

01OVEOQ - Innovative wireless platforms for the internet of things

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Exam Type 3 – First List of Exercises - March 30th

In the following, the Development Board PyCom FiPy will be simply referred as FiPy

- Exercise 1. Write the firmware code to switch on a LED on the FiPy
- Exercise 2. Write the firmware code to connect with the FiPy via WiFi, upload the firmware via Wi-Fi and switch on a LED with different colors:
 - a. Red: unsuccessful
 - b. Green: successful
- Exercise 3. Write the firmware code to read sensor/GPS/NFC data, transmit via Wi-Fi and BlueTooth and provide the following:
 - a. Print the read data on a screen
 - b. Switch on a Led selecting a color from a graduated scale associated to data possible ranges
- Exercise 4. Write the firmware code to setup a radio link, read the channel, print the frequency on a screen, read the signal level, light a selecting a color from a graduated scale associated to signal possible ranges, scan the spectrum, print the detected signals on a screen, for the following radio links:
 - a. Wi-Fi
 - b. BlueTooth
 - c. SigFox (no spectrum scan)
 - d. LoRa (no spectrum scan)