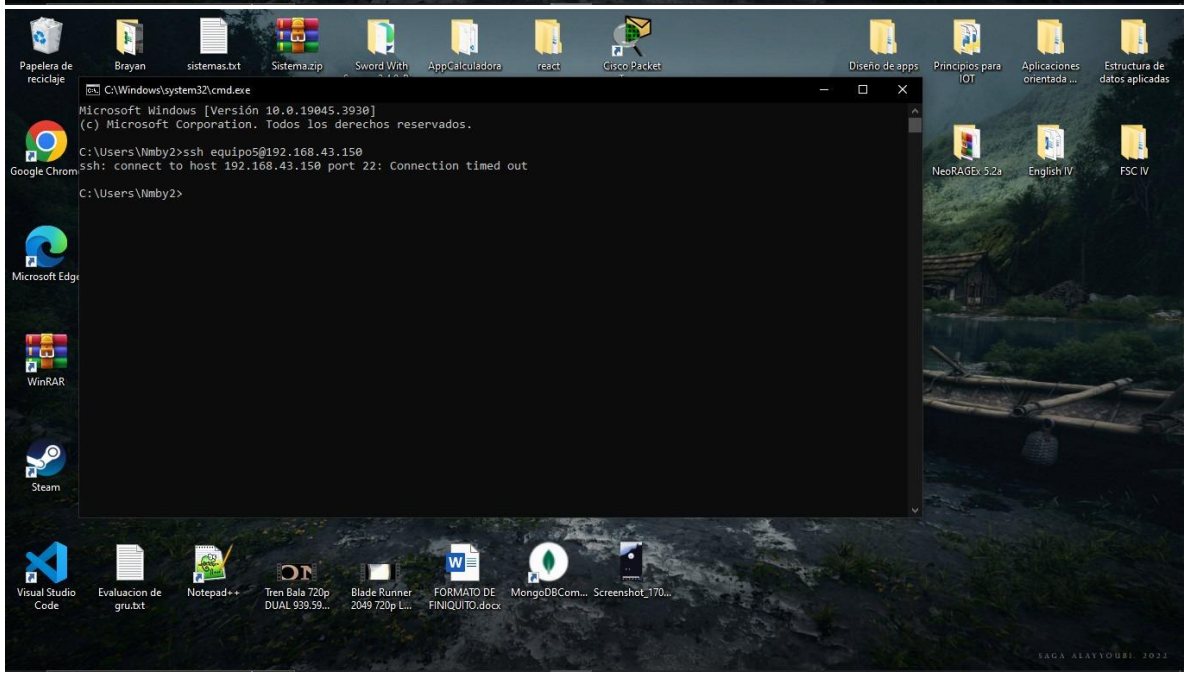
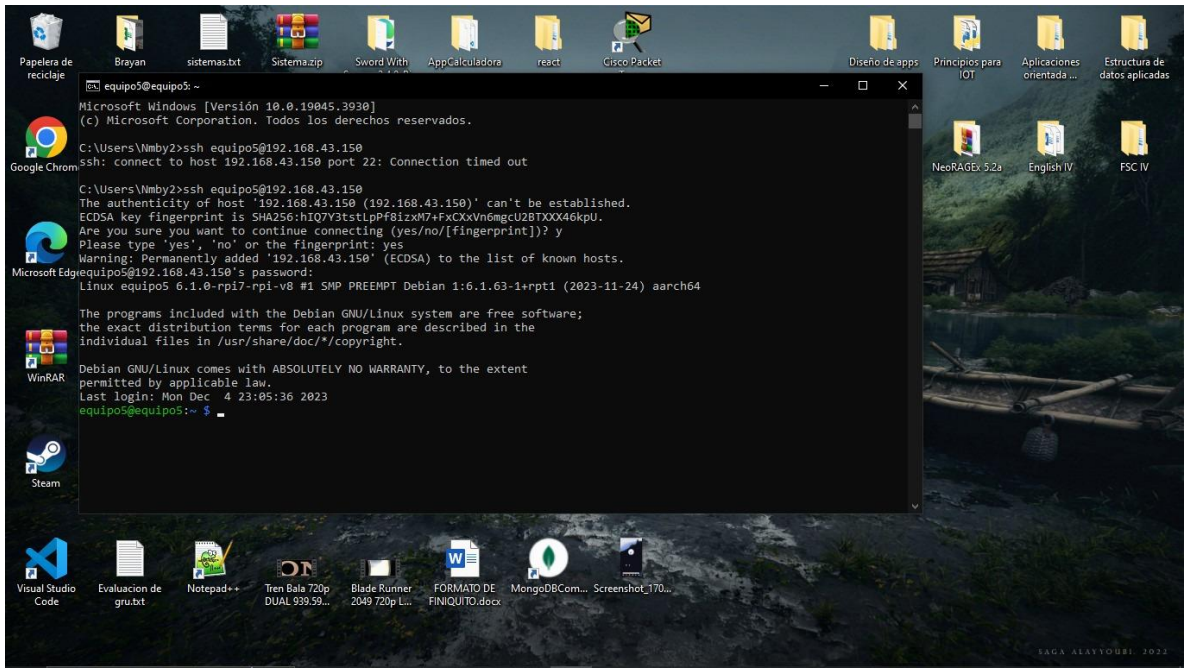
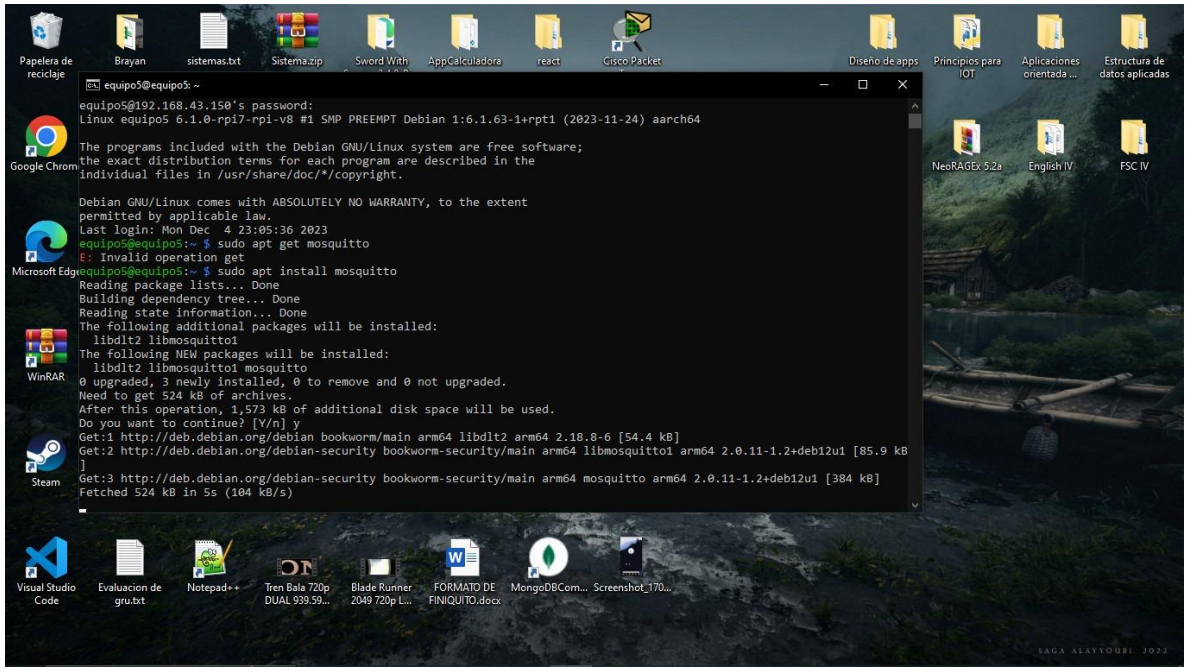
Clase 11

Raspberry Pi Imager v1.8.5
Raspberry Pi
Dispositivo Raspberry Pi
Sistema operativo
Almacenamiento
RASPBERRY PI 4
RASPBERRY PI OS (64-BIT)
SDXC CARD
Escribiendo... 0%
CANCELAR ESCRITURA


C:\Windows\system32\cmd.exe
Microsoft Windows [Versión 10.0.19045.3930]
(c) Microsoft Corporation. Todos los derechos reservados.
