

## Music Maker



I took the week 3 example task as the basis for the project, on which I started to create the project. First of all, I added a drag and drop feature that allows instruments to be moved on tracks with the mouse. I used the HTML Drag and Drop API for help. The instrument dropped on the track is a copy of the original so that the same instrument can be added to the tracks multiple times. It was important for me to add the ability to remove an instrument dropped into a track. For this, I added a button, which, when clicked, removes the instrument from the track.

Next, I added a play button, which, when clicked, starts playing the song composed on the tracks. I also added a pause button to stop the song from playing. After pressing the pause button, if you press the play button, the song will resume from the point where it was paused. The icons buttons are from Font Awesome Icons.

I also deemed it important to allow the user to remove an instrument from the track even when the song is playing. If an instrument is removed while it's playing, the song immediately proceeds to the next instrument on the track, or stops playing if there are no more instruments on the track. The application also prevents pressing the play button and playing the song from the beginning if the song is already playing. Only when the song is paused can the play button be clicked again. Once the song has finished playing, or if the user has removed all instruments during playback, the user is forced to refresh the page before creating the next song. Dropped instruments are scaled according to the duration of the instrument. The user can drop as many instruments onto the track as they want. If the instruments don't fit on the screen width-wise, a scroll feature is added to the track.

I also added volume control capability for each track as well as for each instrument. Volume levels can also be adjusted while the song is playing. The user can also add as many tracks as

they want, and remove tracks by pressing the cross button. The user can also choose whether a specific track plays on a loop or only plays through once using a checkbox.

Available instruments can be added and removed from the page by clicking on the cross button. Instruments are categorized based on their type. From the dropdown menu, you can select which type of instruments you want to view. By clicking on an instrument, you can change its category.

When the user has created a song of their liking, they can download and save it for themselves. The download button appears to the user whenever there are instruments on the tracks. When the user downloads the song they created, a link to the song is added to their list of downloaded files. By clicking on the link, the user can save the file to their device. The song will be saved according to the mp3 files dropped onto the tracks, and the resulting file is also of mp3 type. I used the lameJS library to assist in creating the file.

### **Technologies and tools**

- HTML5
- CSS3
- JavaScript
- HTML Drag and Drop API
- Font Awesome Icons
- LameJS library

### **Features and points**

Feature	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'n'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
One can change the category of an instrument	1
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	1
User can delete tracks and instrument items	3
Track can be scrolled if the width of the instruments exceeds the width of the track.	1

The song always starts playing from the exact point where it was paused when the user presses play.	2
Pressing play is prevented if the song is already playing.	1
An instrument can be removed from the track, even while the song is playing.	2
Volume levels can also be adjusted while the song is playing	1
The song immediately jumps to the next instrument on the track if the instrument being played is removed. The track's play also stops immediately if the track is emptied.	3
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