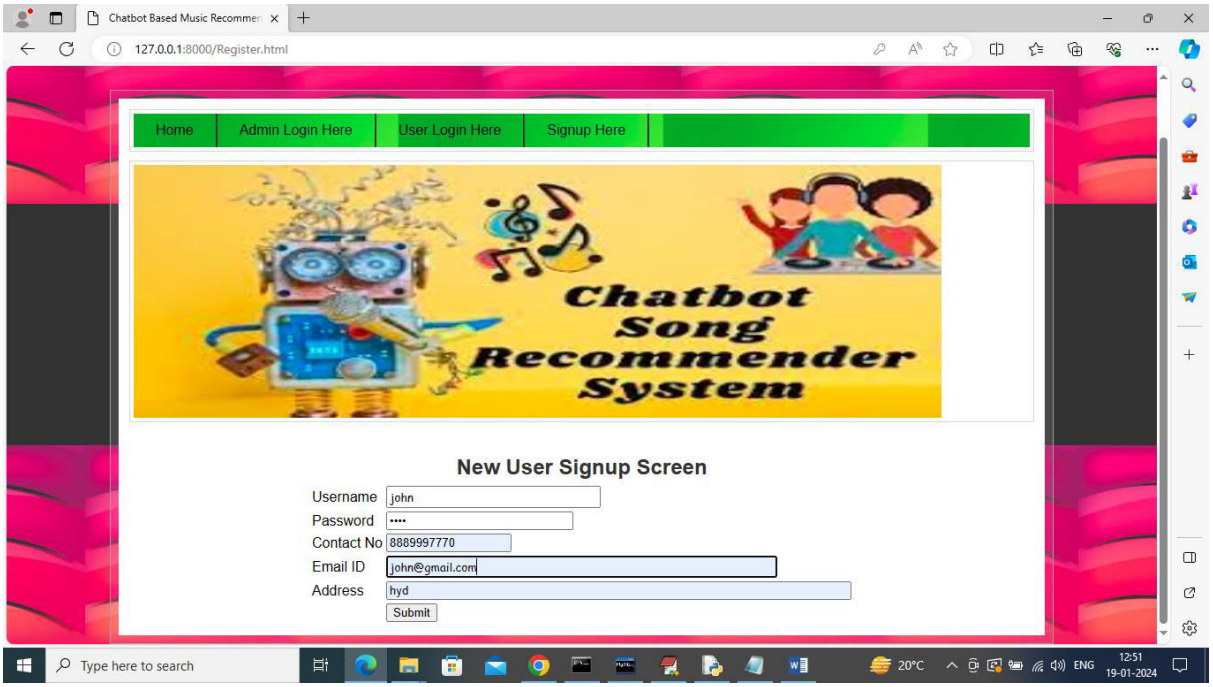
In above screen admin is uploading songs by entering description and then upload songs file and then press button to upload song



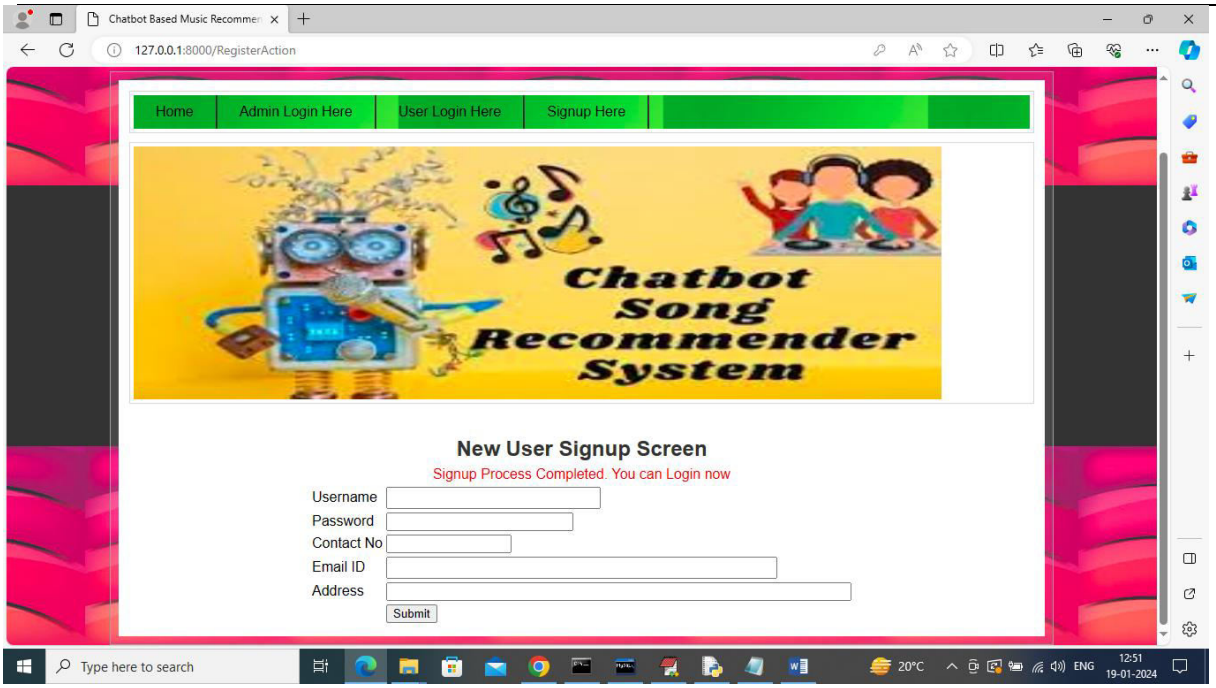
In above screen song is uploaded and similarly you can upload any number of songs and now click on 'View User List' link to get below registered user details



