Submission Date	9/10/2019
Project Name	L-wing Solar Panel interactive Display
Student Names	June Patrick Dacaya, Nicholas Phillip
Project repository	https://github.com/junedacaya/L-wingSolarPanelInteractiveDisplay
SensorsEffectors choices	BME280
The database will store	Energy collected by the solar panels, weather at that time, total energy collected every 30 minutes
The mobile device functionality will include	Interactive display of power collection from the 4 solar panels. Choose from a single panel display or multi-screen panel display. Access to the database information through the internet.
I will be collaborating with the following company/department	Humber College Institute of Technology & Advanced Learning Computer Engineering Technology Capstones.Specifically from Sustainable Energy and Building Technology program at Humber College.
My group in the winter semester will include	I am not sure if I can have the same group members during the winter semester because my team member at CENG319 right now doesn't have CENG317.
50 word problem statement	The problem is to create a mobile app and a hardware, to track the solar panel activity as well as improve solar poer harvesting. Track its total energy collected every 30 minutes and save it in a database. This information is accessible from anywhere in the globe through the mobile app.
100 words of background	By creating the mobile app and the hardware, people from the Sustainable Energy and Building Technology program will have an interactive GUI that tracks the solar panel activity. The current weather, how bright the sun or is it cloudy, the total and current energy it is collecting will be stored in a database and will be available on the mobile app. I will try to create a hardware prototype that will be controlled by the app or view information from. The prototype will try to guide the panel to the best angle for maximizing solar power harvesting.
Current product APA citation	B. Steindl, R. Enne, S. Schidl and H. Zimmermann, "Linear Mode Avalanche Photodiode With High Responsivity Integrated in High-Voltage CMOS," in IEEE Electron Device Letters, vol. 35, no. 9, pp. 897-899, Sept. 2014. URL: http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6866114&isnumber=6881771
Existing research IEEE paper APA citation	W. Hong-bin, Z. Zhe, C. Xu-hui and W. Yuan-bin, "Stepper motor SPWM subdivision control circuit design based on FPGA," 2017 IEEE/ACIS 16th International Conference on Computer and Information Science (ICIS), Wuhan, 2017, pp. 889-893. URL: http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7960118&isnumber=7959951
Brief description of planned purchases	Plan to purchase Raspberry Pi, voltage sensor, photodiodes and motors.

Solution description	By using the app, users will have the ability to track the solar panels activity. Creating the hardware like photosensors, motors to move the solar panel prototype and temperature on the area will improve solar power harvesting.