

## About Music Maker

For the project, I made a music maker using html for the basic structure and layout, css for styling and javascript for dynamic functions. As for the audio files, I downloaded some from freesound.org. I've also used a premade button style for css from getcssscan.com. I only took references from w3schools for html and css syntax.

## User Manual

**Adding a new track:** Tap on the "Add Track" button. You can add as many as you like.

**Adding instruments:** Only after adding a track, you can drag and drop instruments of your desire. You can either add them in a single track (which will be played sequentially) or in different tracks (which will be played at the same time).

**Playing the track:** Tap on the "Play" button.

**Stopping the track:** Tap on the "Stop" button.

**Downloading song:** Your track will be recorded as soon as you hit "Play". You can just tap on "Download Song". If you don't want the current track, you have to first tap "Stop" and then tap "Play" again for the new track to be recorded.

**Increasing and decreasing volume:** You can do so via the volume slider. However, you need to stop the current track first from playing if you want to change the volume.

**Looping a track:** Tick the "Loop" checkbox to loop a track.

**Deleting a track:** Tap on the "Delete" button to delete a track. If you're in the process of playing tracks, then deleting a track midway won't remove the song during the process. You can tap "Stop" button and then tap "Play" again to notice the difference.

**Deleting an instrument:** Tap on the "X" if you want to delete an instrument in a track.

**Adjusting the volume of an instrument:** After you've added an instrument, you'll see a slider on that instrument grid. You can either slide up or down.

**Adding custom samples:** You can choose an audio file and tap "Add new sample" button. It'll be added under user samples.

## Points Proposal

Features	Points
Well written PDF report	3
Application is responsive and can be used on both desktop and mobile environment	4
Application works on Firefox, Safari, Edge and Chrome	3

The application has clear directory structure and everything is organized well	2
Drag and drop new instruments to the tracks (with mouse or touch screen)	4
Adjustable volume per track	2
Adjustable volume per instrument item	1
Able to download the final song	3
Instrument's length is visualized in the track	4
Available instruments are categorized (basses, guitars, drums...)	2
Users can add as many tracks as they sees fit	1
Some tracks are looping tracks while some can be set to run only once	2
User can delete tracks and instrument items	3
User can add the sample audio of their choice	2
The user added samples can be added to the track	1
Use the web audio API and let users to record singing through microphone	3
Total	40

## Declaration of AI Usage

Tool used: ChatGPT

ChatGPT was used for understanding the requirements more, debugging and finding out the syntax of some features that are a bit hard for me to understand from MDN Web Docs.

### References

- [1] <https://developer.mozilla.org/en-US/docs/Web/HTML/Element/input/range>
- [2] <https://developer.mozilla.org/en-US/docs/Web/API/BaseAudioContext/createGain>
- [3] [https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global\\_Objects/Array/filter](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Array/filter)
- [4] <https://developer.mozilla.org/en-US/docs/Web/API/BaseAudioContext/decodeAudioData>
- [5] <https://getcssscan.com/css-buttons-examples>
- [6] [https://developer.mozilla.org/en-US/docs/Web/API/HTML\\_Drag\\_and\\_Drop\\_API](https://developer.mozilla.org/en-US/docs/Web/API/HTML_Drag_and_Drop_API)
- [7] <https://developer.mozilla.org/en-US/docs/Web/API/AudioContext/createMediaStreamDestination>
- [8] <https://developer.mozilla.org/en-US/docs/Web/API/MediaRecorder>
- [9] <https://developer.mozilla.org/en-US/docs/Web/API/MediaDevices/getUserMedia>
- [10] <https://developer.mozilla.org/en-US/docs/Web/API/HTMLAudioElement>
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