

<p>การสร้าง MQTT Server บน Raspberry Pi เพื่อใช้งาน Chatbot LINE ในฟาร์มอัจฉริยะ</p> <p>Chatbot LINE from Raspberry Pi MQTT Server for Smart Farming</p>
<p>ชื่อ-สกุล : B6304577 นายภาณุพงศ์ แคนอินทร์</p>
<p>6/6 –คำถามท้ายบทเพื่อทดสอบความเข้าใจ</p>

### Quiz\_201 – Node-RED UI

- แสดงข้อมูลที่ได้ทำการทดสอบ

Code nodejs

```
[
  {
    "id": "d6af899f9daf2c4b",
    "type": "tab",
    "label": "Q201-0101",
    "disabled": false,
    "info": "",
    "env": []
  },
  {
    "id": "b2848cd6.ca5c7",
    "type": "ui_slider",
    "z": "d6af899f9daf2c4b",
    "tab": "5969fd52.22b424",
    "name": "Slider",
    "topic": "",
    "group": "Control LED",
    "order": "2",
    "min": "0",
    "max": "100",
    "x": 270,
    "y": 160,
    "wires": [
      [
        "1cca457a.60fb5b",
        "732721f2.32913",
        "3c7de1d6.58b99e",
        "869c189f.bbbd18"
      ]
    ]
  }
]
```

```

    ],
    {
      "id": "1cca457a.60fb5b",
      "type": "ui_gauge",
      "z": "d6af899f9daf2c4b",
      "tab": "5969fd52.22b424",
      "name": "Gauge",
      "group": "Control LED",
      "order": "3",
      "format": "{{value}}",
      "min": 0,
      "max": "1",
      "x": 670,
      "y": 160,
      "wires": []
    },
    {
      "id": "732721f2.32913",
      "type": "ui_chart",
      "z": "d6af899f9daf2c4b",
      "tab": "5969fd52.22b424",
      "name": "",
      "group": "Control LED",
      "order": "4",
      "interpolate": "linear",
      "nodata": "No Data",
      "removeOlder": 1,
      "removeOlderUnit": "86400",
      "x": 670,
      "y": 220,
      "wires": [
        [],
        []
      ]
    },
    {
      "id": "3c7de1d6.58b99e",
      "type": "rpi-gpio out",

