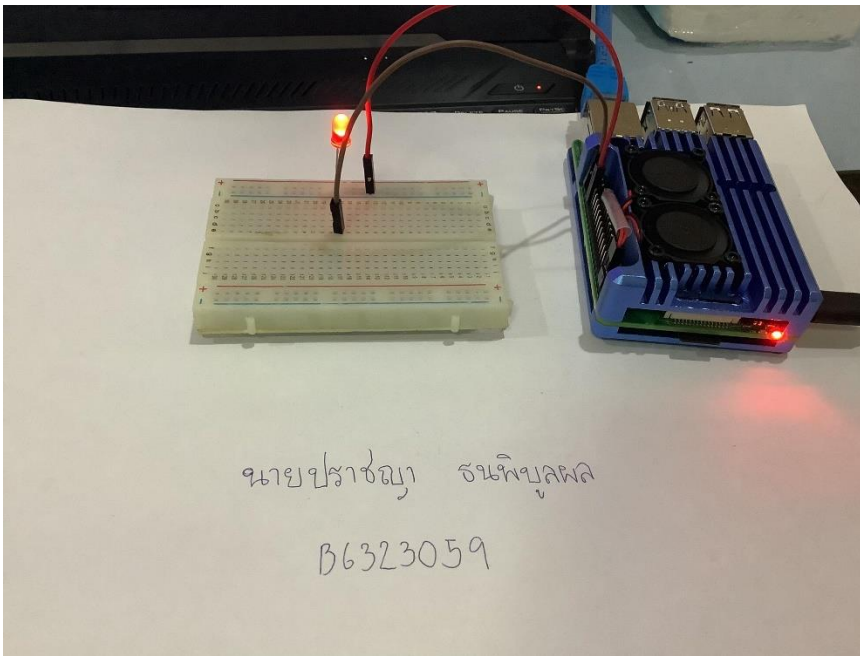
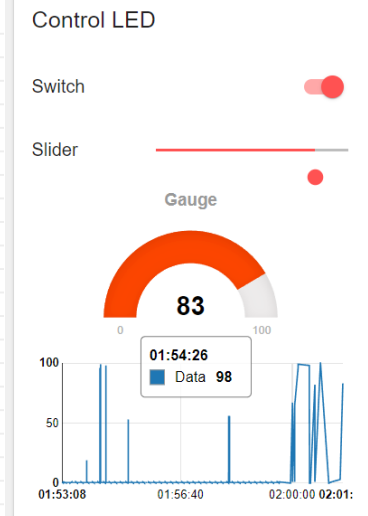
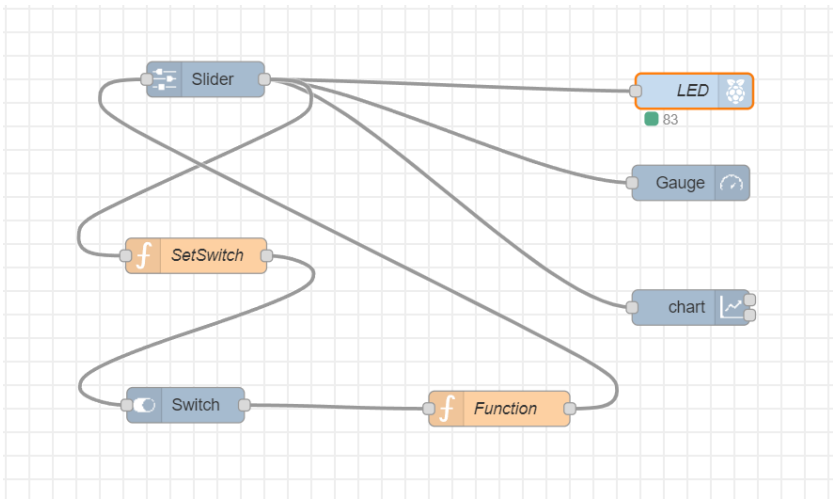


