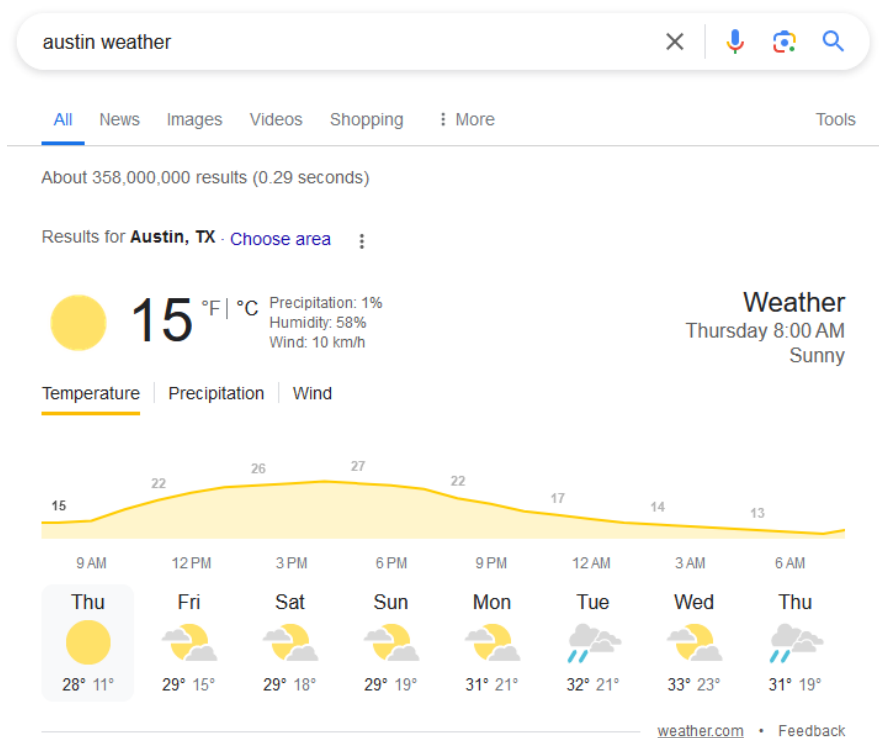


Q1.

```
COM4 - PuTTY
Fetching weather from openweathermap.org
Starting configureSimpleLinkToDefaultState(); ... Completed
Starting sl_Start(0, 0, 0); ... Completed
Starting establishConnectionWithAP(); ... Connected
Starting sl_NetAppDnsGetHostByName(api.openweathermap.org) ... Completed
Creating a socket ... Completed
Connecting to this socket ... Completed
Sending this TCP payload to socket
GET /data/2.5/weather?q=Austin&APPID=5eccled3ab635d60af6562144d387667&units=metric HTTP/1.1
Host:api.openweathermap.org
Accept: */*

Received this response from server
HTTP/1.1 200 OK
Server: openresty
Date: Thu, 11 Apr 2024 13:51:51 GMT
Content-Type: application/json; charset=utf-8
Content-Length: 469
Connection: keep-alive
X-Cache-Key: /data/2.5/weather?APPID=5eccled3ab635d60af6562144d387667&q=austin&units=metric
Access-Control-Allow-Origin: *
Access-Control-Allow-Credentials: true
Access-Control-Allow-Methods: GET, POST

{"coord":{"lon":-97.7431,"lat":30.2672},"weather":[{"id":800,"main":"Clear","description":"clear sky","icon":"01d"}],"base":"stations","main":{"temp":16.46,"feels_like":15.78,"temp_min":13.55,"temp_max":18.99,"pressure":1017,"humidity":62},"visibility":10000,"wind":{"speed":4.12,"deg":310},"clouds":{"all":0},"dt":1712843400,"sys":{"type":2,"id":2003218,"country":"US","sunrise":1712837252,"sunset":1712883344},"timezone":-18000,"id":4671654,"name":"Austin","cod":200}
Push LaunchPad switch to run again
```



Q2.

Close to AP

```
RSSI: -28
```

5ft from AP

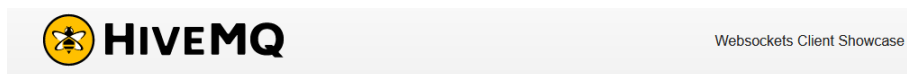
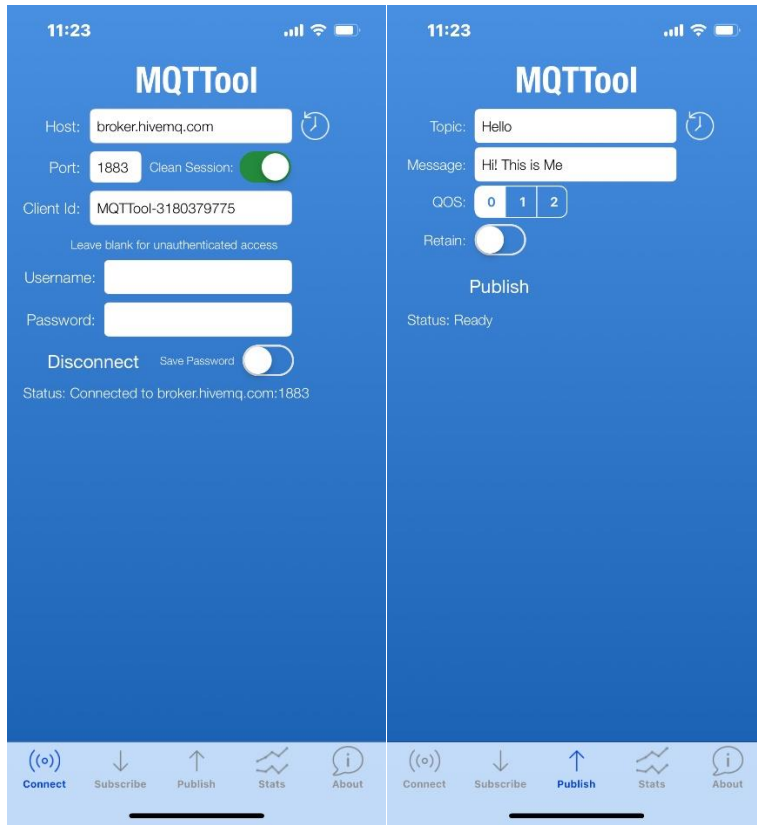
```
RSSI: -43
```


