Synth Trainer

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Project Description

- React-based web app
- Audio ear trainer
- Music production learning tool

Synth Trainer

Audio Synthesis Ear Trainer

Goals & Accomplishments

- Gain the ability to pinpoint sound characteristics
- Familiarize new producers with components that make up sound
- Provide the knowledge needed to articulate ideas
- Reinforce and refresh skills

Project Justification

Why this project?

- Passion for sound design
- Learn a new framework

Project Justification

Why it is a good use of your abilities?

- Past experience with music-making and sound design
- Interest in databases and backend functionality
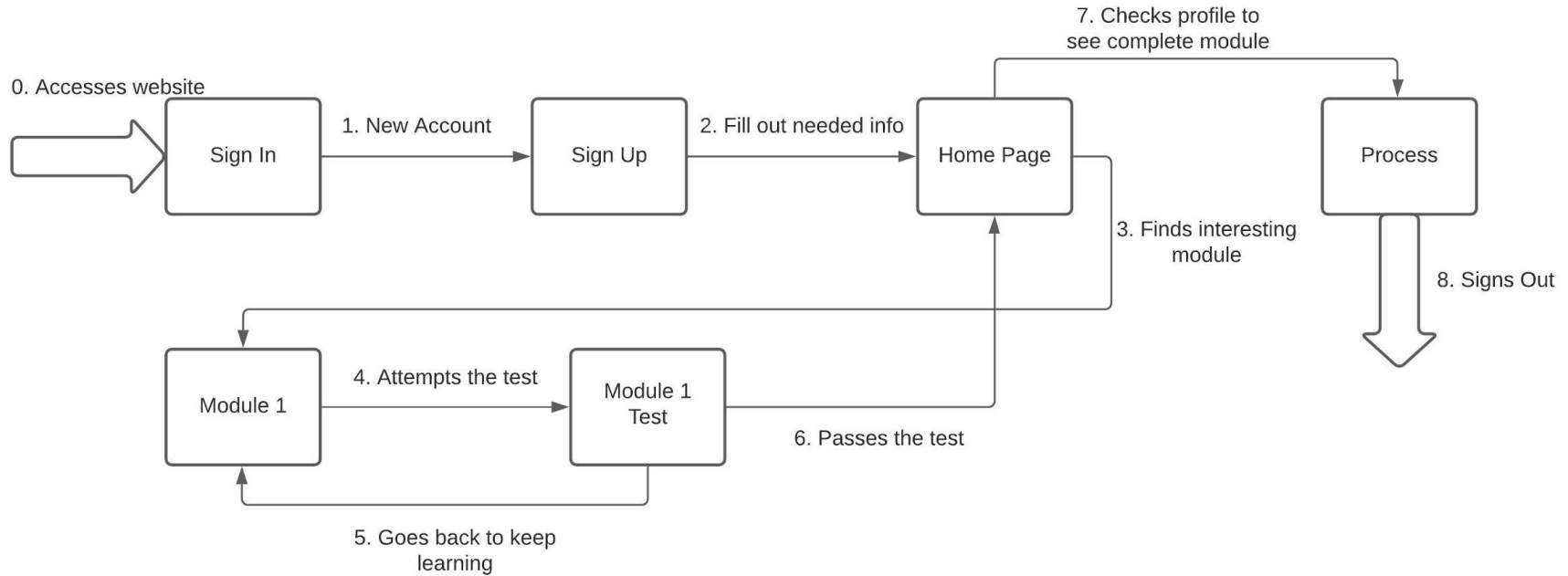- Interest in website UI and styling

