JAYPEE INSTITUTE OF INFORMATION TECHNOLOGY

B-TECH SEMESTER-3

OBJECT ORIENTED PRORAMMING USING JAVA

(24B15CS215)

PROJECT TITLE

Moodify

TEAM MEMBERS

BATCH : F14

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INTRODUCTION

Music is an important part of our everyday life. It has the power to heal, uplift, and connect with our emotions. Many people listen to music to relax, focus, or simply feel better. *Moodify* is an AI-powered application that detects a person's mood using an image and then plays songs that match their emotions. This creates a personalized and enjoyable music experience without the need to search manually.

PROBLEM STATEMENT

Many times, people experience a particular mood but struggle to find the right song that matches how they feel. This can be frustrating and reduces the overall music experience. There is a need for an application that can automatically sense the listener's emotions and suggest or play music accordingly.

<u>PROPOSED SOLUTION</u>

Our solution is to create an application that automatically detects the mood of the user and instantly plays a song that fits the emotional state.

- The **core logic will be implemented in Java**, ensuring platform independence, strong OOP-based design, and smooth performance.

- **Google Gemini API** will be used for analyzing the user's mood from their image, replacing traditional libraries like OpenCV for better AI-powered accuracy.

- Once the mood is detected, Java-based logic will map the mood to a playlist of songs (e.g., happy → energetic songs, sad → soothing songs).

- A user-friendly interface will be developed in HTML, CSS and JavaScript , making the application interactive and visually appealing.

EXPECTED OUTCOME

- A fully functional music application that automatically plays mood-based songs.

- Users will save time, feel more understood, and experience emotional balance through music.

- By improving productivity and mental health, this project contributes to building a happier and more focused society.

- On a larger scale, when our youth and workforce are emotionally stronger and more productive, it will directly support India's progress, helping the nation reach greater technological and cultural heights.

<u>TIMELINE</u>

Week 1:

- Research on Gemini API integration with Java.

- Design project structure (Java OOP classes for mood detection, song mapping, and player).

Week 2:

- Implement mood detection using Gemini API.

- Create Java modules for mood-to-music mapping.

Week 3:

- Develop music player interface using HTML, CSS & JavaScript.

- Integrate playlist management with mood detection.

Week 4:

- Testing and debugging.

- User feedback collection.

- Final improvements and project documentation.

<u>REFERENCES</u>

1.   Gemini API Documentation

      (https://ai.google.dev/)

2.   Java Official Documentation

      (https://docs.oracle.com/en/java/)

3.   GeeksforGeeks – Java Tutorials

      (https://www.geeksforgeeks.org/java/)

4.   Music Therapy Research

(https://www.frontiersin.org/journals/psychology/sections/music-psychology)