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ESE516

<h1 style="text-align:center">Assignment 0</h1>

1. Team Details

Team Name: IoTracking

Members:
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2. Device Description

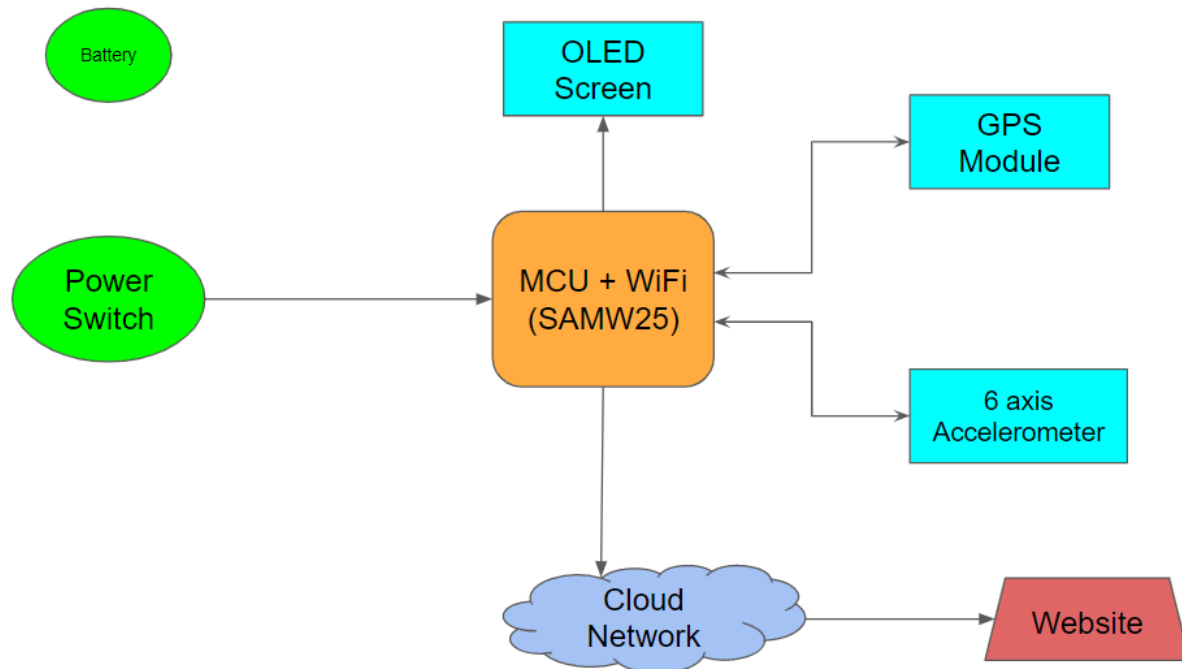IoTracking - Pseudo Airtag

Using the following components:
    1) GPS module (extra)
    2) 6 axis accelerometer
    3) OLED screen

We will make a GPS-tracking device that will draw on an OLED of where it has been and display metrics of its experience through the accelerometer. We will interface with WiFi to connect to our phone's hotspot connection to broadcast these metrics and data into the cloud storage. The cloud network will feed the data into our NodeRed website, where we can visually see and track the device's locations. The device can show the real-time location with the scatter plot on NodeRed, compare with an initial location, and alert the user on the website if it is outside the expected range.

P.S.: we will choose one of the 2 GPS module:
1. Adafruit Ultimate GPS Breakout - 66 channel w/10 Hz updates - Version 3:
   https://www.adafruit.com/product/746

2. Ultimate GPS Module PA1616D - 66 channel w/10 Hz updates - MTK3333 Chipset
   https://www.adafruit.com/product/5186

3. Simple System Diagram

4. Detailed System Diagram