

Homework 4 - Raspberry Pi

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The Raspberry Pi is the data packaging component of the system.

Requirements

Necessary Operating System, Packages, and Libraries

This project requires an installed version of Python. It also requires an installation of the ibmiotf library, which can be installed with the follow command:

```
pip install ibmiotf
```

Software Setup

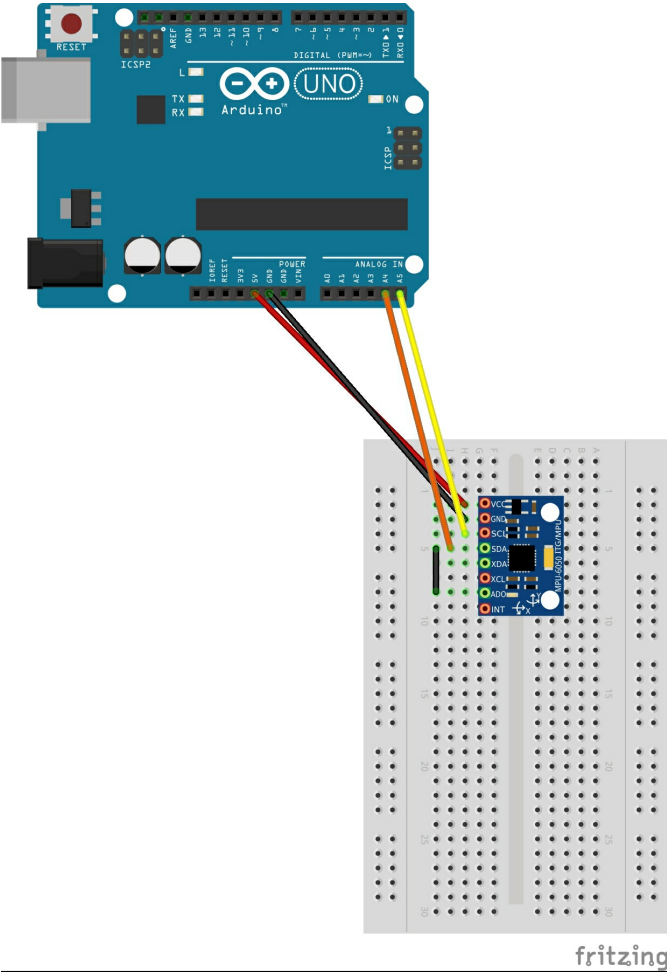
The files that run on the Raspberry Pi are:

newVersion.py

To execute piServer.py, run following command in terminal:

```
python newVersion.py
```

Hardware Setup



Software Functionality

Flow of Control

The Raspberry Pi opens a serial port connection to the Arduino and a ibmiotf MQTT connection to Bluemix. It then monitors for incoming data from the Arduino, formats that data as json, and publishes the data to the Bluemix cloud.

Role in Overall System

The Raspberry Pi accepts data collected by the sensor connected to the Arduino, formats that data, and passes it onto the Bluemix cloud.