```

```

    "z": "d6af899f9daf2c4b",
    "name": "LED",
    "pin": "26",
    "set": "",
    "level": "0",
    "freq": "",
    "out": "pwm",
    "bcm": true,
    "x": 670,
    "y": 100,
    "wires": []
  },
  {
    "id": "828cc789.3d3b08",
    "type": "function",
    "z": "d6af899f9daf2c4b",
    "name": "Function",
    "func": "if(msg.payload == \"true\"){\n    msg.payload = 1;\n}\nelse{\nmsg.payload = 0;\n}\n\nreturn msg;",
    "outputs": "1",
    "noerr": 0,
    "initialize": "",
    "finalize": "",
    "libs": [],
    "x": 480,
    "y": 380,
    "wires": [
      [
        "b2848cd6.ca5c7"
      ]
    ]
  },
  {
    "id": "58638633.9de238",
    "type": "ui_switch",
    "z": "d6af899f9daf2c4b",
    "tab": "5969fd52.22b424",
    "name": "Switch",
    "topic": "",

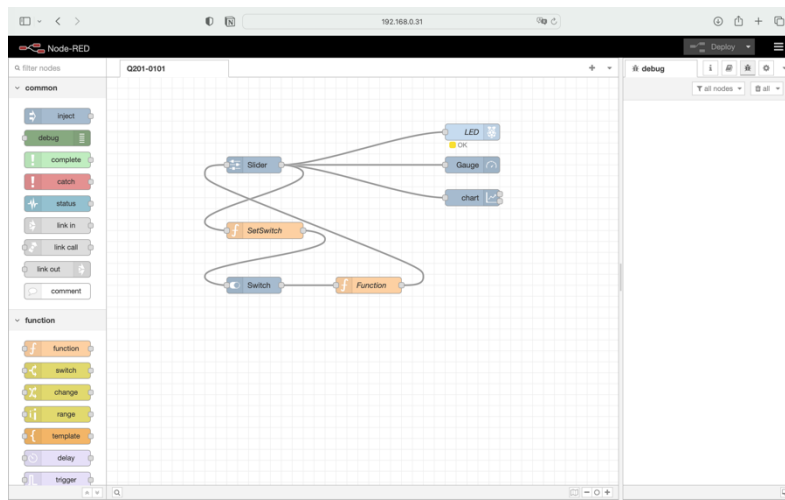
```

```

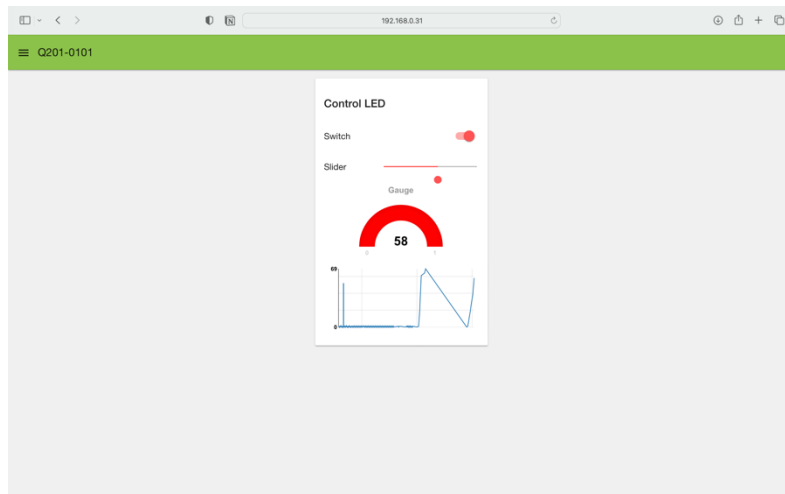
    "group": "Control LED",
    "order": 1,
    "onvalue": "true",
    "offvalue": "false",
    "x": 270,
    "y": 380,
    "wires": [
      [
        "828cc789.3d3b08"
      ]
    ]
  },
  {
    "id": "869c189f.bb8d18",
    "type": "function",
    "z": "d6af899f9daf2c4b",
    "name": "SetSwitch",
    "func": "if(msg.payload > 0)\n  msg.payload = 1;\nelse \n  msg.payload = 0;\n\nreturn msg;\n",
    "outputs": 1,
    "noerr": 0,
    "initialize": "",
    "finalize": "",
    "libs": [],
    "x": 290,
    "y": 280,
    "wires": [
      [
        "58638633.9de238"
      ]
    ]
  },
  {
    "id": "5969fd52.22b424",
    "type": "ui_tab",
    "name": "Q201-0101",
    "icon": "dashboard",
    "order": "1"
  }
}