10ft from AP

```
RSSI: -55
```

RSSI gets more negative as AP gets further from robot and the relationship is non linear.

Q3.



 **HIVEMQ**
CLOUD

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Connection connected

Host: mqtt-dashboard.com

Port: 8884

ClientID: clientid-xxWhUvNOG2

Disconnect

Username:

Password:

Keep Alive: 60

SSL: ☒

Clean Session: ☒

Last-Will Topic:

Last-Will QoS: 0

Last-Will Retain: ☐

Last-Will Message:

Publish

Subscriptions

Messages

2024-04-11 11:24:52 Topic: Hello Qos: 0

Hi! This is Me

Add New Topic Subscription

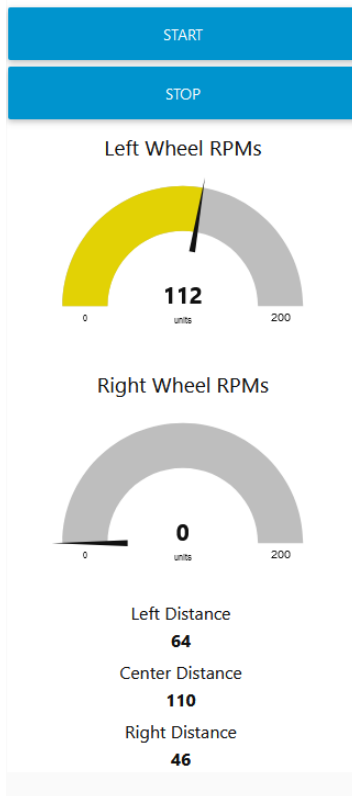
Qos: 2

Hello

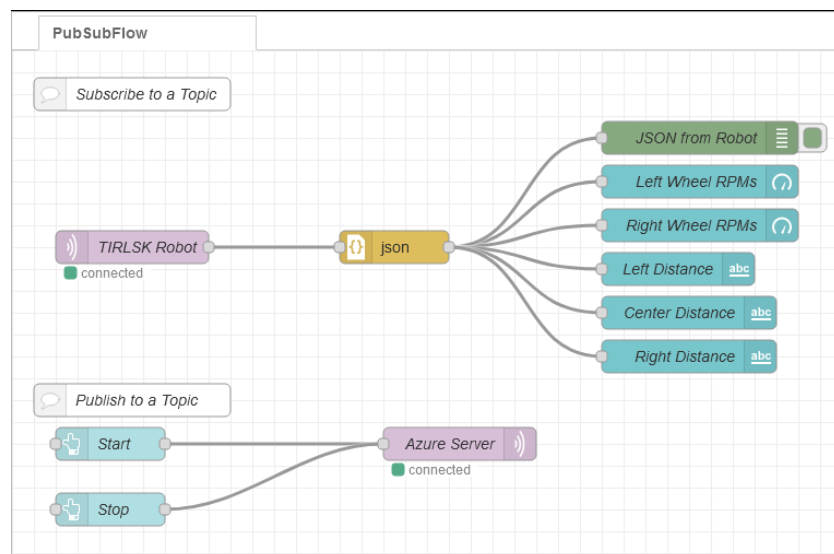
Q5.

```
LDT9@UbuntuVM: ~  
login as: LDT9  
Authenticating with public key "imported-openssh-key"  
Welcome to Ubuntu 20.04.6 LTS (GNU/Linux 5.15.0-1060-azure x86_64)  
  
 * Documentation:  https://help.ubuntu.com  
 * Management:    https://landscape.canonical.com  
 * Support:       https://ubuntu.com/pro  
  
This system has been minimized by removing packages and content that are  
not required on a system that users do not log into.  
  
To restore this content, you can run the 'unminimize' command.  
  
Expanded Security Maintenance for Applications is not enabled.  
  
0 updates can be applied immediately.  
  
Enable ESM Apps to receive additional future security updates.  
See https://ubuntu.com/esm or run: sudo pro status  
  
The programs included with the Ubuntu system are free software;  
the exact distribution terms for each program are described in the  
individual files in /usr/share/doc/*/copyright.  
  
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by  
applicable law.  
  
To run a command as administrator (user "root"), use "sudo <command>".  
See "man sudo_root" for details.  
  
LDT9@UbuntuVM:~$
```

LAB6



My Web App has 2 buttons to stop and start the robot. It has 2 gauges to show the RPMs of the left and right motors. It has 3 text outputs to show the left, center and right distances from the distance sensor.



The hyperlink to my web-app <http://172.174.245.35:1880>