การสร้าง MQTT Server บน Raspberry Pi เพื่อใช้งาน Chatbot LINE ในฟาร์มอัจฉริยะ	
Chatbot LINE from Raspberry Pi MQTT Server for Smart Farming	
ชื่อ-สกุล : นายปราชญา ธนพิบูลผล	รหัสนักศึกษา : B6323059
6/6 –คำถามท้ายบทเพื่อทดสอบความเข้าใจ	

### Quiz\_201 – Node-RED UI

- แสดงข้อมูลที่ได้ทำการทดสอบ

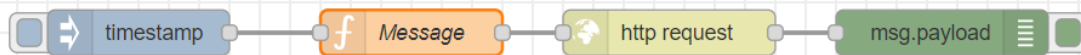
```
[{"id":"4719550a8895092e","type":"tab","label":"D29_1","disabled":false,"info":"","env":[]},{
  "id":"b2848cd6.ca5c7","type":"ui_slider","z":"4719550a8895092e","tab":"5969fd52.22b424","name":"Slider","topic":"","group":"Control LED","order":"2","min":"0","max":"100","x":330,"y":120,"wires":[["1cca457a.60fb5b","732721f2.32913","3c7de1d6.58b99e","869c189f.bb5d18"]]},{"id":"1cca457a.60fb5b","type":"ui_gauge","z":"4719550a8895092e","tab":"5969fd52.22b424","name":"Gauge","group":"Control LED","order":"3","format":"{{value}}","min":0,"max":"100","x":743,"y":208,"wires":[]},{
  "id":"732721f2.32913","type":"ui_chart","z":"4719550a8895092e","tab":"5969fd52.22b424","name":"","group":"Control LED","order":"4","interpolate":"linear","nodata":"No Data","removeOlder":1,"removeOlderUnit":"86400","x":743,"y":314,"wires":[[],[]]},{
  "id":"3c7de1d6.58b99e","type":"rpi-gpio out","z":"4719550a8895092e","name":"LED","pin":"21","set":"","level":"0","freq":"","out":"pwm","bcm":true,"x":746,"y":130,"wires":[]},{
  "id":"58638633.9de238","type":"ui_switch","z":"4719550a8895092e","tab":"5969fd52.22b424","name":"Switch","topic":"","group":"Control LED","order":"1","onvalue":"true","offvalue":"false","x":313,"y":397,"wires":[["828cc789.3d3b08"]]},{"id":"869c189f.bb5d18","type":"function","z":"4719550a8895092e","name":"SetSwitch","func":"if(msg.payload > 0){\n  msg.payload = 1;\n}else {\n  msg.payload = 0;\n  \nreturn\nmsg;\n}","outputs":1,"noerr":0,"x":322,"y":270,"wires":[["58638633.9de238"]]},{"id":"828cc789.3d3b08","type":"function","z":"4719550a8895092e","name":"Function","func":"if(msg.payload == \"true\"){\n  msg.payload = 1;\n}else{\n  msg.payload = 0;\n} \nreturn msg;","outputs":"1","noerr":0,"initialize":"","finalize":"","libs":[],"x":580,"y":400,"wires":[["b2848cd6.ca5c7"]]},{"id":"5969fd52.22b424","type":"ui_tab","name":"TEST1","icon":"dashboard","order":"1"}]
```

