01. Step-by-step instructions to install python dependencies or any additional software.

INTRO

Dependencies are the public libraries/packages (different then the codes from your project) that are needed to run applications within Python.
These need to be installed in order to access them, this installation is done by the 'requirements.txt' file that could be found on the Github platform.

THE STEPS

01. Open Atom
02. Open terminal
03. Type in terminal: **pip3 install -r requirements.txt --user** (since we mainly used a MAC) to install the dependencies in Python.
    Often we used **sudo pip3 …** because we had pip3 did not always allow us to install.
    This dependency contained the MQTT communication protocol which was needed to talk to the Design Hub.

    The **requirement.txt** also contained the dotenv dependency which was needed to get the **THING_ID** and **THING_TOKEN** from the wheelchair platform.
04. Create the **.env** file and include the **THING_ID** and **THING_TOKEN** (created within the Data-Centric Design Hub)

THE RASPBERRY

After following the steps to set up the Raspberry Pi and connecting it to the network. Additional software installations were needed to get the Raspberry to the latest software version as well as get it connected to Git.

05. First **sudo apt-get update** and **sudo apt-get upgrade** where needed to get the latest version, after which **sudo apt-get install git** was needed to set up Git.

06. Within the Raspberry we then had to get the requirements installed by running: **python3 -m pip install -r requirements.txt --user**

THE FEATHER

The Feather BlueFruit, which needed to had a Bluetooth connection between the Gyro we used in the wheel of the wheelchair and the raspberry, connected to the frame.

In order to connect this blue feather to the Raspberry we had to connect to the GATT service for which Bluetooth dependencies were needed.

07. These installs were as following and needed to be executed one by one:
sudo apt-get install bluez libbluetooth-dev

sudo pip3 install git+https://github.com/peplin/pygatt

sudo pip3 install "pygatt[GATTTOOL]"

sudo pip3 install bluepy

sudo pip3 install pexpect

TRAIN AND TEST

In order to use the train and test file, the dependencies for the learning library needed to be installed.

08. pip install -U scikit-learn was executed to import the library.

AUDIO

In order to get the speaker to play audio files, while being connected to the raspberry, audio libraries needed to be installed.

09. sudo apt-get install portaudio and python3 -m pip install pyaudio where executed on the raspberry to get the libraries imported.