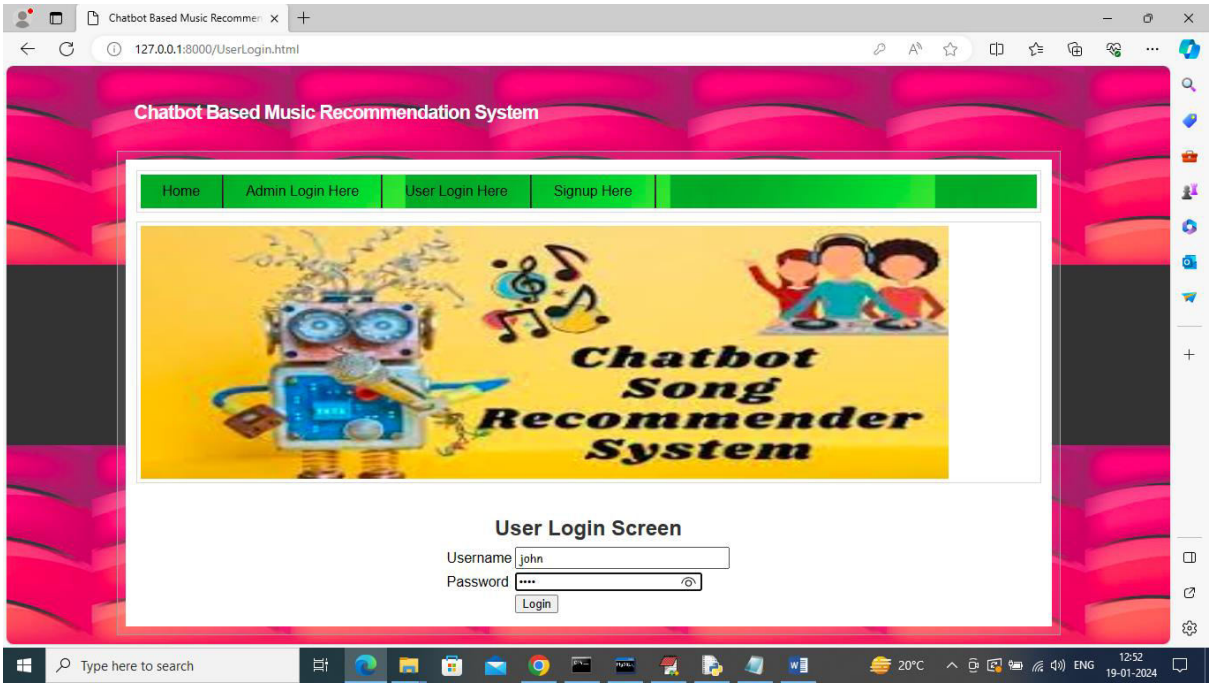
In above screen admin can view list of registered users and now logout and register new user