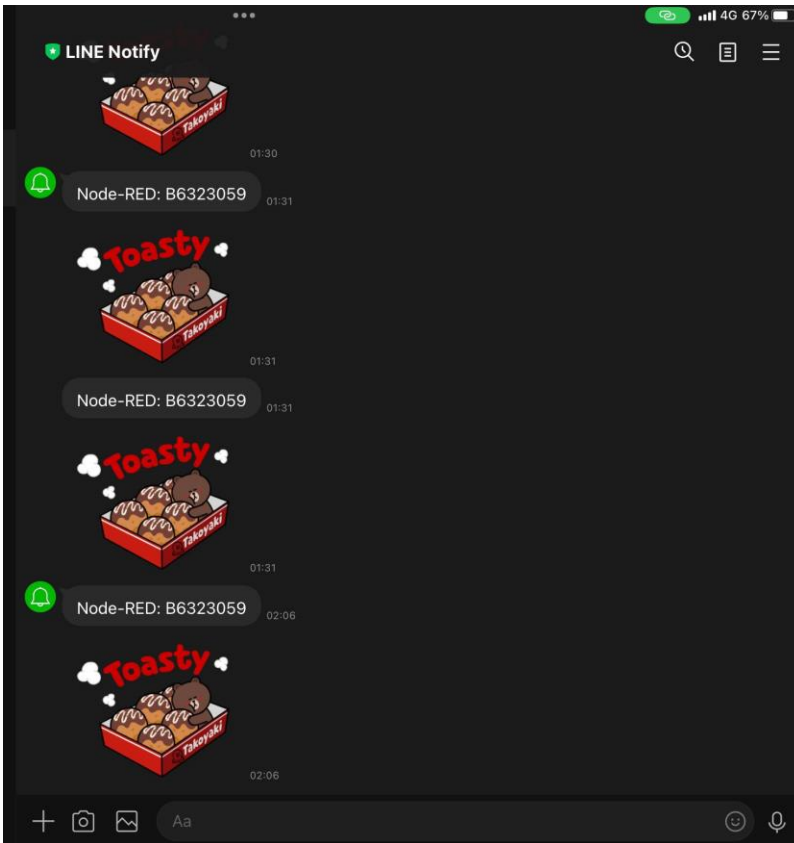


**Quiz\_202 – Node-RED to LINE notify**

- แสดงข้อมูลที่ใต้ทำการทดสอบ

```
[{"id":"50d97bcf.d02684","type":"tab","label":"D29_2","disabled":false,"info":"","":{"id":"8cb66889.d96b28","type":"http request","z":"50d97bcf.d02684","name":"","method":"POST","ret":"txt","paytoqs":"ignore","url":"https://notify-api.line.me/api/notify","tls":"","persist":false,"proxy":"","insecureHTTPParser":false,"authType":"","senderr":false,"headers":[],"x":590,"y":120,"wires":[["6d47b0ce.054b2"]]},{"id":"6d47b0ce.054b2","type":"debug","z":"50d97bcf.d02684","name":"","active":true,"tosidebar":true,"console":false,"tostatus":false,"complete":"payload","statusVal":"","statusType":"auto","x":770,"y":120,"wires":[],"{"id":"51ef834a.3d95ec","type":"function","z":"50d97bcf.d02684","name":"Message","func":"msg.token = 'dbpES6H4biMq3NZCRkrdRm28BgcNMMneWst3U3aXnQ6';\nmsg.message = 'B6323059';\nmsg.stickerPackageld = 6370;\nmsg.stickerId = 11088020;\n\nmsg.headers = {\n  'content-type':'application/x-www-form-urlencoded',\n  'Authorization':'Bearer ' + msg.token\n};\nmsg.payload = {\n  'message': msg.message,\n  'stickerPackageld':msg.stickerPackageld,\n  'stickerId':msg.stickerId\n};\nreturn msg;\n","outputs":1,"noerr":0,"initialize":"","finalize":"","libs":[],"x":420,"y":120,"wires":[["8cb66889.d96b28"]]},{"id":"75e765f7.d089fc","type":"inject","z":"50d97bcf.d02684","name":"","props":[{"p":"payload"}, {"p":"topic","vt":"str"}],"repeat":"","crontab":"","once":false,"onceDelay":0.1,"topic":"","payload":"","payloadType":"date","x":240,"y":120,"wires":[["51ef834a.3d95ec"]]}]
```

