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MUS 170
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MUS 170 Project 1

Try it out: https://preview.p5js.org/xiaolan.huang/present/petRcbHij

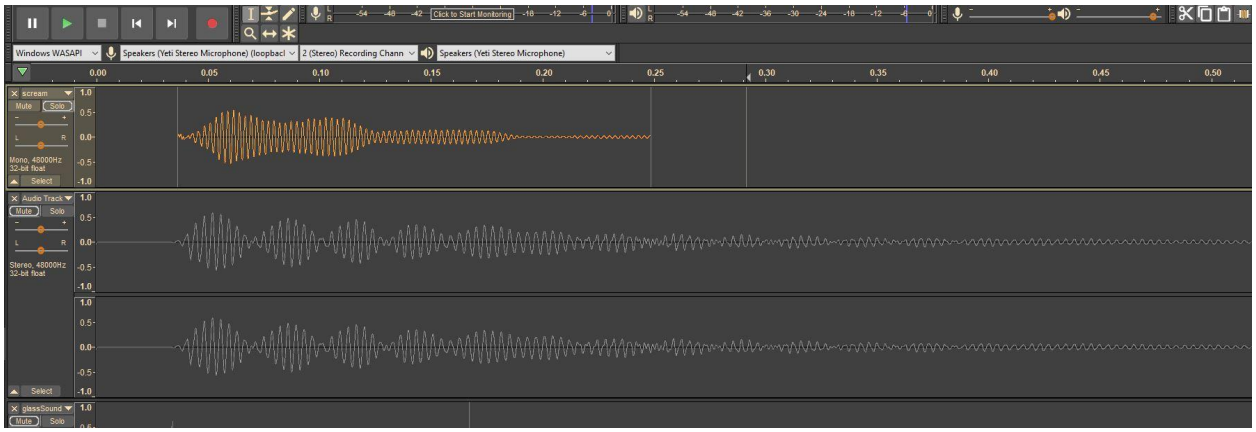
Inspiration: Inspired by game music and ambient sounds, I am interested to explore how ambient sounds are made.

What it does:

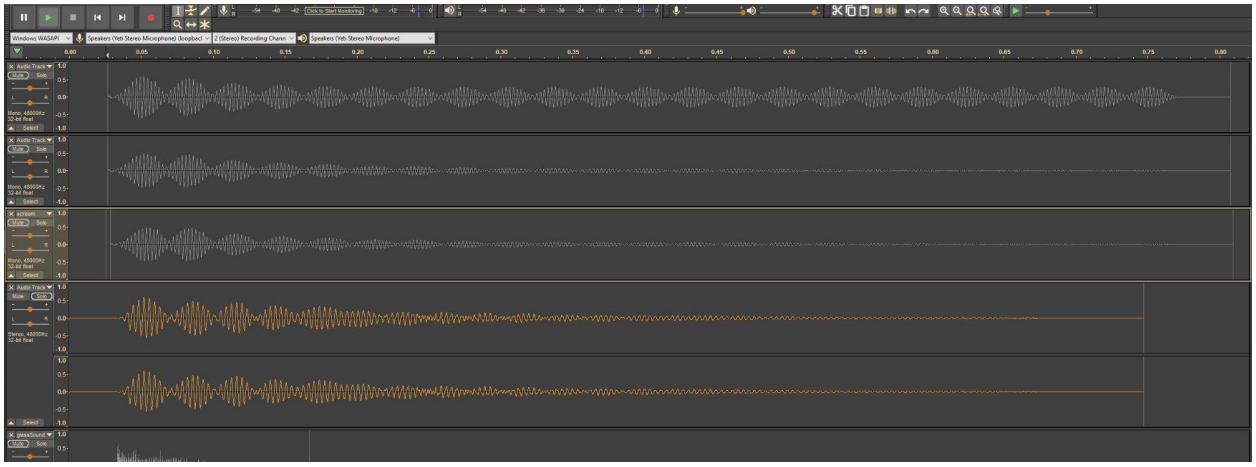
With a mixture of synthesized sounds (changed from the laugh and scream tracks) and recorded sounds, I aim to create a crowded fantasy tavern environment including lute music, glass sound, dish sound, water pouring sound, and fireplace sound.

