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ECE153B

# Final Project Proposal: Desktop Aide

**Project Website:** https://sites.google.com/view/desktopaide-ece153b

**Overview:**

Our project centers around building a desktop accessory. We are taking an all-in-one approach as our product will have the ability to be used as both a personal fan and an informative LCD Display. The fan is configured with a motor, allowing the user to control the direction of the rotating fan via commands from Termite. Along with the fan and motor, we will be using a temperature sensor, RTC, and an LCD Display to display useful information that the user might wish to be aware of.

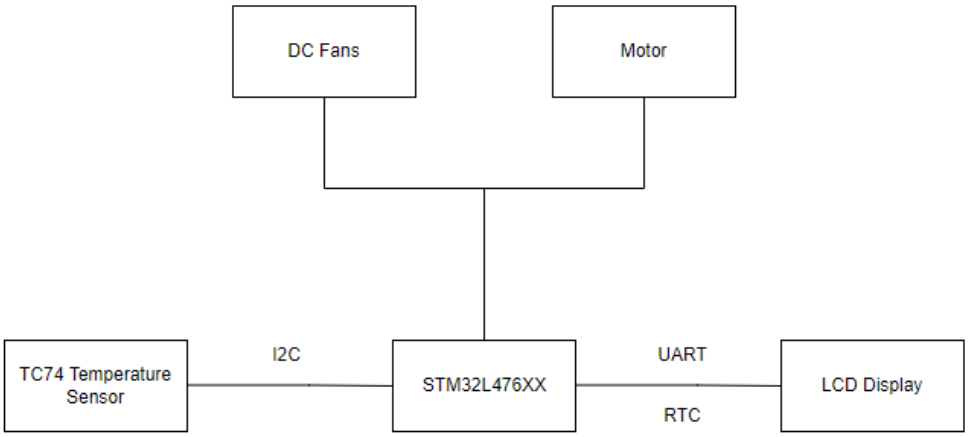
**Peripherals:**

- Motor
- DC Fans
- LCD Display
- TC74 Temperature Sensor

**Protocols:**

- I2C
- UART

**Block Diagram:**




**Software Design:**

The core of our program will need to do a number of things. It will need to get a temperature reading from the TC74 and send that reading over to the LCD Display. It will also need to set up an RTC in order to correctly display the time and date to the LCD Display. A Termite connection will also need to be set up to allow the user to send commands over to the personal fan for it to turn on and rotate to the user's liking.

**Responsibilities:**

Erin:

Configure Temperature sensor and readings via I2C, figure out how to send data/display text on LCD Display. Set up RTC and figure out how to display the correct time and date on the LCD.

Danny:

Figure out how to set up fans and motor to rotate seamlessly. Then figure out how to get the STM32 board to communicate with these peripherals (turn on fans, control fan speed, turn motor back and forth).

Both:

Work on code in main() to have all peripherals work together as expected.