EE 629 – IoT using Raspberry Pi
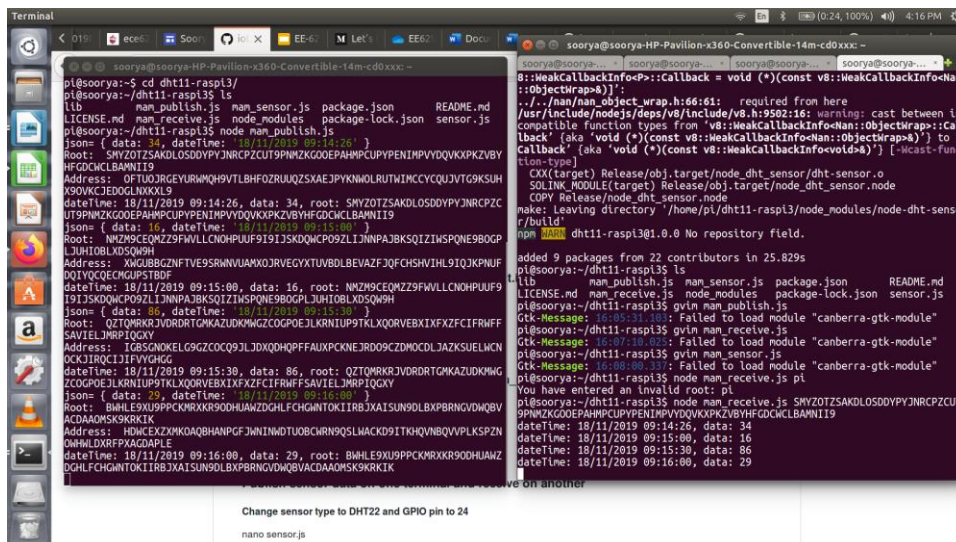
Lesson 10 – Exercises - **Done**

Lab A: Block Chain

- Ran the two python program given in the exercises to understand the basic blockchains creation

Lab B: IOTA

- Followed the steps given to install the required packages to send DHT22 sensor data to the IOTA Tangle using MAM

Figure 1 shows the results of MAM publish and receive functions using the java script

Figure 2 shows the results of data received from sensor DHT22 being published using the java script

Terminal — soorya@soorya-HP-Pavilion-x360-Convertible-14m-cd0xxx: ~

pi@soorya:~/dht11-raspi3$ node sensor.js
temp: 23.6C, humidity: 34.3%
temp: 23.6C, humidity: 34.1%
temp: 23.6C, humidity: 34.1%
temp: 23.6C, humidity: 34.0%
temp: 23.6C, humidity: 33.9%
temp: 23.6C, humidity: 33.9%
temp: 23.7C, humidity: 34.0%
temp: 23.6C, humidity: 33.8%
temp: 23.6C, humidity: 33.8%
temp: 23.6C, humidity: 33.9%

pi@soorya:~/dht11-raspi3$ node mam_sensor.js
Root: KLMVDJ9XCURTZKIVPR9WDBSNPMSSWKXPQHVUTSLBVKMWCKTSEBFULGWEFVYTJYOUARKXBAYAQMIQNZUBR
Address: DANUWGMCPRRXJVSQTOBOMNHQPWPAECPIDOXDO9TAGHBTKBHYQSHZ9ZZMIHPEAWBLILGQSZYXXELPKZPZK
dateTime: 18/11/2019 09:26:52, data: {temp: 23.6 C, humidity: 34.0 %}, root: KLMVDJ9XCURTZKI
VPR9WDBSNPMSSWKXPQHVUTSLBVKMWCKTSEBFULGWEFVYTJYOUARKXBAYAQMIQNZUBR
Root: XCMKYUQBDDFVLYLXWHHBV9DQPHHXSHZBQZYLDPVUBQEOANFEXHSZQDYOXWDDWESVFZOMUOVNU9SIVRUQL
Address: FVKGMEMEQJZJBS9VUGCOEAZSQNMTKNNYIUBBQPQORANHZAJENPZZRCR9EUMLDVIKJIEDMYNBJTUNT9QIIA
dateTime: 18/11/2019 09:27:21, data: {temp: 23.6 C, humidity: 33.9 %}, root: XCMKYUQBDDFVLYL
XWHHBV9DQPHHXSHZBQZYLDPVUBQEOANFEXHSZQDYOXWDDWESVFZOMUOVNU9SIVRUQL
Root: NDZHLHEVHDRMERXPGKCDTHLCU9WTZJLMSVYEEOWHVWWRNQUOLEQQJGQYAVLRBVVEICAWHIVLVEYSFECG9
Address: EIAAFGAYLYCMVDXG9HSPEXGZET9MJFWVGOKBXLTOOLWCGGXEDIHTTNIKESBJFNLWGOAVHTHFOJITCKKNL
dateTime: 18/11/2019 09:27:51, data: {temp: 23.6 C, humidity: 33.8 %}, root: NDZHLHEVHDRMERX
PGKCDTHLCU9WTZJLMSVYEEOWHVWWRNQUOLEQQJGQYAVLRBVVEICAWHIVLVEYSFECG9

nano mam_sensor.js

Press control-z to stop

node sensor.js

node mam_sensor.js

node mam_receive.js YOUR_ROOT

soorya@soorya-HP-Pavilion-x360-Convertible-14m-cd0xxx: ~

pi@soorya:~/dht11-raspi3$ node mam_receive.js KLMVDJ9XCURTZKIVPR9WDBSNPMSSWKXPQHVUTSLBVKMWCK
TSEBFULGWEFVYTJYOUARKXBAYAQMIQNZUBR
dateTime: 18/11/2019 09:26:52, data: {temp: 23.6 C, humidity: 34.0 %}
dateTime: 18/11/2019 09:27:21, data: {temp: 23.6 C, humidity: 33.9 %}
dateTime: 18/11/2019 09:27:51, data: {temp: 23.6 C, humidity: 33.8 %}