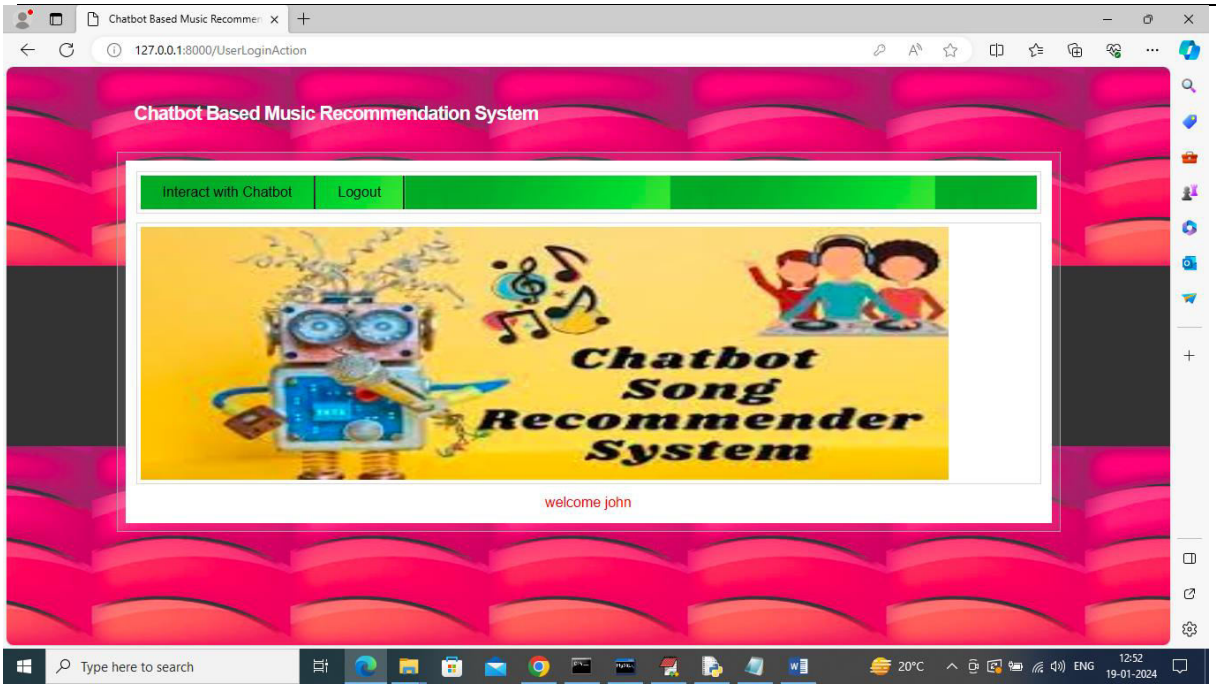
In above screen user is entering sign up details and then press button to get below page



In above screen user signup completed and now click on 'User Login' link to get below page