User Story 1

- Meet Joe

- Create an account

- Find module

- Enters Module
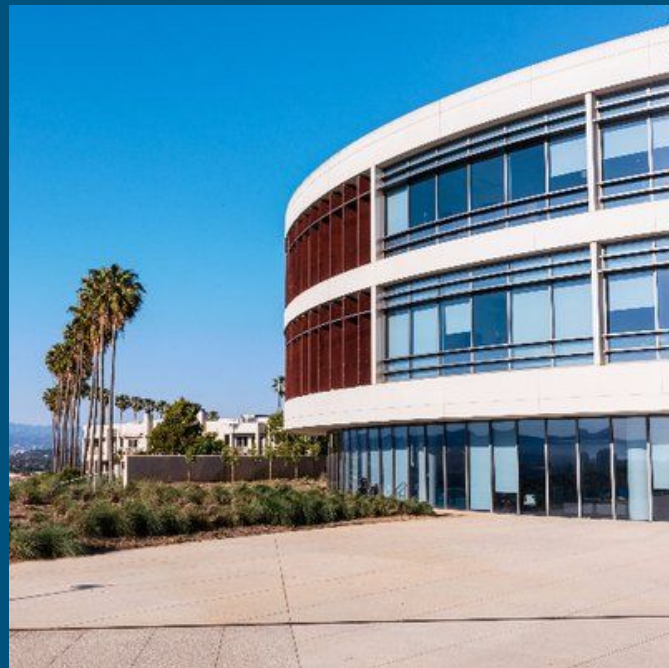
- Takes the test
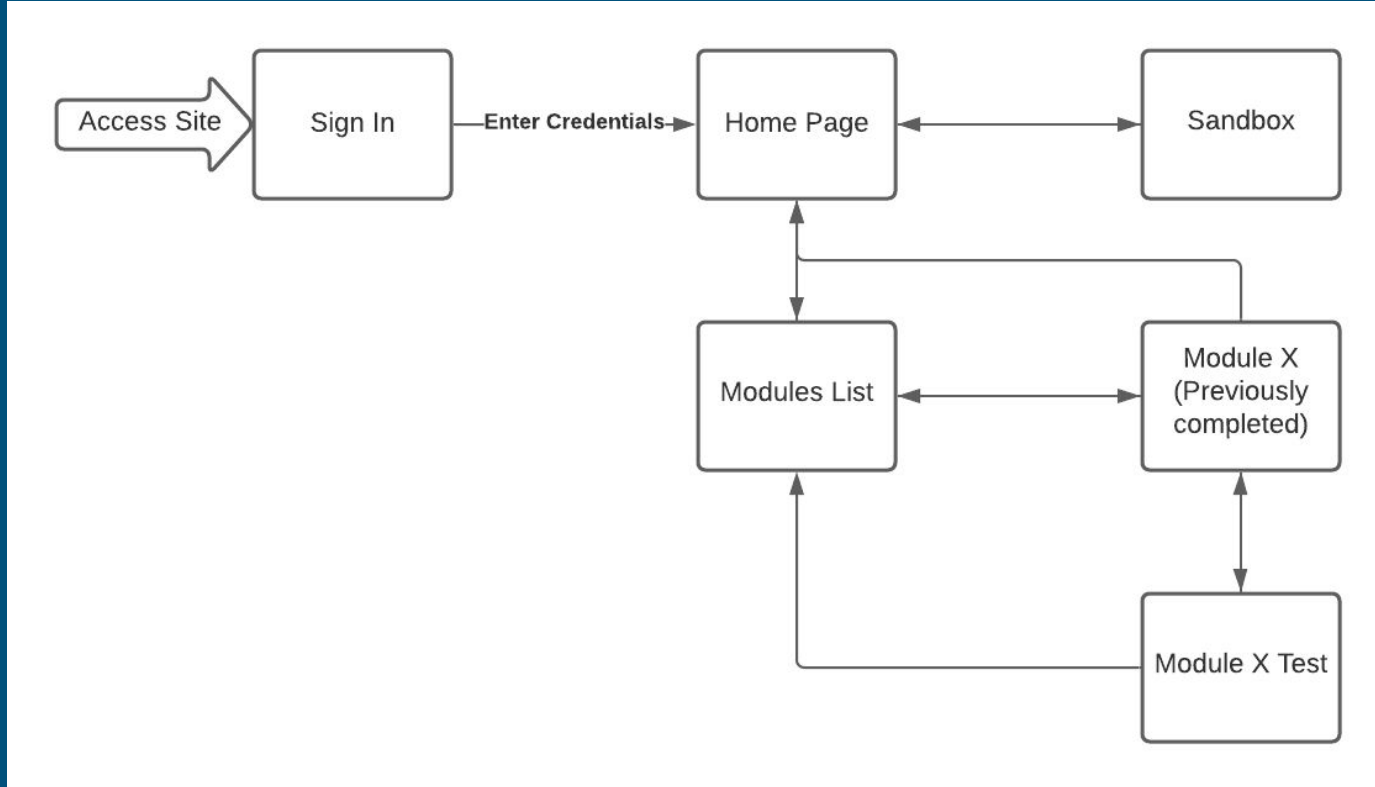
- Passes the module!

