

Virtual Piano

ECE 153B Project Proposal

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Overview:

Our idea is to simulate a piano by taking inputs that would output sound to the board's onboard speaker. The user will apply inputs from an external keyboard, which each different key will correspond to a different sound that the speaker will output. For our keyboard, we plan to manually design our own implementation.

Peripherals:

1. Speaker (On Project Board)
2. Keyboard

Software Design:

There will be a while loop that will continuously read inputs from our keyboard, and play a sound corresponding to the certain key input. The key input will be sent into the board, and then the board will interpret the input and return the corresponding frequency, through the on-board speaker.

Goals:

1. Ability to detect at least 8-10 different key inputs
2. Ability to produce a different sound based on the key inputs

Group Responsibilities:

Penglin will be in charge of the peripheral setup, making sure each key will produce a different input, while Kindy will handle the interfacing and sound production for the project, making sure that each input will produce its own unique sound.