*This document outlines task 1 for new students in the Internet of Things (IoT) Dunedin Project at the Otago Polytech for Semester 2, 2017*

**Task 1 Information:**

As a new student in the Internet of Things Dunedin project this semester, you need to perform some research to get you up to speed for the semester ahead. Your primary task is to work as a group to research and document important aspects of the IoT Dunedin project. Task 1 can be summarised as:

* Research information about the project. Topics include
  + **Internet of Things**
    1. What is Internet of Things (IoT)
    2. What are the applications for IoT (what can we actually do with IoT)
    3. What are examples of IoT devices
  + **LoRa**
    1. What is LoRa
    2. What is the difference between LoRa and LoRaWAN
    3. What are advantages and disadvantages of LoRa (especially compared to things like WiFi, cellular and Sigfox)
    4. Information on LoRa compatible devices
* Document your research on our GitHub website
  + Our website is available at:
  + <http://otagopolytechnic.github.io/ThingsNetworkDunedin/>
  + After we have done research and started documenting, we need to update our web site with more thorough information.

**Task 1 Output:**

The primary goal (or output) of task 1 for new project students is to complete the following:

1. Update and expand the home page for our website
   1. Add content to page (float right) – or some other suitable navigation solution (this may be hadled by our web dev)
   2. Expand “What is Internet of Things?” section
      1. Add subsections (where needed)
      2. Add example of devices
      3. Add examples of technologies (LoRa, WiFi, cellular)
      4. Add information of applications of IoT (monitoring electricity usage, creating smart homes, monitoring/tracking wildlife etc.)
   3. Expand “LoRaWAN Network” section
      1. More extensive description of LoRaWAN
      2. Section for LoRa versus LoRaWAN
      3. Section for advantages/disadvantaged of LoRa versus other technologies (WiFi, cellular, sigfox etc.)
      4. Section for our network design – requires description and also visuals (e.g., network diagram)
   4. Expand and move “Our Goal” section
      1. Move current section to top of page, rename to “Our Mission”
      2. Create new section (in same place) with much more detailed information
      3. We need a more in-depth summary of our goal. Mainly focussing on the network infrastructure – to provide LoRa service to Dunedin at no cost!
      4. Updated “Current Status” and “Future Plan”
2. Create a new “FAQ” page for the website
   1. We need a new page for Frequently Asked Questions
   2. This material can be sourced from the updated web page (but presented in a much more concise form).
   3. The FAQ should grow over time – but we will begin with the basics. Which are:
   4. What is the IoT Dunedin project
   5. What does the IoT Dunedin project do
   6. What does the IoT Dunedin project provide
   7. How can I contact the IoT Dunedin project
   8. What is IoT
   9. What is LoRa
   10. Why should I use LoRa
   11. Why should I not use LoRa
   12. There are many other important questions, add more if you think of them