User Story 1 Case Diagram

User Story 2

- Doesn't have access his work station.
- Has an idea
- Signs in
- Sandbox mode
- Tweaks different parameters
    a. Successfully creates the sound he wants
    b. Happy accident
    c. Not happy at all
- Goes back to modules

User Story 2 Case Diagram

Sign in/Sign up

Profile Page
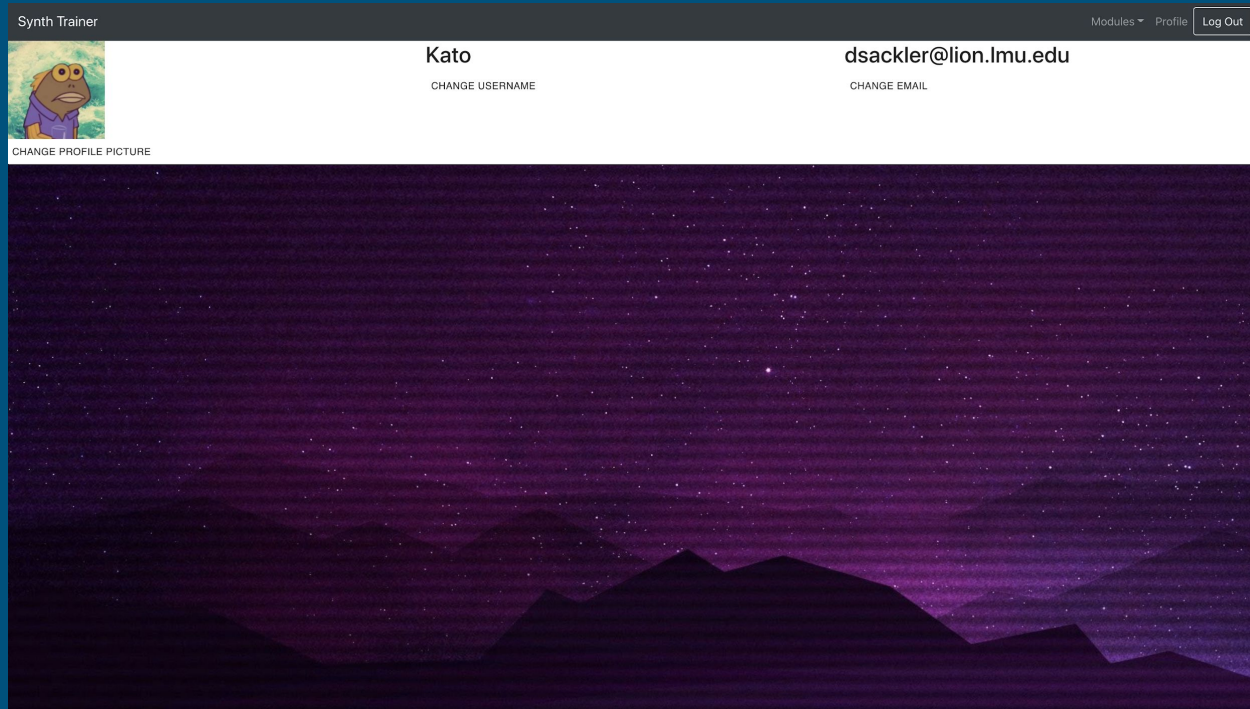
Sandbox
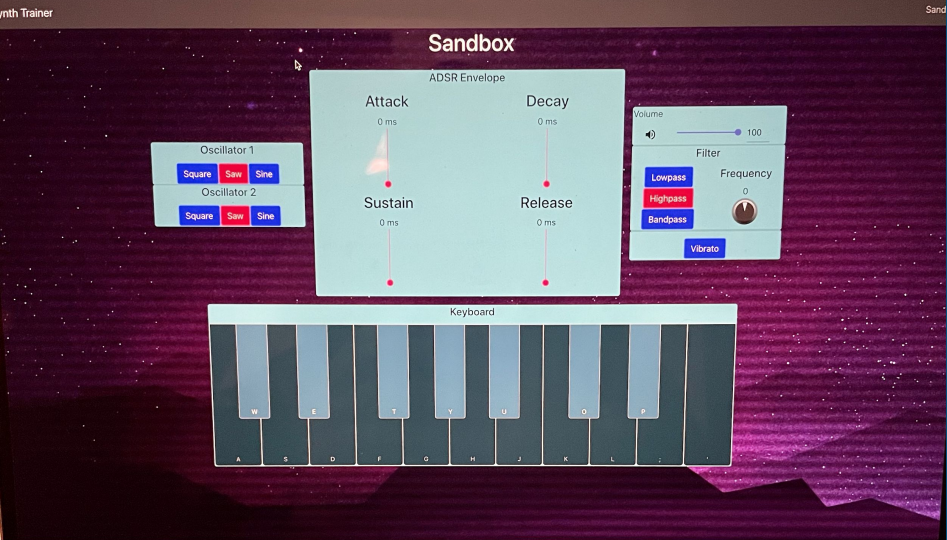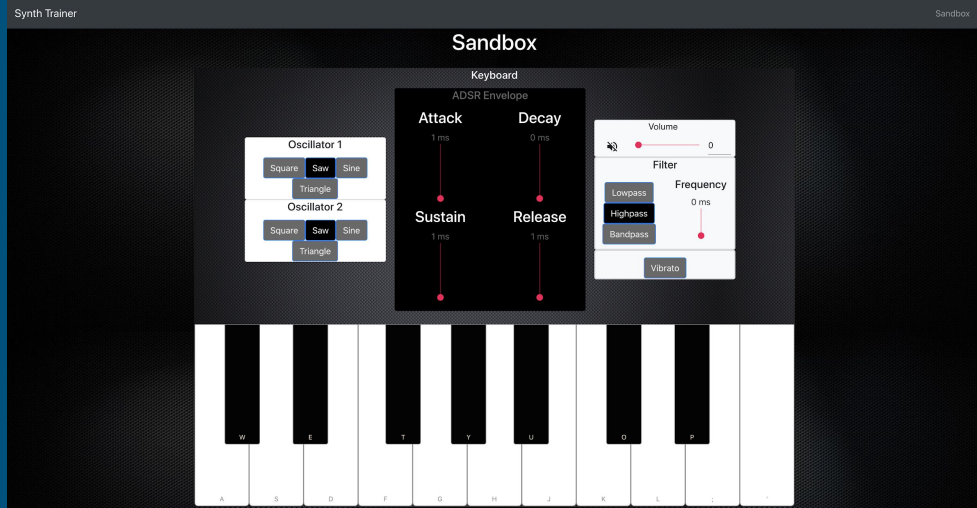
Project Diagrams

