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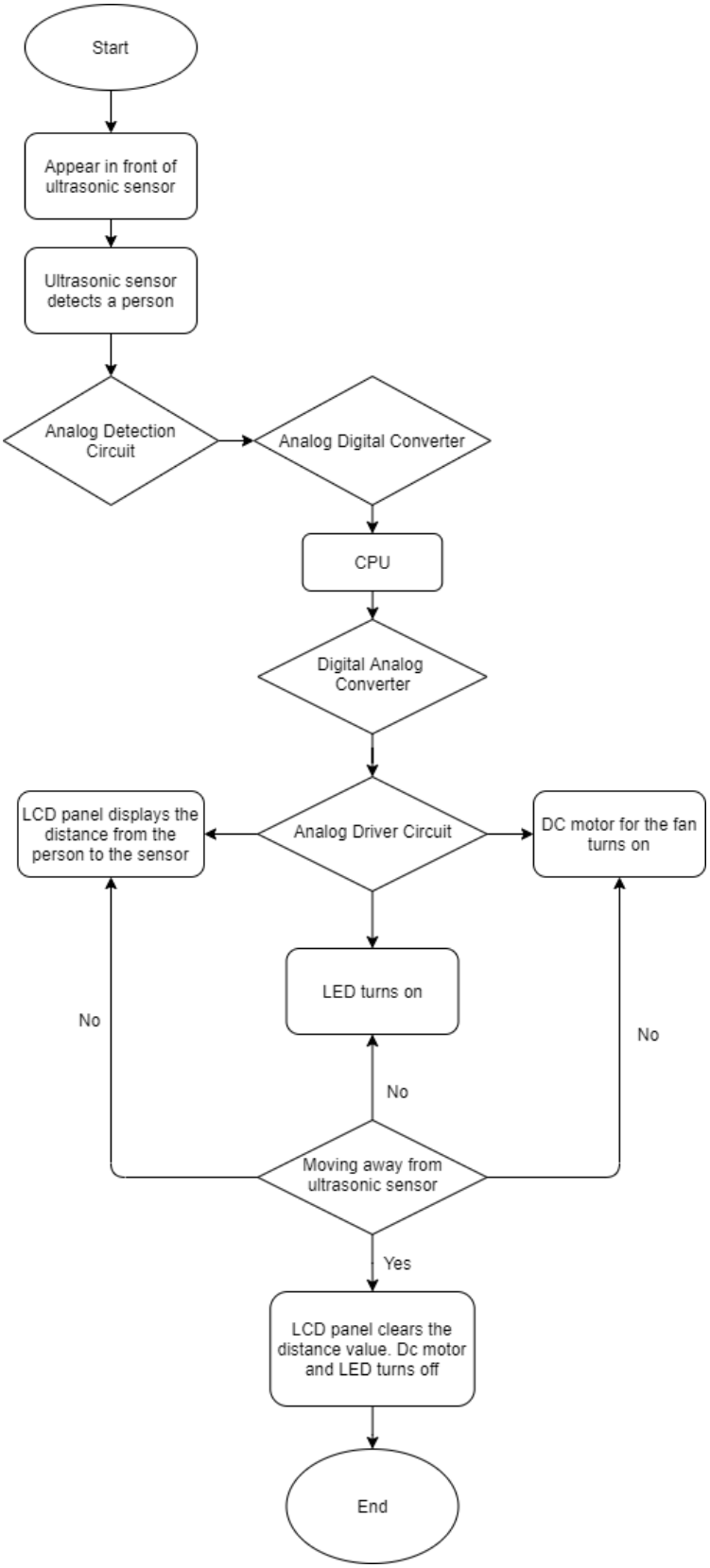
Submission 3

Project Topic: LED motion sensor

1. Flowchart:



This flowchart diagram will explain how this device would work. It shows all the main components and functions of the device step by step. It also show the process of how the device would convert values of the sensor from analog to digital.

2. Main Functions:

System Components	Functions of Components
Ultrasonic sensor	• Collects surrounding environment's sound waves • Sensitivity and distance of where the sensor can pick up can be adjusted with a Potentiometer (might add that later if there's extra time) • Sensor sends analog values which should be converted to digital
LED	• LED will light up with the presence of an object
DC motor	• Will act as the motor that will power the fan • Will start spinning with the presence of an object
LCD panel display	• Display the distance of the object from the sensor • Display the speed that the fan is turning (optional if there's extra time)

3. Programming Considerations:
   The most difficult problem I will face is programming the LCD display. My solution to this problem would be doing more research and looking for outside sources like other Arduino projects to aid me in coding the LCD display.