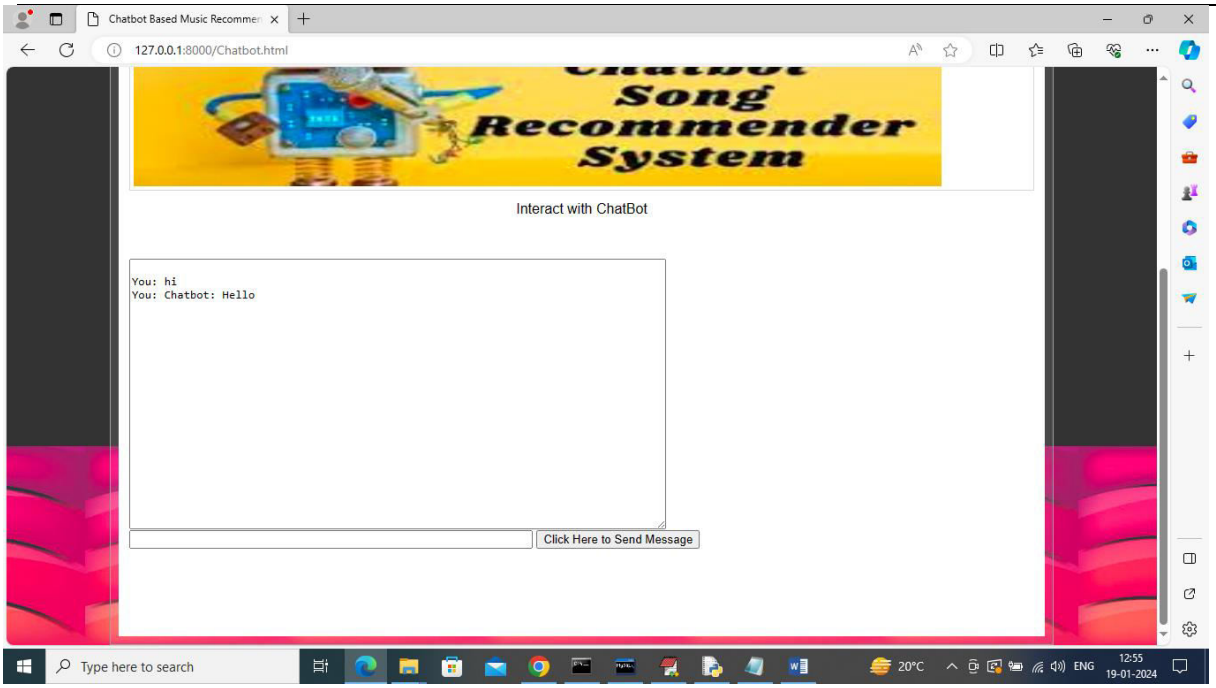


In above screen user is login and after login will get below page



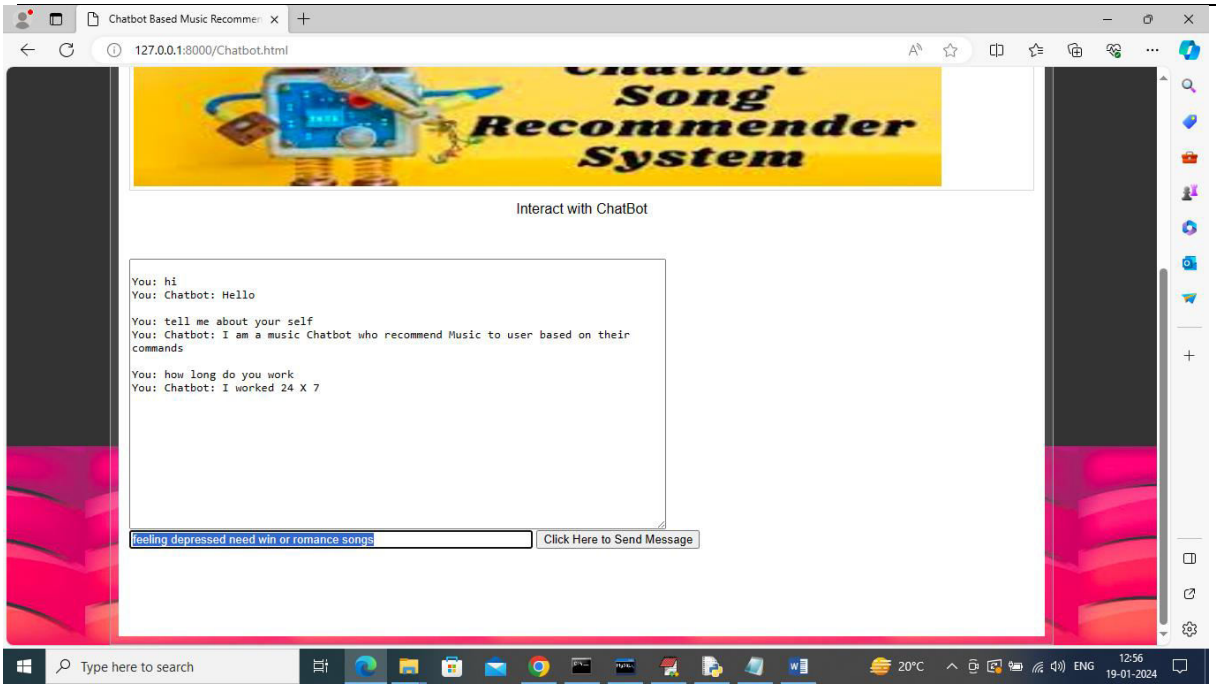
In above screen click on 'Interact with Chatbot' link to get below page

In above screen I am sending 'hi' to Chatbot and then press button to get below page