- **Slides 08 through 10 or so** — Detailed diagrams for the project; use several slides if necessary to show all the parts and their interactions/associations, as well as how they work. Remember there are multiple views of your system, so one static diagram won't show everything. Be prepared to TALK ABOUt the project parts and the hows and whys of things.
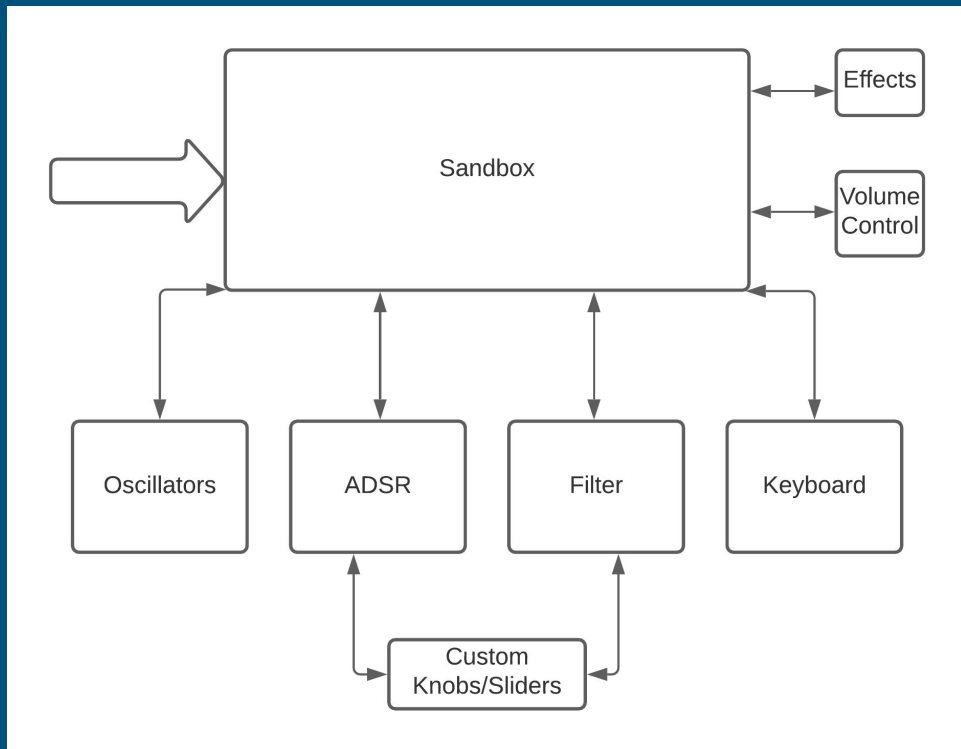
Project Diagrams

