“Who is at home?” Instructional Guide

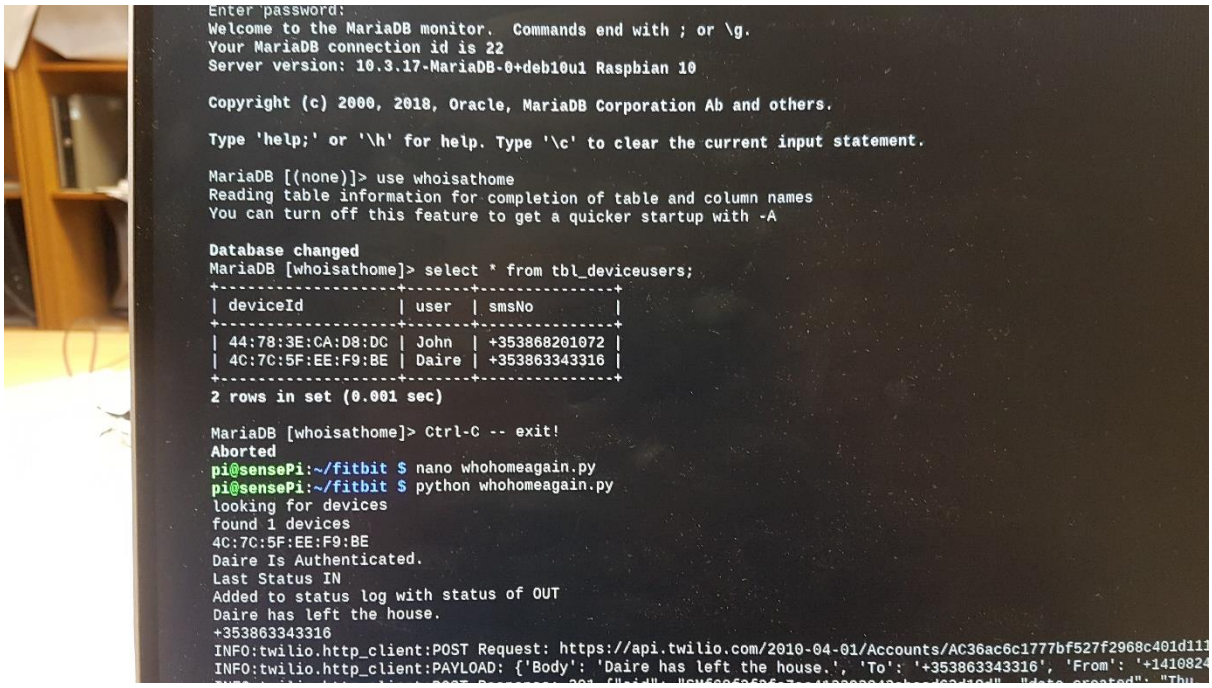
Introduction:

For my IoT Application assignment I decided to create a smart home device which could be used to inform either myself or my wife Daire, when the other was home.

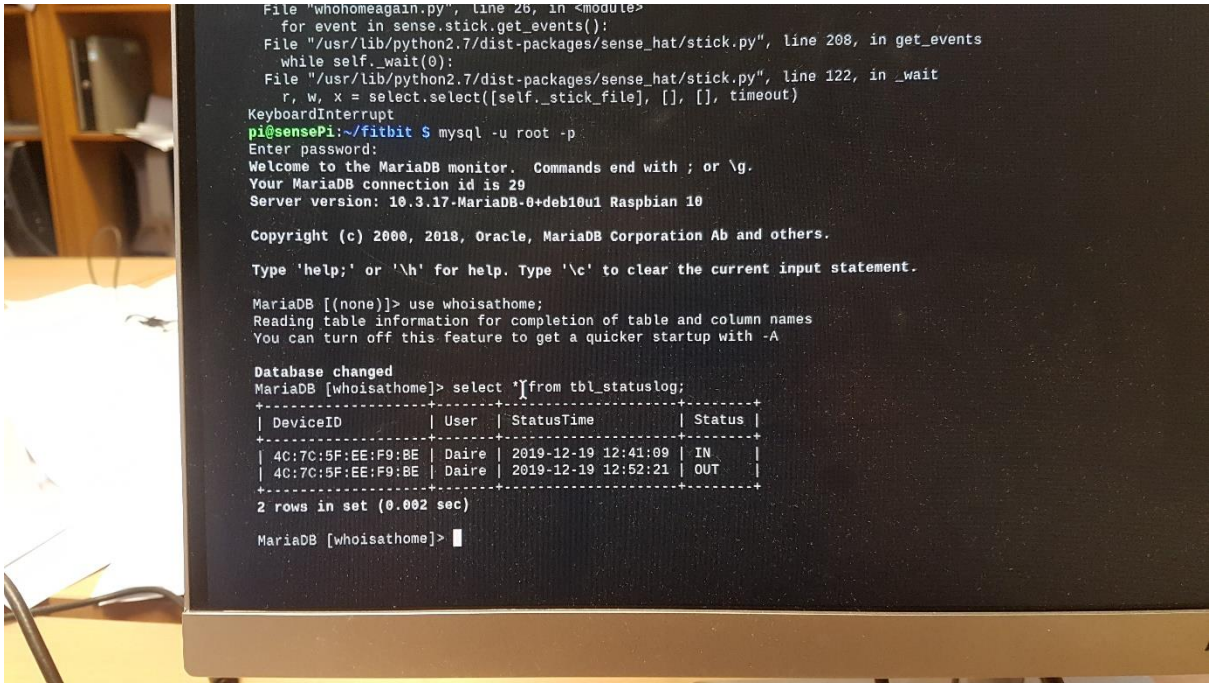
Video URL - https://youtu.be/WUFSqo_syLc