How I built it:

Experimenting and learning effects in Audacity, I recreate the lute sound from scream recording by first denoise the screaming noise. I then extract part of the scream wav, use envelops tool to make the excerpt spindle-shaped, and repeated it 22 times. After repeating, I then make it fade out and added reverb to simulate the lutestring getting quieter and being played in the room. Then, I am able to create octaves by changing pitch.

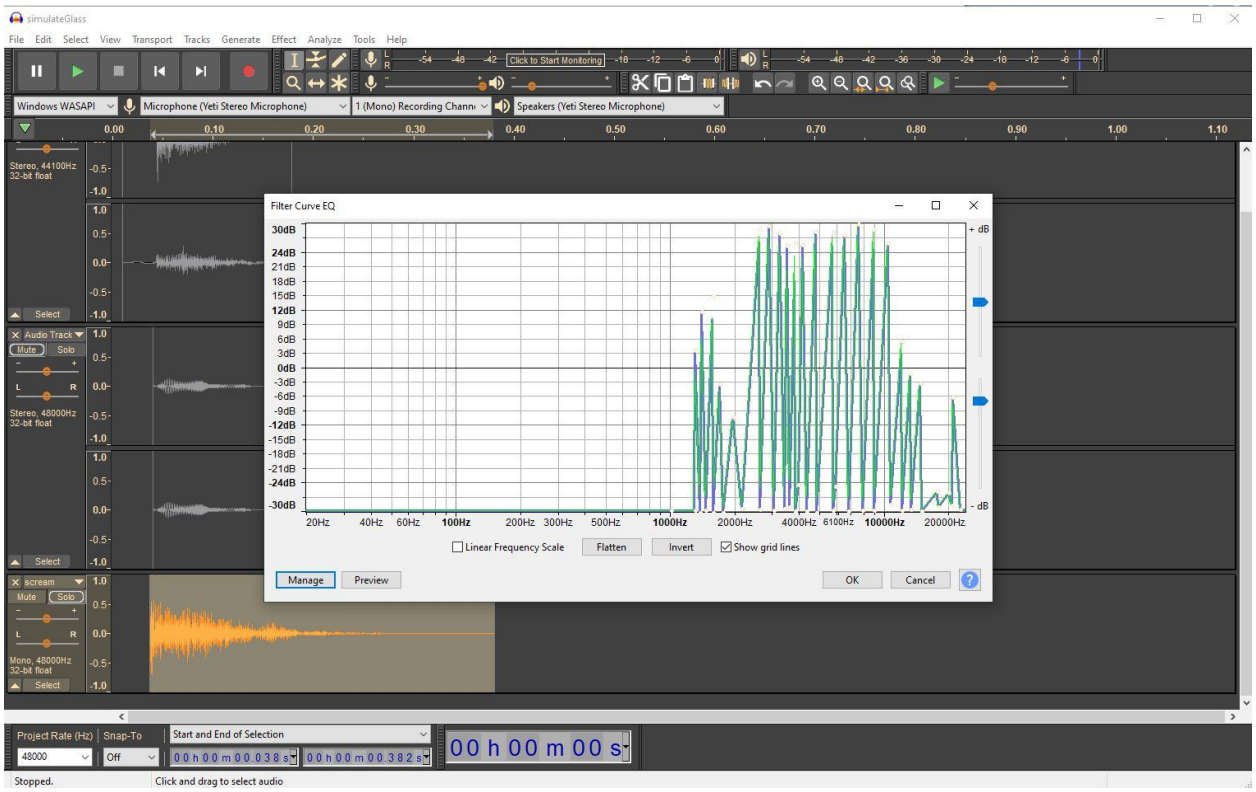


// change part of the screen to similar pitch by eq filter and change speed pitch and tempo