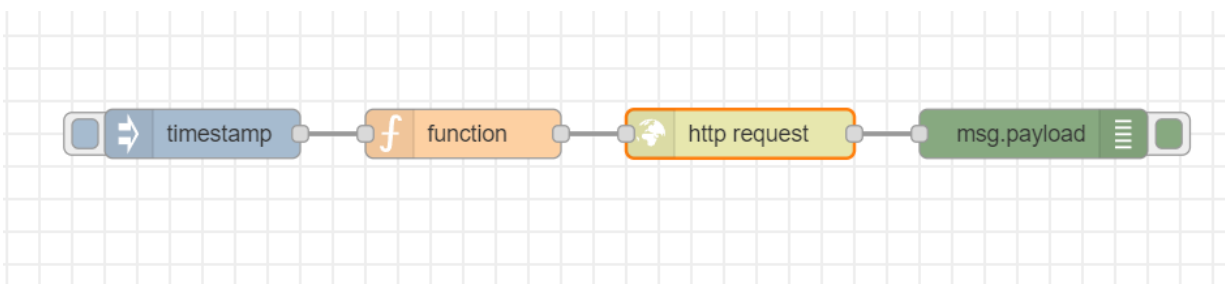




**Quiz\_203 – Node-RED to Google Sheet**

- แสดงข้อมูลที่ทำการทดสอบ

```
[{"id":"e97faef8.fb0d4","type":"tab","label":"D29_3","disabled":false,"info":""},{
  "id":"f9532ea8.463cf","type":"inject",
  "z":"e97faef8.fb0d4","name":"","props":[{"p":"payload"},{"p":"topic","vt":"str"}],
  "repeat":"","crontab":"","once":false,"onceDelay":0.1,"topic":"","payload":"","payloadType":"date",
  "x":220,"y":80,"wires":[["9baf4a75.a30408"]]}, {"id":"d8ddc578.4b0a38",
  "type":"debug","z":"e97faef8.fb0d4","name":"","active":true,"tosidebar":true,
  "console":false,"status":false,"complete":false,"statusVal":"","statusType":"auto",
  "x":730,"y":80,"wires":[]}, {"id":"9baf4a75.a30408","type":"function",
  "z":"e97faef8.fb0d4","name":"","func":"var data = {}\\n
  data.Tempp = parseFloat((Math.random() * 20) + 20).toFixed(2);\\n
  data.Humid = parseFloat((Math.random() * 20) + 40).toFixed(2);\\n
  data.Light = parseFloat((Math.random() * 20) + 60).toFixed(2);\\n
  data.RSSI = parseFloat((Math.random() * 20) + 80).toFixed(2);\\n
  msg.payload = data\\n
  return msg;","outputs":1,"noerr":0,"initialize":"","finalize":"","libs":[],
  "x":380,"y":80,"wires":[["9e20f292.3b6f4"]]}, {"id":"9e20f292.3b6f4",
  "type":"http request","z":"e97faef8.fb0d4","name":"","method":"GET",
  "ret":"txt","paytoqs":"ignore","url":"https://docs.google.com/forms/u/0/d/e/1FAIpQLSefrP4SjcMvQMfj2rKPg5KqtG69FsnbRc_HaDast_8EK9Yt6w/formResponse?entry.1430118170={{payload.Tempp}}&entry.323976293={{payload.Humid}}&entry.1239562869={{payload.Light}}&entry.135041538={{payload.RSSI}}","tls":"","persist":false,"proxy":"","insecureHTTPParser":false,
  "authType":"","senderr":false,"headers":[],
  "x":550,"y":80,"wires":[["d8ddc578.4b0a38"]]}]
```



ประทับเวลา	Temperature(C)	Humidity(%)	Light(%)	RSSI(dB)	
24/6/2023, 2:13:03	11	11	11	11	11
24/6/2023, 2:13:09	22	22	22	22	22
24/6/2023, 2:13:14	33	33	33	33	33
24/6/2023, 2:13:19	44	44	44	44	44
24/6/2023, 2:13:46	55	55	55	55	55
24/6/2023, 2:18:17	333	444	555	666	666
24/6/2023, 2:33:48	32.87	59.5	75.16	83.07	83.07
24/6/2023, 2:33:52	20.52	50.72	76.84	83.89	83.89
24/6/2023, 2:34:06	25.42	57.89	72.55	83.46	83.46
24/6/2023, 2:34:08	32.01	48.93	76.77	82.16	82.16
24/6/2023, 2:35:31	24.22	46.59	77.23	86.48	86.48
24/6/2023, 2:35:34	28.46	51.2	71.84	82.05	82.05
24/6/2023, 2:36:49	25.56	46.43	75.55	89.48	89.48