C:\Users\Nmby2>ssh equipo5@192.168.43.150
ssh: connect to host 192.168.43.150 port 22: Connection timed out
C:\Users\Nmby2>


Papelera de reciclaje
Brayan
sistemas.txt
Sistema.zip
Sword With
AppCalculadora
react
Cisco Packet
Diseño de apps
Principios para IOT
Aplicaciones orientada ...
Estructura de datos aplicadas
Google Chrom
NeoRAGEx 5.2a
English IV
FSC IV
Microsoft Edge
WinRAR
Steam
Visual Studio Code
Evaluacion de gru.txt
Notepad++
Tren Bala 720p DUAL 939.59...
Blade Runner 2049 720p L...
FORMATO DE FINIQUITO.docx
MongoDBCom...
Screenshot_170...
equipo5@equipo5: ~
Microsoft Windows [Versión 10.0.19045.3930]
(c) Microsoft Corporation. Todos los derechos reservados.
C:\Users\Nmby2>ssh equipo5@192.168.43.150
ssh: connect to host 192.168.43.150 port 22: Connection timed out
C:\Users\Nmby2>ssh equipo5@192.168.43.150
The authenticity of host '192.168.43.150 (192.168.43.150)' can't be established.
ECDSA key fingerprint is SHA256:hIQ7Y3tstLpPf8izxM7+FxCXxVn6mgcU2BTXXX46kpU.
Are you sure you want to continue connecting (yes/no/[fingerprint])? y
Please type 'yes', 'no' or the fingerprint: yes
Warning: Permanently added '192.168.43.150' (ECDSA) to the list of known hosts.
equipo5@192.168.43.150's password:
Linux equipo5 6.1.0-rpi7-rpi-v8 #1 SMP PREEMPT Debian 1:6.1.63-1+rpt1 (2023-11-24) aarch64
The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.
Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Mon Dec 4 23:05:36 2023
equipo5@equipo5:~ $


Papelera de reciclaje
