Sanil Baweja

153B Final Project

Website Link: https://sites.google.com/view/153b-sanil-baweja/home

Overview:

My idea is to simulate a dance floor, with a minifigure dancer. The minifigure will be attached to a motor which will oscillate at various rates to simulate dancing. The minifigure will be placed over an LED board which is to act as a dancefloor. I will use the audio jack to output tones to signify various intensities of music. There will be a temperature sensor attached, and if the it gets too hot then lower intensity music will play, and the dancer will slow down its dancing to cool the temperature down. The LED flashing will also decrease. Once the temperature gets cold again, the higher intensity music, dancing, and flashing will resume. Output to Termite to display "too hot, slow it down" or "too cold, speed it up".
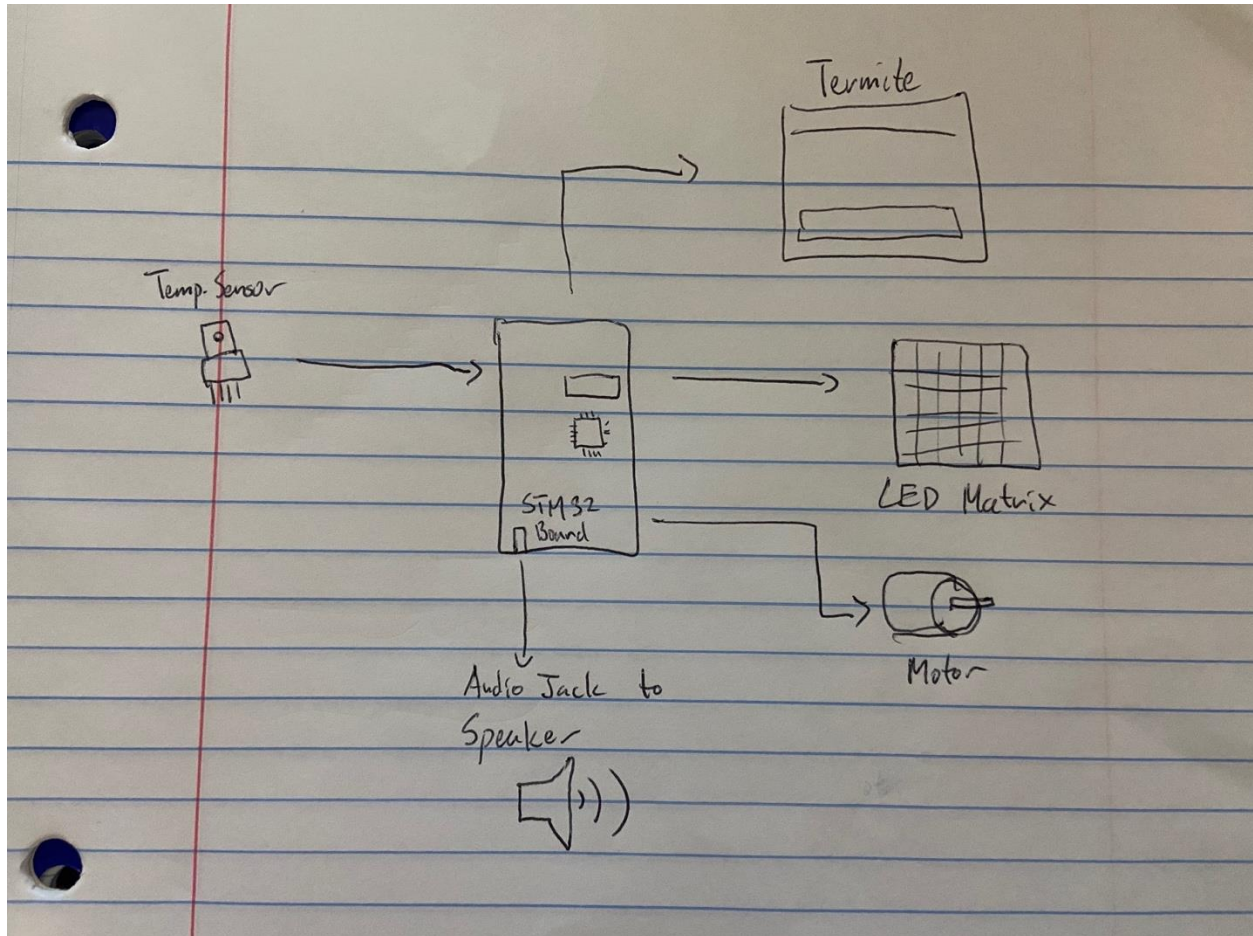
Peripherals:

LED Board, Motor, Temp sensor

Serial Interface Protocols:

I2C, UART

Block Diagram:

Software Structure:

Interrupt when temperature passes certain thresholds. Affects output to LED, Motor, Termite, and Audio.