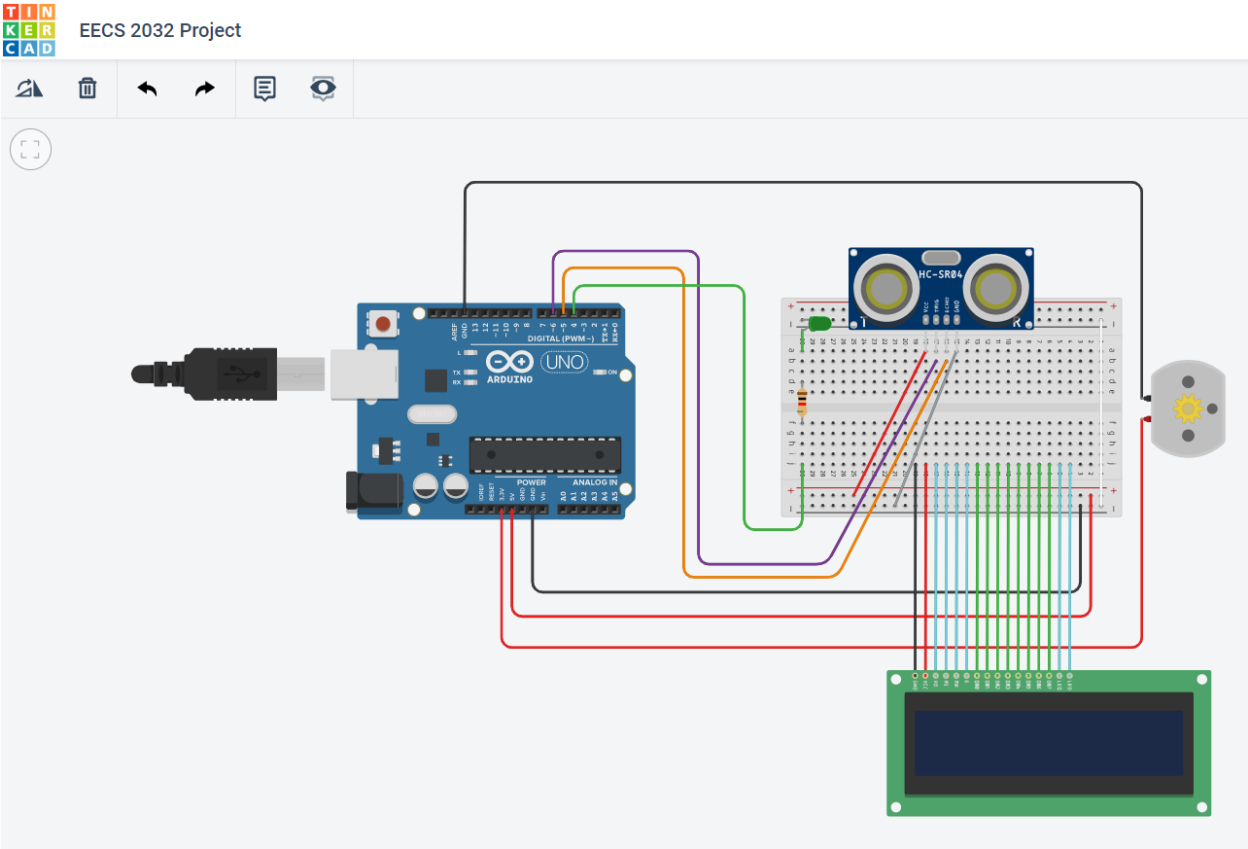
Name of Student: Kevin Nguyen

Student #: 217228255

Email: kn2001@my.yorku.ca

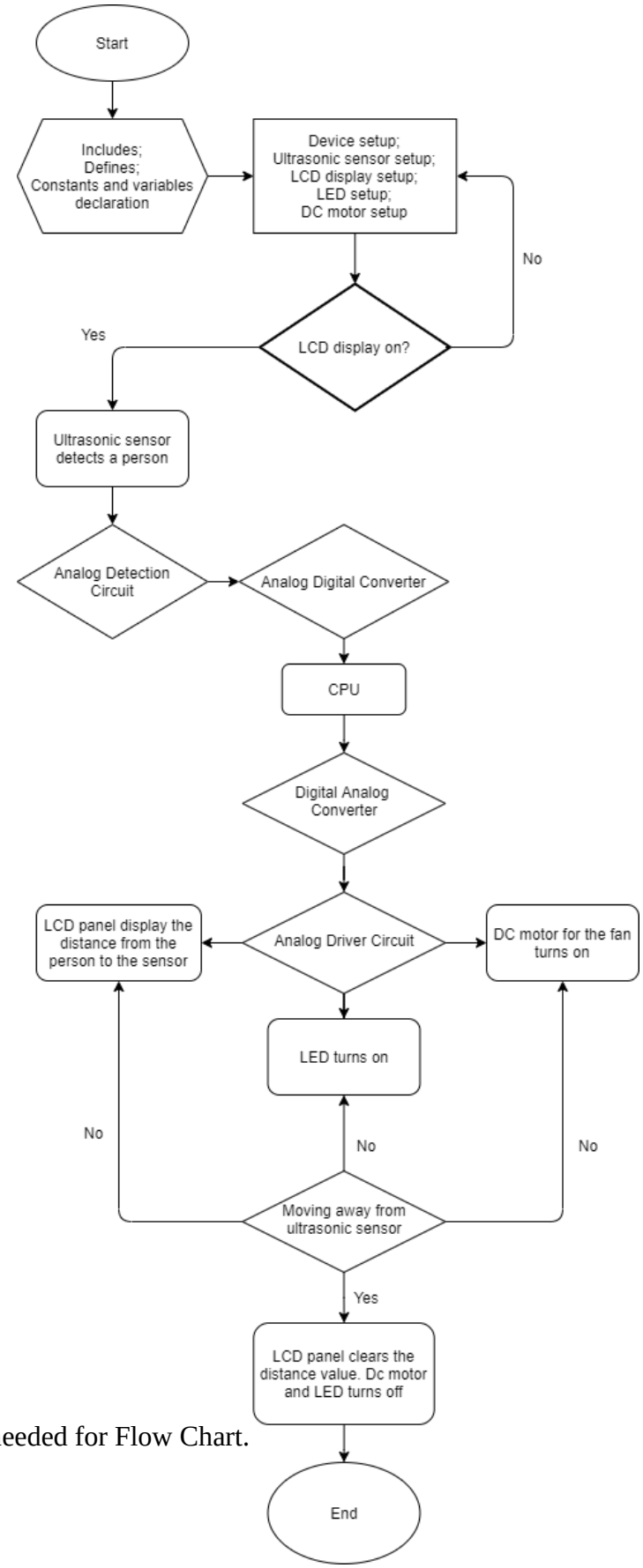
Submission 4

1. Final version of hardware diagram:



I find that minimal changes are only needed in my diagram.

2. Final version of the Flow Chart:



Minimal changes were needed for Flow Chart.

3. Details of Hardware and Software of my project and challenge in my design and implementation:
    - For my Hardware side of the project I would be using the Arduino Due to control my device. In the flow chart its specifics what each hardware components do. The ultrasonic sensor will sense movement from my hand. The DC motor and LED will turn on when the ultrasonic sensor senses movement. The DC motor will act as a fan and the LED is to display if the DC motor is spinning or not. The LCD display will display the distance when movement from an object is detected. Finally, once there's no object Infront of the ultrasonic sensors the LED, DC motor stops, and the LCD panel clears the previous value.
    - For my Software side of the project I would be using Arduino IDE to code on the device. I would code like the tutorial with more added content. I would create delays and loops. I would make constants and variables for the program and make sure that the code would work accordingly with the outputs and input of the device. With the ultrasonic sensor I would code so that it records the distance is from the device and display that value on the LCD display. Also, once the ultrasonic sensor detects an object then the DC motor which will act as a fan will turn on with the LED.
    - My greatest challenges would be the LCD display for the design and implementation of the project. Since I am not sure how to code or implement it on the breadboard. The LCD display will take the most time to code and implement on the breadboard. Therefore, I would do some online research so I can properly set up my LCD display module and making sure the DC motor and LED would work together once the device is on.