♫ MUSIC PLAYER PROJECT DOCUMENTATION

Project: Tufailhasan's Music Player

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1. INTRODUCTION

This document provides detailed documentation for the **Music Player** developed as part of the internship requirements.
The app is a modern, responsive, and user-friendly **web-based music player** implemented using HTML, CSS, and JavaScript. It allows users to play local audio files, manage playlists, and interact with the player using intuitive controls and keyboard shortcuts.

In addition to meeting all mandatory requirements, several bonus enhancements have been implemented to make the player more functional, visually appealing, and engaging.

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2. FEATURES IMPLEMENTED (AS PER REQUIREMENTS)

The following features were implemented to meet the internship requirements:

- Play / Pause, Next, Previous functionality

- Rewind 5 seconds / Forward 5 seconds

- Volume control and progress bar with current time & duration

- Upload songs via file input

- Drag & Drop support for adding multiple songs

- Persistent playlist stored in browser (localStorage)

- Shuffle and Repeat functionality

- Responsive design using CSS and Bootstrap, optimized for desktop, tablet, and mobile devices

- Keyboard shortcuts: Space (play/pause), Arrow keys (rewind, forward, volume)

- Clear and user-friendly layout with attention to accessibility and usability

- Documentation and code comments explaining HTML, CSS, and JavaScript sections

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3. ADDITIONAL ENHANCEMENTS (BONUS FEATURES)

Beyond the required features, the following improvements were added:

- Auto-read metadata from uploaded songs (Title, Artist, Album Art) using **jsmediatags**

- Light / Dark theme toggle

- Frosted-glass UI with gradient buttons

- Smooth transitions and hover effects

- Playlist item removal functionality

- Semi-transparent player container over background image for aesthetic design

- Keyboard and mouse-friendly controls for improved interactivity

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4. TECHNOLOGY STACK

- **HTML5** – Structure of the player and pages

- **CSS3** – Styling, layout, responsiveness (with Bootstrap 5 integration)

- **JavaScript (vanilla)** – Interactivity, audio management, keyboard shortcuts, drag & drop, shuffle/repeat logic

- **Bootstrap 5** – Responsive grid system and UI components

- **jsmediatags** – Reading audio metadata

- **Bootstrap Icons** – Icons for buttons and controls

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5. SETUP AND INSTALLATION

To run the project locally, follow these steps:

1. Download or clone the project folder from GitHub.

2. Ensure the following files are present:

   o index.html

   o css/style.css

   o js/script.js

   o assets/ folder with default audio files (e.g., F1.mp3)

   o Images/ folder with background images (e.g., F1img.webp)

3. Open index.html in a web browser.

4. Play the default song or add your own via **file upload / drag & drop**.

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6. HOW TO USE THE APP

1. Open index.html to access the player.

2. Play the default song using the Play button or select another song from the playlist.

3. Add new songs via the **file input** or **drag & drop** multiple files.

4. Use the **playlist** to select or remove songs.

5. Adjust volume using the slider and seek position using the progress bar.

6. Toggle **Shuffle** or **Repeat** mode as needed.

7. Use **keyboard shortcuts** for quick control:

   o Space: Play/Pause

   o Arrow Left/Right: Rewind/Forward 5s

   o Arrow Up/Down: Volume adjustment

8. Toggle **Light/Dark mode** for a personalized look.

9. Enjoy smooth transitions, responsive layout, and visually appealing UI across all devices.

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7. CONCLUSION

This project demonstrates proficiency in web development using **HTML, CSS, JavaScript, and Bootstrap**.
It fulfills the internship requirements while including enhancements like **drag & drop upload, metadata extraction, persistent playlist, theme toggle, and keyboard shortcuts**, creating a fully interactive and enjoyable user experience.

The project highlights the ability to follow specifications, implement functional features, and deliver enhancements beyond basic expectations.
It serves as a professional portfolio piece that is ready to impress recruiters.

YOU CAN VIEW LIVE DEMO HERE:
https://tufaildafedar0-prog.github.io/Music-player-/