Universidade Fernando Pessoa

Hardware and Sensors

Push Button

1. Create a project, which turns on a led when you press the push button and off when it is released. Using the following components:
   a. 2 x 220Ω ohm resistor
   b. Led (indifferent color)
   c. Arduino Uno
   d. Push Button

2. Configure your Arduino to read the push button value using the pin mode - INPUT_PULLUP (use the internal Arduino resistor);

3. Setup an interrupt, which will be triggered by the button pressed event. When the button is pressed it will swap the state of the led light (turn on or off regarding the previous observed state).

4. Try to complement your traffic light system, which when the button is pressed will trigger the Car Traffic Light to Red and Pedestrian traffic light to green (respect both light sequence);

5. Submit your code and circuit(s) screenshot(s) into the eLearning Hardware and Sensor dropbox.