The process:
My first step in this process was to create a python script that would use the Bluetooth technology in the raspberry pi to search for devices at home and recognize either my wifes or my phone.

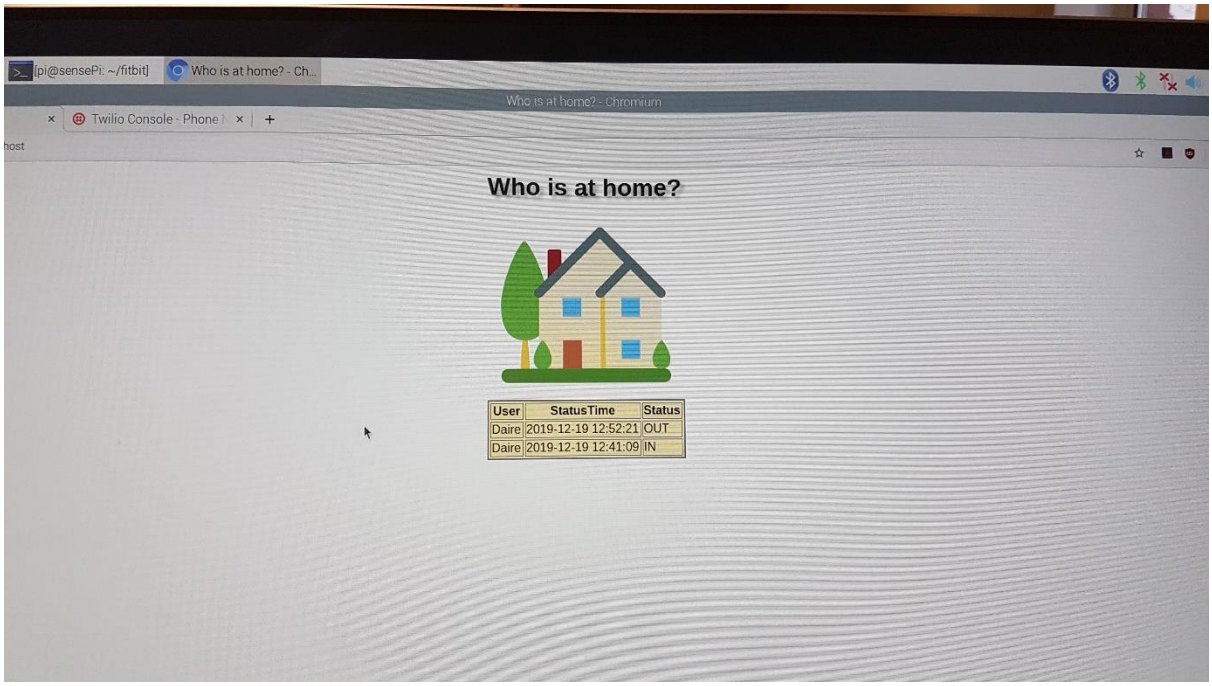
To fulfil the combined knowledge aspect of this assignment – I created a mysql database on the pi which contained two tables. One titled tbl_devicesusers which held the MAC address of the associated phones as well as user names and the associated phone number of the other person in the house (for use in sms messaging later in the process)