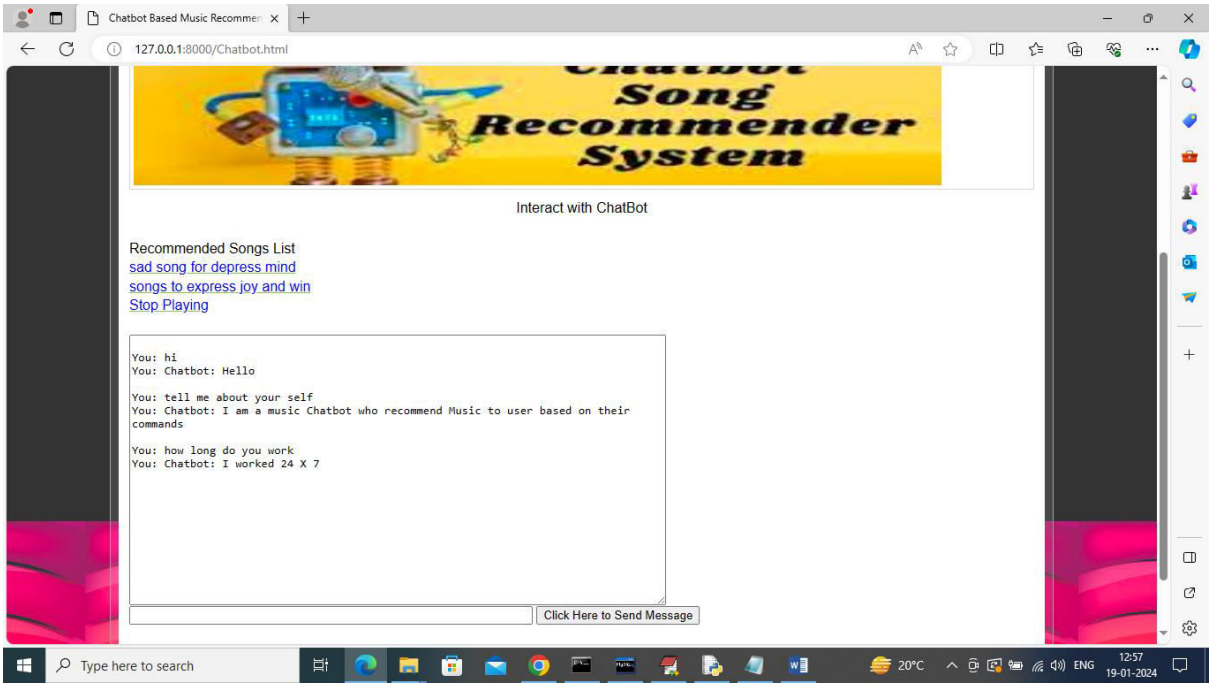


In above screen Chatbot replied with ‘hello’

I asked some more questions and Chatbot replied and now I will ask about songs



In above screen in blue colour text asking about some songs and then press button to get below page



In above screen we got some recommended songs list in blue colour text and you can click those links to play songs and can click on 'Stop Playing' to stop songs

6. CONCLUSION AND FUTURE WORK

CONCLUSION

We have presented a survey and methodology for building the chat bot song recommender system. To perform this, we first identified various approaches for building a chat bot known to date. We then evaluated the considered algorithms which are useful in building of our system in terms of their ability to work on the recommendation process of the system. We also gathered all the requirements

needed for building our system and studied the overall process involved in chat bot's working. Lastly, we summarized the deployment requirements of our system. On the conclusion note our "Chat bot Song Recommender System" is used to facilitate the use by people to automate and give them better music player experience. The application solves the basic needs of music listeners without troubling them as existing applications do.

7. REFRENCES

[1] J. B. Schafer, D. Frankowski, J. Herlocker, and S. Sen, "Collaborative filtering recommender systems," The Adaptive Web: Methods and Strategies of Web Personalization, pp. 291-324,2007.

[2] M. J. Pazzani and D. Billsus, "Content based recommendation systems," The Adaptive Web: Methods and Strategies of Web Personalization, pp. 325-341, 2007.

[3] E. J. Humphrey, J. P. Bello, and Y. LeCun, "Moving beyond feature design: deep architectures and automatic feature learning in music informatics," in Proc. 13th Int"l Conf. Music Info. Retrieval, pp. 403- 408, October2012.

[4] E. J. Humphrey, J. P. Bello, and Y. LeCun, "Moving beyond feature design: deep architectures and automatic feature learning in music informatics," in Proc. 13th Int"l Conf. Music Info. Retrieval, pp. 403- 408, October2012.

[5] W. Hsu, and C. J. Lin, "A comparison of methods for multiclass support vector machines" IEEE Tran. Neural Networks, vol. 13, no. 2, pp. 415-425, 2002

[6] R. E. Fan, K. W. Chang, C. J. Hsieh, X. R. Wang, and C. J. Lin, "LIBLINEAR: a library for large linear classification," J. Machine Learning Research, vol. 9, pp. 1871- 1874, 2008.

[7] V. Oord, S. Dieleman, and B. Schrauwen, "Deep content- based music recommendation," in Proc. 26th Int'l Conf. Neural Info. Process. Systems, pp.2643- 2651, December 2013 [8] Krizhevsky, I. Sutskever, and G. E. Hinton, "Image net classification with deep.