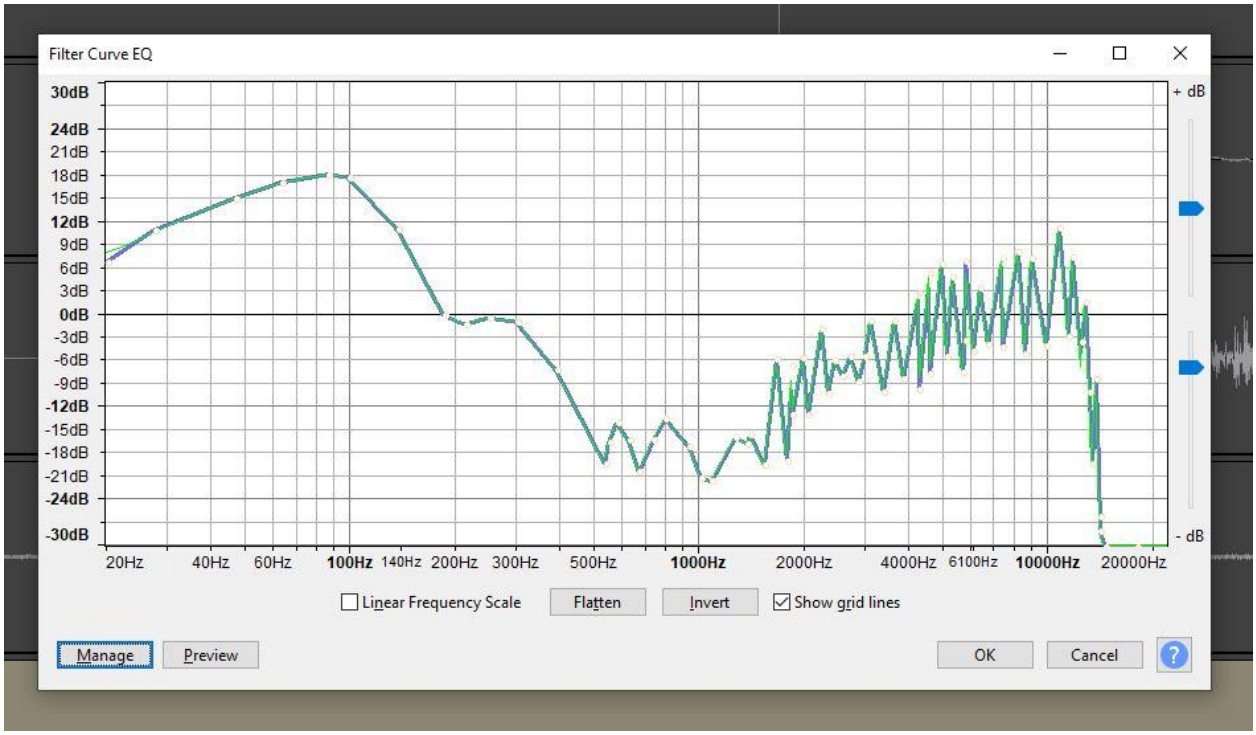


// used repeat and envelop tool to change the sound similar to the lute

Then using a virtual MIDI keyboard in REAPER, I was able to use my synthesized lute sound as a sample. The keyboard automatically generate the sample into half-pitches, and I was then able to create a melody through the keyboard.



// For the glass sound, I experimented with Filter Curve EQ to simulate the spectrum.



// Similar process with fireplace sound using EQ filter

After all the work in Audacity and Reaper, I gather everything together in the P5JS web editor and allowed users to interactively change the volume of every sound and pan of several sounds.

Challenges I ran into:

Learning Audacity from scratch is hard. I initially wanted to use Audition, but I found that Audacity is more suitable for my project since it is more straightforward in destructive editing. I also find simulating glass sound extremely hard.

I also failed to use an actual MIDI keyboard--I ordered one keyboard online, but the shipping was delayed. I had to change to using a virtual keyboard instead.

Accomplishments that I'm proud of:

I am pretty glad that I was able to get the virtual MIDI keyboard working. Even though my created music piece is pretty simple, it is still a big step for me.

What I learned:

I learned to play around with Audacity and Reaper. Reaper is especially interesting to me. I also learned to manipulate sound in p5JS, which is pretty fun to see everything come together.

What's next for Project1:

Experiment with 3D and Unity

Built With - Audacity - REAPER - p5JS

Code: https://editor.p5js.org/xiaolan.huang/sketches/petRcbHij