```

หน้าจอ node flow ที่ได้ทดสอบ



รูปการทดสอบ 1 – UI



รูปการทดสอบ 2



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

- แสดงข้อมูลที่ได้ทำการทดสอบ

Code nodejs

```
[
  {
    "id": "bf05387658e4fc4c",
    "type": "tab",
    "label": "Q202-0101",
    "disabled": false,
    "info": "",
    "env": []
  },
  {
    "id": "8cb66889.d96b28",
    "type": "http request",
    "z": "bf05387658e4fc4c",
    "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": 550,
    "y": 260,
    "wires": [
      [
        "6d47b0ce.054b2"
      ]
    ]
  },
  {
    "id": "6d47b0ce.054b2",
```

```

    "type": "debug",
    "z": "bf05387658e4fc4c",
    "name": "",
    "active": true,
    "tosidebar": true,
    "console": false,
    "tostatus": false,
    "complete": "payload",
    "targetType": "msg",
    "statusVal": "",
    "statusType": "auto",
    "x": 730,
    "y": 260,
    "wires": []
  },
  {
    "id": "51ef834a.3d95ec",
    "type": "function",
    "z": "bf05387658e4fc4c",
    "name": "Message",
    "func": "msg.token = 'Your Token';\nmsg.message = \"Hello
World\";\nmsg.stickerPackageId = 11537;\nmsg.stickerId = 52002734;\n\nmsg.headers = {\n
  \"content-type\": \"application/x-www-form-urlencoded\", \n
  \"Authorization\": \"Bearer \" +
msg.token\n};\nmsg.payload = {\n
  \"message\": msg.message, \n
  \"stickerPackageId\": msg.stickerPackageId, \n
  \"stickerId\": msg.stickerId\n};\nreturn
msg;\n",
    "outputs": 1,
    "noerr": 0,
    "initialize": "",
    "finalize": "",
    "libs": [],
    "x": 380,
    "y": 260,
    "wires": [
      [
        "8cb66889.d96b28"
      ]
    ]
  },
  {
    {

```

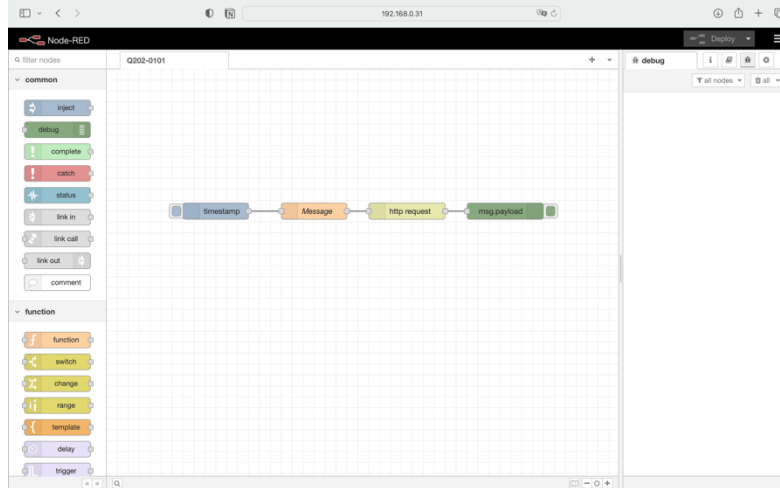
```

    "id": "75e765f7.d089fc",
    "type": "inject",
    "z": "bf05387658e4fc4c",
    "name": "",
    "props": [
      {
        "p": "payload"
      },
      {
        "p": "topic",
        "vt": "str"
      }
    ],
    "repeat": "",
    "crontab": "",
    "once": false,
    "onceDelay": 0.1,
    "topic": "",
    "payload": "",
    "payloadType": "date",
    "x": 200,
    "y": 260,
    "wires": [
      [
        "51ef834a.3d95ec"
      ]
    ]
  }
]

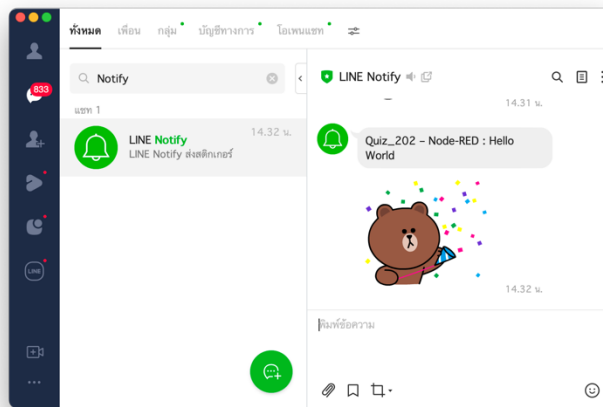
```