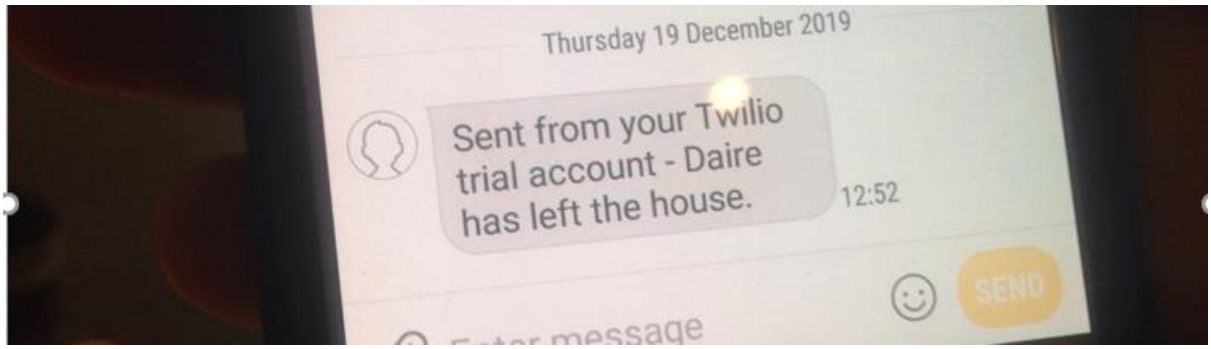
On running of python script the raspberry pi checks the tbl_deviceusers table of the database for the users details and if they are present checks the last status of the user and adds the new status to the statuslog table.



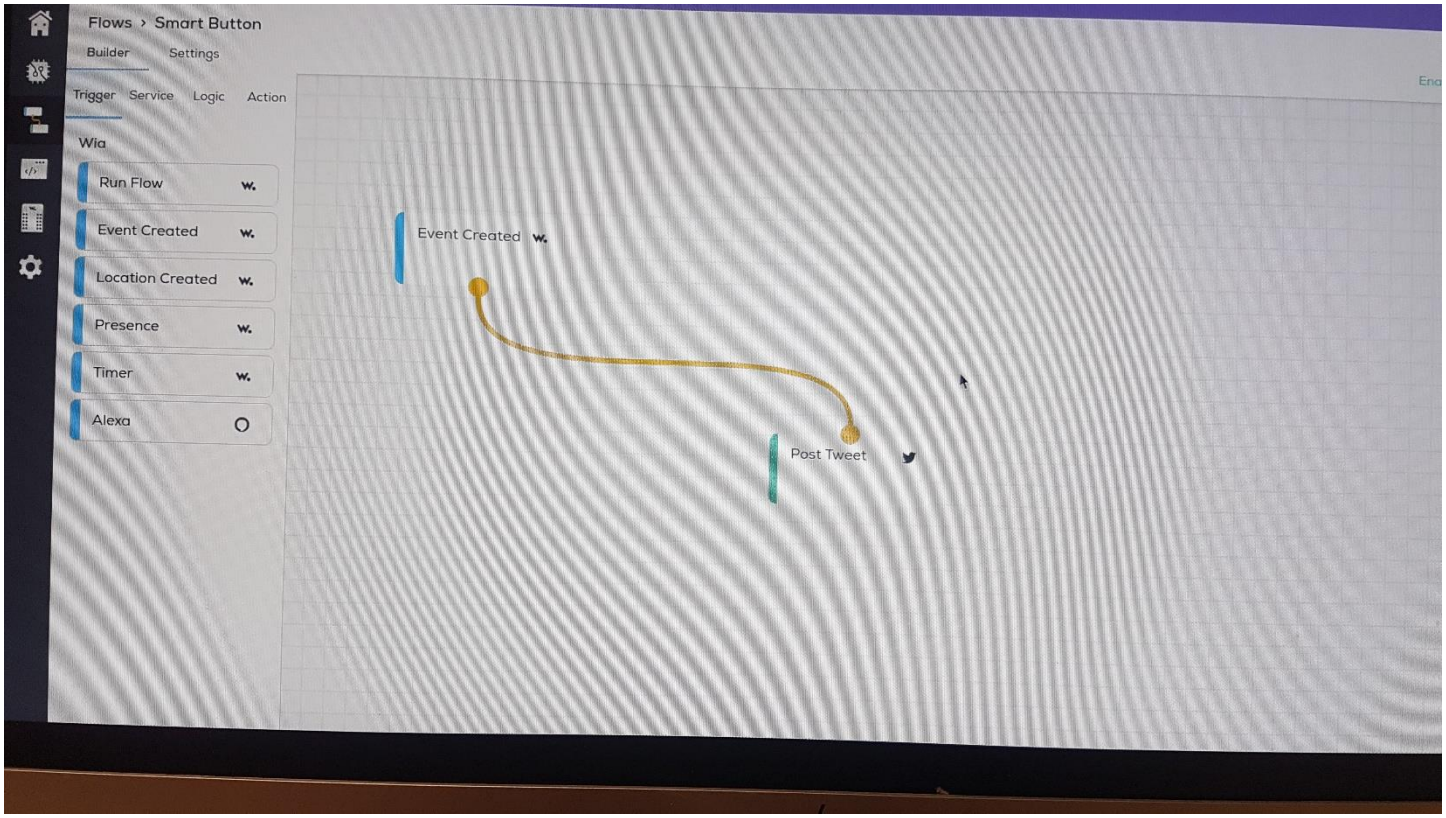
This is reflected on a website also hosted on the pi which allows the user to view the status log table

