Prototyping an Internet­ of­ Things enabled “smart” home

Introduction

Smart home technologies allow home owners that use them to control environmental factors around their homes most notably their heating and their lighting however other aspects such as security systems can also be connected. The task that I have been set is to design and prototype one such device and demonstrate its functionality.

Methods and Workings

For this project I will be using the Arduino Uno (Arduino, 2019) with connected Ethernet shield (Arduino 2019) and the Adafruit.io platform () the pairing of this hardware and web interface allows me to create very presentable internet of things prototypes. Before connecting to the internet of things platform I need data to send to the platform. The two data pieces that I will be sending are a light data from and LDR and temperature data I then connected an LCD to allow me to see the data on the system. The below two figures show the wiring for the LDR and its LED the temperature sensor and its LED and the second image shows the wiring for the LCD.

Testing

LCD

TEMP

LIGHT

ETHERNET CONNECTION

MQTT CONNECTION

References

Arduino 2019 Arduino Uno Rev 3 <https://store.arduino.cc/arduino-uno-rev3>. Accessed 27/01/2019

Arduino 2019, Arduino Ethernet Shield 2. <https://store.arduino.cc/arduino-ethernet-shield-2>, accessed 27/01/2019

Appendix (to sort)

