SIT210: Embedded Device Development
Task 3.1P mBed: Setup an mBed using online compiler and drag-and-drop

Hardware Required
mBed

Software Required
Web browser

Pre-requisites: You must do the following before this task
1) Register an account with MbedOS at https://os.mbed.com

Task Objective
This is an introduction task to mBed platform and build a simple motion sensing circuit.

Steps:
1) Import the first program onto your mBed:
https://os.mbed.com/docs/v5.6/tutorials/blinky-on-the-arm-mbed-online-compiler.html

2) Design a simple circuit board that use a distance sensor to activates the LED a) Use: Sharp GP2Y0A21YK0F distance sensor b) Here is a tutorial for using the Sharp sensor with Arduino. Your task is to implement this step using mbed
http://www.instructables.com/id/How-to-Use-the-Sharp-IR-Sensor- GP2Y0A41SK0F-Arduin/ Hint: For testing purpose, you should print out distance value to terminal for testing. For windows you, can use PuTTY:
https://os.mbed.com/docs/latest/tutorials/serial- comm.html

3) Modify your code to light up the onboard LED light whenever movement is detected.
a) Tip: You need to devise a logic to use distance sensor to achieve this task.

4) Compile the code and copy to the mbed.

Task Submission Details

Q1: Submit a video in which you explain your circuit board and its functionality, explain the code and perform a demonstration of the outcome.

I did not have the specified sharp sensor, so instead used two different sensors to implement different parts of the task. I included video and code for each.

Infra Red Sensor

Ultrasonic Sensor

Q2: Create a repository named mBedMotion on Github. Upload your code to the repository. Include the link to your repository here.

https://github.com/stopkickingtherobots/mBedMotion