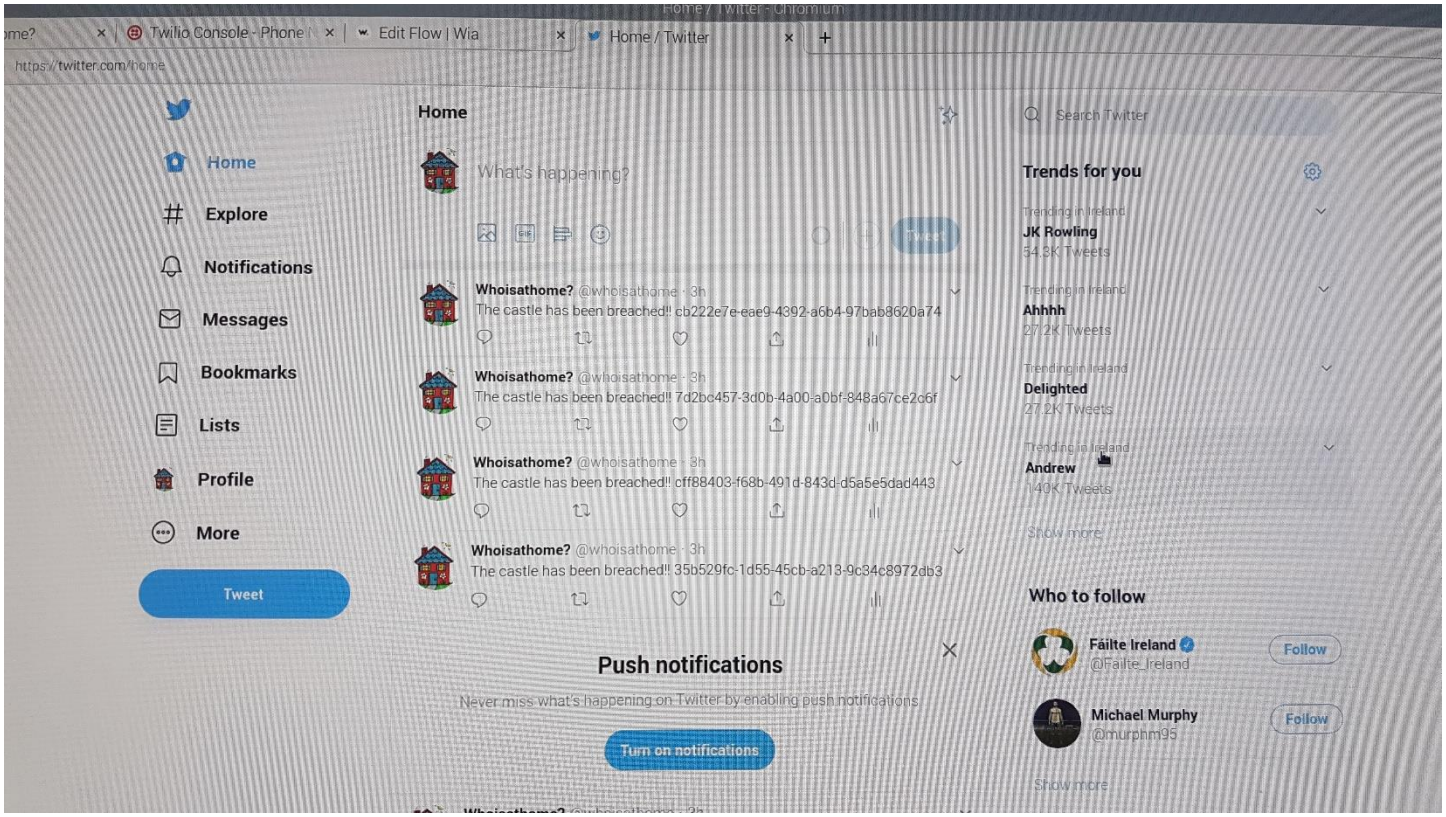


Using twillio messaging this also sends a message to the other user in the database informing them that someone has pressed the button and their status.



Using a flow on the Wia platform a tweet is also sent to a twitter account informing followers that “the castle has been breached”!





This smart home device has everything contained on the raspberry pi and using a cross platform of programs used on this course is a handy iot application that can prove beneficial to the McCann household in the future!