

I currently intern at an audio equipment company (Shure Inc.) and have always had an interest in music. For my final project, I will be creating a single-page application for a beat pad that uses strictly HTML, CSS, and JavaScript.

### Beat Pad Container (<div id="beat-pad-container">)

- This div will be empty and contain the beat pad
- **JavaScript Functionality:** Instead of hard-coding every button, I'll use JavaScript to create them dynamically when the page loads
  - Use document.getElementById and forEach loop to create new button
  - Set text to the sound name
  - Use button.dataset.sound = 'kick' add attribute to link it to sound
  - Use container.appendChild(button) to append button to container

### The Pads (<button class="pad">)

- These are buttons the user will click, I'll map them to keyboard keys
- **JavaScript Functionality:** When a user clicks a pad, a specific sound will play. I will also add visual effect to show the button was pressed.
  - Use addEventListener to each button
  - Use event.target.dataset.sound to get sound name from button that was clicked
  - Find audio element in HTML
  - Play audio sound

## Website Functionality & User Journey

- **Loading the Beat Pad:** Upon loading the application, users will see a grid of "pads" representing different drum sounds (kick, snare, hi-hat).
- **Playing Sounds:** Users will click or tap on individual pads to trigger their corresponding drum sound. Each click will instantly play the sound.
- **Visual Feedback:** When a pad is pressed, its visual appearance will change temporarily (illuminate, change color) to provide immediate feedback that the sound has been triggered.
- **Looping Beats (Future Feature):** Initially, the beat pad will focus on individual sound playback. A future enhancement will allow users to record a sequence of presses and loop them, creating simple drum patterns.
- **Adjusting Volume (Future Feature):** Sliders or controls will be added to adjust the volume of individual sounds or the master output.

## Home Page (Beat Pad Interface)

This will be the main and essentially only page of the application. It will house the entire beat pad interface.

- **Beat Pad Grid:** A visual grid of buttons or div elements, each representing a drum sound.
- **Sound Bank/Labels:** Clear labels indicating which sound each pad triggers ("Kick," "Snare," "Hi-Hat").
- **"Play All" / "Stop All" Button (Future Feature):** A button to play or stop a pre-recorded loop.
- **Volume Sliders (Future Feature):** Individual sliders for each sound or a master volume slider.

BEAT PAD

KICK

SNARE

RIMSHOT

HI-HAT  
(CLOSED)

HI-HAT  
(OPEN)

CLAP

TOM

CYMBAL

808 BASS