

# Python Synthesizer

A Computers, Sound and Music Class Project

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## Project topic area

I would like to make a simple synthesizer, ideally in Rust but likely in Python.

## The vision

I want to create a simple synthesizer with at least one octave of input (keyboard home row?) and several ways to modify the sound.

For example, if I press the "j" key on my computer keyboard then a 261.63 Hz sine wave would be generated. If I also press the "o" key then the octave might shift, and a 523.25 Hz sine wave would be generated instead. I hope to implement 3-4 effects as well as the ability to shift octaves up and down. More, depending on how challenging each of the effects are to implement.

I would like to get more experienced working with Rust crates and with audio in general, so I think this project would give me plenty of experience with both.

## Areas of concern

I would like to get more experienced working with Rust, but I can also see this being a steep learning curve for some of the things I have never done before. My plan is to create the project using only Rust but if I run into too many dead ends, I might switch over to Python instead.

## Github url

<https://github.com/ruspedpdx/simple-synth-tunes>