หน้าจอ node flow ที่ได้ทดสอบ





### รูปการทดสอบ 1 – LINE



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

- แสดงข้อมูลที่ทำการทดสอบ

Code nodejs

```
[
  {
    "id": "bccf86285085930b",
    "type": "tab",
    "label": "Q203-0101",
    "disabled": false,
    "info": "",
    "env": []
```

```

    },
    {
      "id": "7d1e14812a855917",
      "type": "http request",
      "z": "bccf86285085930b",
      "name": "",
      "method": "GET",
      "ret": "txt",
      "paytoqs": "ignore",
      "url":
"https://docs.google.com/forms/u/1/d/e/1FAIpQLSfZrXI2Jkf2fCOMY31jeSyHmBqLsJPYtGRpINk90Y6CxEx
lCA/formResponse?entry.252906820=1111&entry.786950774=1111&entry.1482600245=1111&entry.18948
59910=1111",
      "tls": "",
      "persist": false,
      "proxy": "",
      "insecureHTTPParser": false,
      "authType": "",
      "senderr": false,
      "headers": [],
      "x": 550,
      "y": 300,
      "wires": [
        [
          "b9895985dc7e1f96"
        ]
      ]
    },
    {
      "id": "cb0745f72cc70fd3",
      "type": "inject",
      "z": "bccf86285085930b",
      "name": "",
      "props": [
        {
          "p": "payload"
        },
        {
          "p": "topic",
          "vt": "str"
        }
      ]
    }
  ]
}

```

```

    }
  ],
  "repeat": "",
  "crontab": "",
  "once": false,
  "onceDelay": 0.1,
  "topic": "",
  "payload": "",
  "payloadType": "date",
  "x": 160,
  "y": 300,
  "wires": [
    [
      "09b1e9e81f8ff62a"
    ]
  ]
},
{
  "id": "b9895985dc7e1f96",
  "type": "debug",
  "z": "bccf86285085930b",
  "name": "",
  "active": true,
  "tosidebar": true,
  "console": false,
  "tostatus": false,
  "complete": "payload",
  "targetType": "msg",
  "statusVal": "",
  "statusType": "auto",
  "x": 750,
  "y": 300,
  "wires": []
},
{
  "id": "09b1e9e81f8ff62a",
  "type": "function",
  "z": "bccf86285085930b",
  "name": "function 1",

```

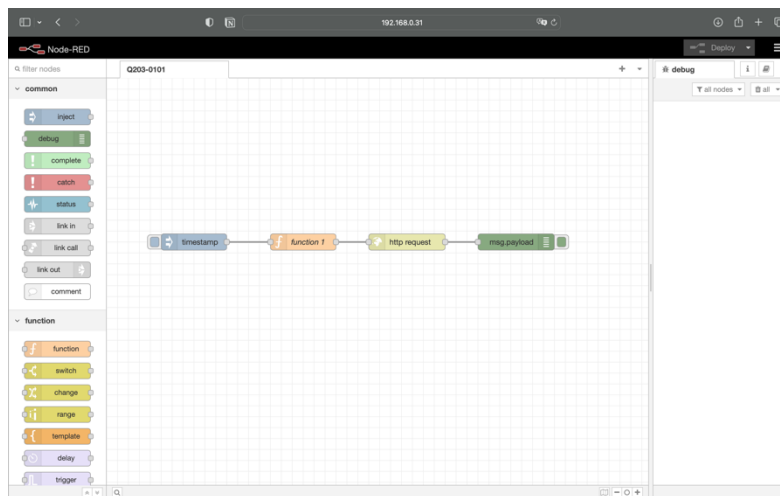
```

"func": "var data = {}\ndata.Tempp = parseFloat((Math.random() * 20) + 20).toFixed(2);\ndata.Humid = parseFloat((Math.random() * 20) + 40).toFixed(2);\ndata.Light = parseFloat((Math.random() * 20) + 60).toFixed(2);\ndata.RSSI = parseFloat((Math.random() * 20) + 80).toFixed(2);\n\nmsg.payload = data\n\nreturn msg;",

"outputs": 1,
"noerr": 0,
"initialize": "",
"finalize": "",
"libs": [],
"x": 360,
"y": 300,
"wires": [
  [
    "7d1e14812a855917"
  ]
]
}
]

```

หน้าจอ node flow ที่ได้ทดสอบ



รูปการทดสอบ 1 – Google Sheet

