

Music Mixer Project of Russell & Jin

✓ *Overview of the Project*

This project is an interactive music mixer web application built with HTML, CSS, and JavaScript. The main theme of the project is **Ocean**, using sound and visuals inspired by the sea to create a playful and immersive audio experience. Users interact with the application by combining different sounds to build a custom music mix in the browser.

The visual direction explores cute, stylized ocean-themed characters, such as marine animals, to make the interface approachable and engaging. Design research also includes interactive elements and simple mini-game concepts that may enhance user engagement without distracting from the core music-mixing experience. The overall focus is on experimentation, creativity, and intuitive interaction through sound and motion.

✓ *Key Features*

① **Basic Music Player Controls**

Play / Pause, Stop, Master Volume, Playback Speed, and Loop

② **Drag and Drop Audio Interaction**

Users can drag sound elements into designated areas to trigger audio playback through direct interaction.

③ **Multi-Layered Sound Mixing**

Multiple audio tracks can be played and layered together, allowing users to experiment with different combinations of sounds.

④ **Themed Audio System**

Audio elements are organized around an ocean theme, including ambient ocean sounds, marine animal effects, instrumental sounds, and electronic elements designed to work together cohesively.

⑤ **Optional Interactive Elements**

The project may include a simple mini-game where a character requests specific

sound mixes using visual cues. Players must listen to similar-looking audio icons before selecting the correct sounds to mix. The mini-game is played with up to N attempts across M questions, adding an extra layer of interaction to the music mixer.

✓ *Architecture*

The application is built using a front-end-only architecture with standard web technologies. The structure focuses on clear separation between structure, styling, and behavior.

① **HTML Structure**

Defines draggable sound elements, drop zones, audio elements, and character containers.

② **CSS Styling and Animation**

Handles layout, visual theme, character design, transitions, and animations triggered by user interaction.

③ **JavaScript Logic**

- Drag and drop event handling
- Audio playback and control
- Layered sound management
- Interaction-based visual state changes

④ **Audio Assets**

Short, loop-friendly audio files stored locally and loaded through HTML audio elements.

✓ *Resources & Research*

- The drag and drop feature can be implemented using the HTML draggable attribute. MP3 audio files will be used for the mixer, and MIDI support is also being considered.

Ref - FOL : week5 drag & drop work

<https://www.fanshaweonline.ca/d2l/le/content/2038335/Home>

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Ref - FOL : Week 8 Juke box start

<https://www.fanshaweonline.ca/d2l/le/content/2038335/Home>

➤ **Free Music downloadable Site**

(Downloaded music is in the asset folder)

<https://mixkit.co/free-sound-effects/>

<https://pixabay.com/sound-effects/>

<https://freesound.org/>

<https://www.zapsplat.com/>

<https://soundbible.com/>

- YouTube Audio Library

<https://www.youtube.com/c/audiolibrary-channel>

How to use the YouTube Audio Library

<https://support.google.com/youtube/answer/3376882?hl=en>

- Adobe Sound effect library

<https://www.adobe.com/products/audition/free-sound-effects.html>

- The 6 Best Free Sound Effects Websites for Creators (Blog)

<https://uppbeat.io/blog/sound-effects/free-sound-effects-websites>

➤ **Music mix reference site & free sound**

<https://www.myinstants.com/en/categories/sound%20effects/us/>

<https://soundbuttonsworld.com/>

<https://www.epidemicsound.com/sound-effects/>

➤ **Drag & Drop reference**

<https://outlook.cloud.microsoft/mail/inbox/id/AAQkADM1M2QyOTBjLWE3OGMtNDkxYi04ZGFhLTEzY2JhYTE0MjgxZQAQACIAXj5EiAhAozByrutzvjk%3D>
<https://shopify.github.io/draggable/>

✓ *Task Delegation*

Russell is responsible for development, technical research, and core project ideation, focusing on JavaScript functionality, audio handling, and drag and drop interactions. **Jin** leads the visual design and design research and also acts as the project manager, coordinating schedules, organizing tasks, and ensuring smooth collaboration throughout the project.