Testing Plan for Web Music Player

1. Functional Testing

✔ Check if all buttons and links work correctly

Play/Pause Button: Should toggle between play and pause.

Next/Previous Buttons: Should correctly switch songs.

Volume Control: Adjusts the audio volume smoothly.

Seek Bar: Allows users to move forward/backward in the song.

Playlist Selection: Clicking a song should start playback.

✔ Test Song Loading

Ensure audio files load correctly without delay.

Verify metadata (song title, artist, album cover) updates properly.

✔ Edge Case Testing

Play button when no song is selected → Should not crash.

Rapidly switching songs → Should not freeze.

Setting volume to 0 → Should mute correctly.

Pausing and resuming after switching tabs → Should work without issues.

2. UI/UX Testing

✔ Test on Different Screen Sizes

Desktop: Should display all elements properly.

Tablet: UI should adapt with proper spacing.

Mobile: Controls should be easily accessible with touch gestures.

✔ Fix Any Broken Layout Issues

Ensure buttons are aligned properly.

Check for overflow issues on small screens.

Test dark/light mode compatibility if applicable.

3. Compatibility Testing

✔ Test on Multiple Browsers:

Google Chrome

Mozilla Firefox

Microsoft Edge

Apple Safari

✔ Test on Different Operating Systems:

Windows (PC/Laptop)

MacOS (MacBook, iMac)

Android (Smartphones & Tablets)

iOS (iPhone, iPad)

4. Performance Testing

✔ Check Page Load Speed:

Use Google PageSpeed Insights or Lighthouse.

Optimize image and audio file sizes to reduce loading time.

✔ Test Audio Streaming Performance:

Ensure no lag or buffering when switching songs.

Optimize preloading of the next song for seamless transitions.

5. Security Testing

✔ Check Console for Errors

Open Developer Tools (F12 → Console) and resolve any JavaScript errors.

✔ Prevent Unauthorized Access

Ensure only allowed file formats (MP3, WAV) are loaded.

✔ Secure API Calls (if used)

Hide API keys in environment variables (if fetching data from an external source).

6. User Testing & Feedback

✔ Ask real users to test the player.

✔ Collect feedback on ease of use and features.

✔ Make improvements based on suggestions.