Website Diagram
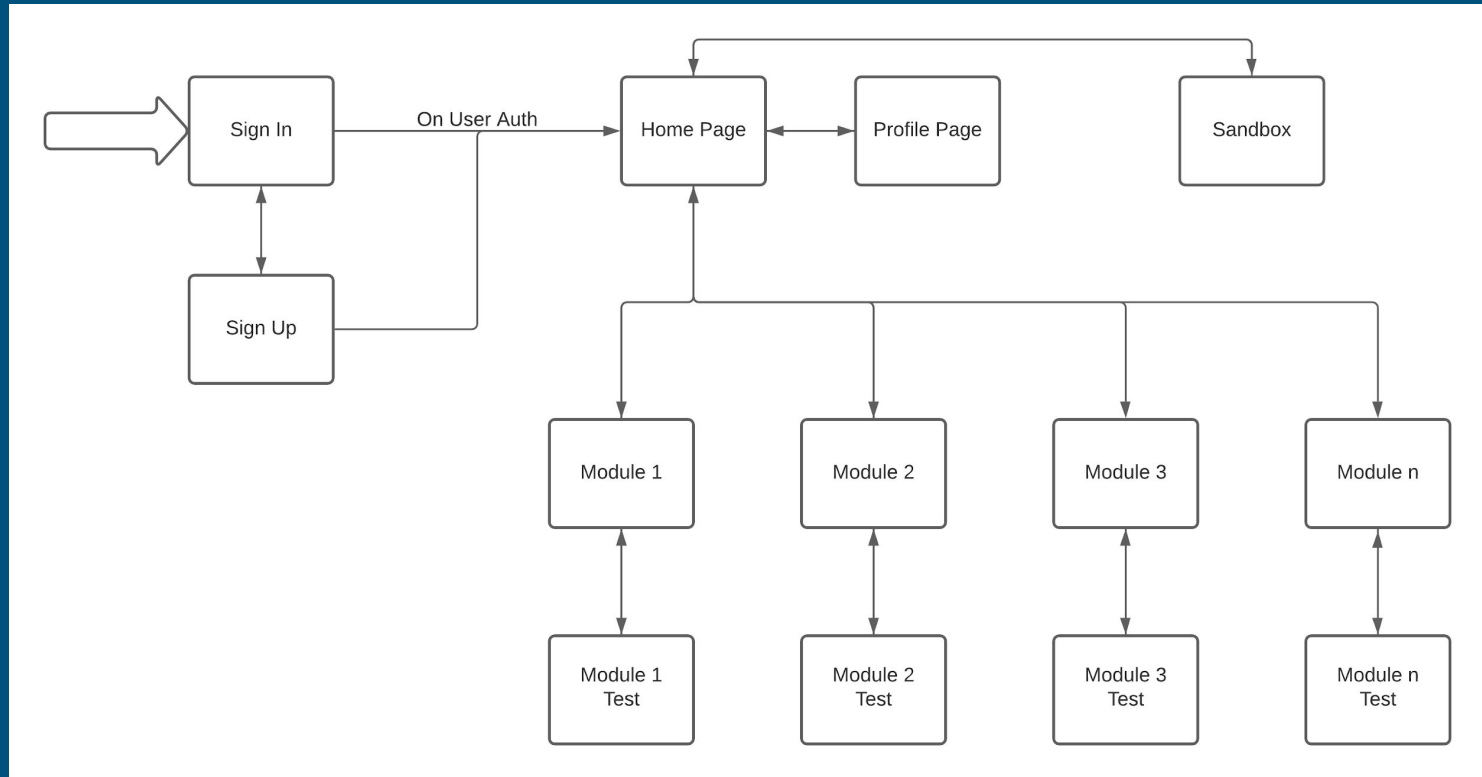
Project Diagrams
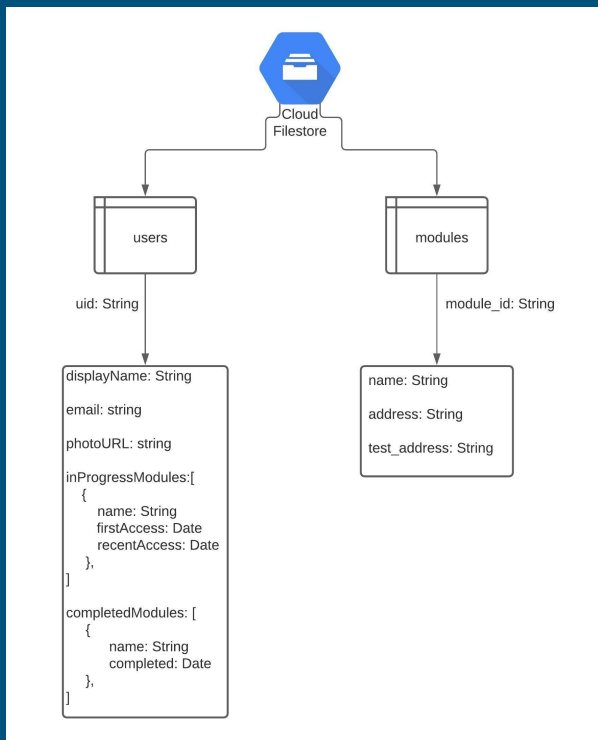
Sandbox Component

Project Diagrams

Slide that goes over how page specific components interact

-Modules -> Specific Module -> Components that relate to that specific module (Oscillators + ADSR, Oscillators + ADSR + Filter, etc…)

Demo

Follow along at **https://synth-trainer.web.app/**

Challenges

- Dealing with React's recent "rework" w/ hooks and functional components

- Dealing with Synth taking up too much CPU power, resulting in sound distortion and loud cracks/pops

- Learning the Tone library and getting it to mesh with React

- Connecting to and getting data from FireStore

Status Update

- **Adding Modules**

- **Squashing bugs**

- **Adding features to Sandbox**

- **Looking forward to next semester!**

Thank You!