

Concept: Drag and Drop Music Mixer

Create a UI with draggable “music pieces”; user drags each piece to a drop zone to try to make their own music. Select buttons on the left of the page will contain different themes of background images and tracks. When the user chooses a different theme, the entire game should reset with all the draggable pieces below the drop zones and empty drop zones. A reset button below the draggable music pieces allows emptying drop zones and reset the theme selected. A pause/play button beside the drop zone allows pausing or playing all the music tracks loaded.

Music Mixer Feature Breakdown:

- ✓ Buttons on the left side allow selecting different themes of background track; clicking on one of the buttons loads the background image and track.
- ✓ User drags a music piece from the below of the music mixer area, drops it on one of five drop lines to create music. When dropping the music piece, image will be loaded and bouncing on the drop line, and the corresponding music will be played.
- ✓ Have a reset button. When clicked, all images and music loaded are cleared and reset.
- ✓ Allow dragging the music piece back to the below.
- ✓ Allow playing or pausing the whole music mixer.

Page load: set up the drag and drop functionality, set up each button’s functionality, load the initial background image

- ✧ Need draggable attribute on the pieces (jpg and svg files)
- ✧ Need to handle the drag with JS, set the ID of the piece being dragged so we know where to put it / add it when we drop it -> use the set and get methods on the drag event
- ✧ Reparent on a drop -> retrieve the ID of the piece we’re dragging and then reparent it in the current/active drop zone (just a div / empty container that we can put things into)
- ✧ Will have to wipe styles and restyle so that we can make the dropped image appear the way we want it

Adding/Removing Music Pieces: this is a 2-direction drag and drop - dragging from the choices board and dropping to the drop zone (add), and in reverse dragging from the drop zone and dropping to the choices board (remove).

- ✧ To adding a piece, enable each piece in the music pieces to be dragged, and enable each zone in drop zones to be dragged over and dropped. Reparent on a drop. Play the corresponding music track.
- ✧ To removing a piece, enable each zone in drop zones to be dragged, and enable each container of music pieces to be dragged over and dropped. Reparent on a drop. Pause the corresponding music track.

Select buttons:

- ✧ On a click, use the “this” keyword to retrieve the id from the active button - This will be 0, 1 or 2 because we have 3 themes.
- ✧ Take that 0, 1, or 2 and find the corresponding background image (named as background-img 0 to 2) and background track (background-track 0 to 2)
- ✧ On a click, change the background image to the corresponding background image, and play the corresponding background track.
- ✧ Also need to empty out the drop zones.

Reset Button: need two extra variables: one to store the current background image index (ie, 0, 1, or 2), named as currBackground; another to store a list of active music pieces index (ie. 0, 1, ... or 19), named as currPieces. (When page loaded, currBackground is initially set to 3 to indicate no background, and currPieces is initially an empty list. Each time a select button is clicked, currBackground needs to be set to the corresponding background's id. Each time a music piece is dragged and dropped; the corresponding id of music piece should be added to the list currPieces.)

- ✧ On a click, take currBackground to find the current background image and current background track, then clear the current background image by using removeChild() method on the parent node and pause the background track by using pause() method. After doing this, set this variable to 3 (indicates no background loaded).
- ✧ Then take currPieces, and loop through each element in this list. For each element, find the current music piece on the drop zone and the corresponding active track, then remove the image of that music piece from the drop zone by using removeChild() method on the placeholder, and pause the corresponding music track by using pause() method. Lastly remove this element from the list.
- ✧ At last, the currBackground should be 3 and the list currPieces should be empty.

Pause/Play Button: need an extra boolean to indicate whether it is pause or play, named as paused. (When page loaded, paused is set to be true. Each time dragged music piece into drop zones, paused is set to be false).

- ✧ On click, first check the status of paused.
- ✧ If paused is true, we need to continue play all the music tracks. We find all available music tracks by using currBackground and currPieces, then replay them, and lastly, we need to set paused to false to indicate the music tracks are playing now.
- ✧ If paused is false, we need to pause all music track. The process is like above, we find all available music tracks by using currBackground and currPieces, then pause them, and lastly, we need to set paused to true to indicate the music tracks are pausing now.