Brayan
sistemas.txt
Sistema.zip
Sword With
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English IV
FSC IV
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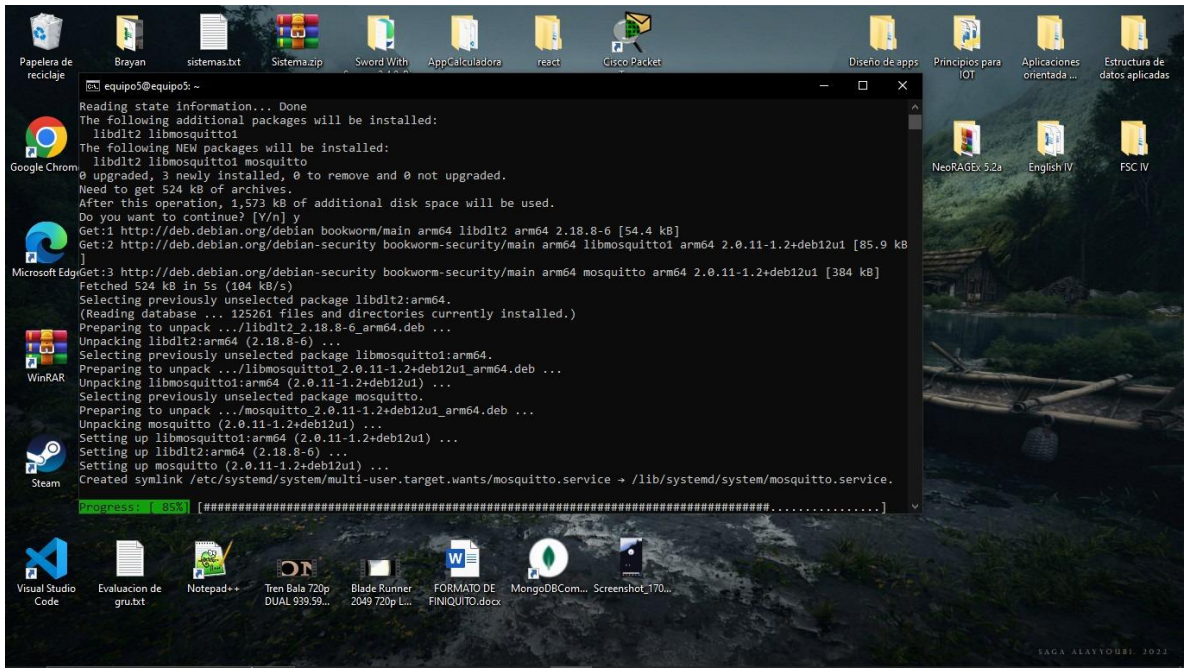
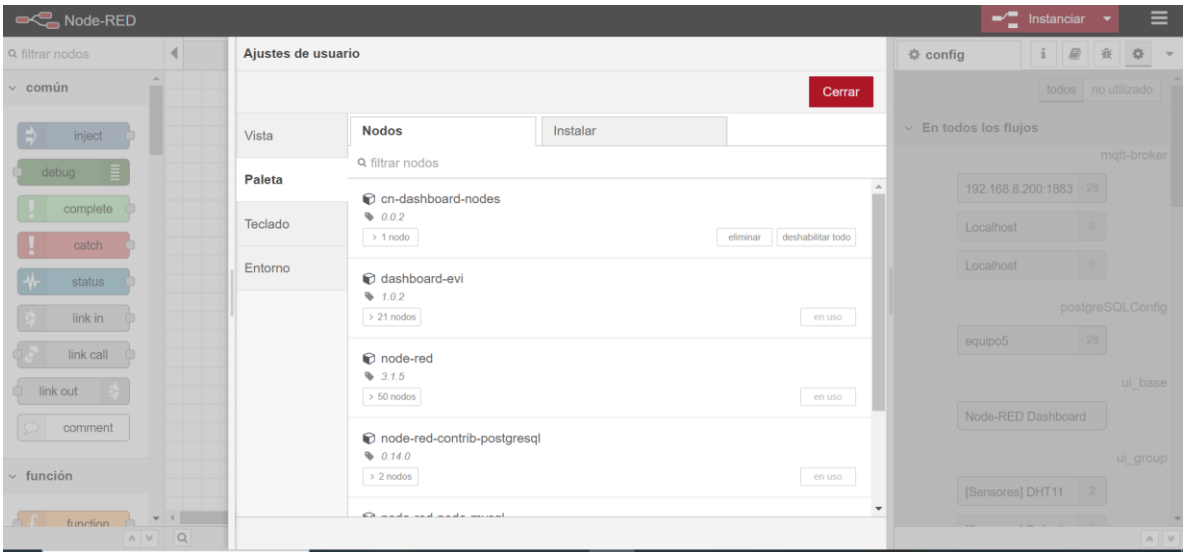
Steam
Visual Studio Code
Evaluacion de gru.txt
Notepad++
Tren Bala 720p DUAL 939.59...
Blade Runner 2049 720p L...
FORMATO DE FINIQUITO.docx
MongoDBCom...
Screenshot_170...
equipo5@equipo5: ~
equipo5@192.168.43.150's password:
Linux equipo5 6.1.0-rpi7-rpi-v8 #1 SMP PREEMPT Debian 1:6.1.63-1+rpt1 (2023-11-24) aarch64
The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.
Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Mon Dec 4 23:05:36 2023
equipo5@equipo5:~ $ sudo apt get mosquitto
E: Invalid operation get
equipo5@equipo5:~ $ sudo apt install mosquitto
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
libdlt2 libmosquitto1
The following NEW packages will be installed:
libdlt2 libmosquitto1 mosquitto
0 upgraded, 3 newly installed, 0 to remove and 0 not upgraded.
Need to get 524 kB of archives.
After this operation, 1,573 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://deb.debian.org/debian bookworm/main arm64 libdlt2 arm64 2.18.8-6 [54.4 kB]
Get:2 http://deb.debian.org/debian-security bookworm-security/main arm64 libmosquitto1 arm64 2.0.11-1.2+deb12u1 [85.9 kB]
Get:3 http://deb.debian.org/debian-security bookworm-security/main arm64 mosquitto arm64 2.0.11-1.2+deb12u1 [384 kB]
Fetched 524 kB in 5s (104 kB/s)

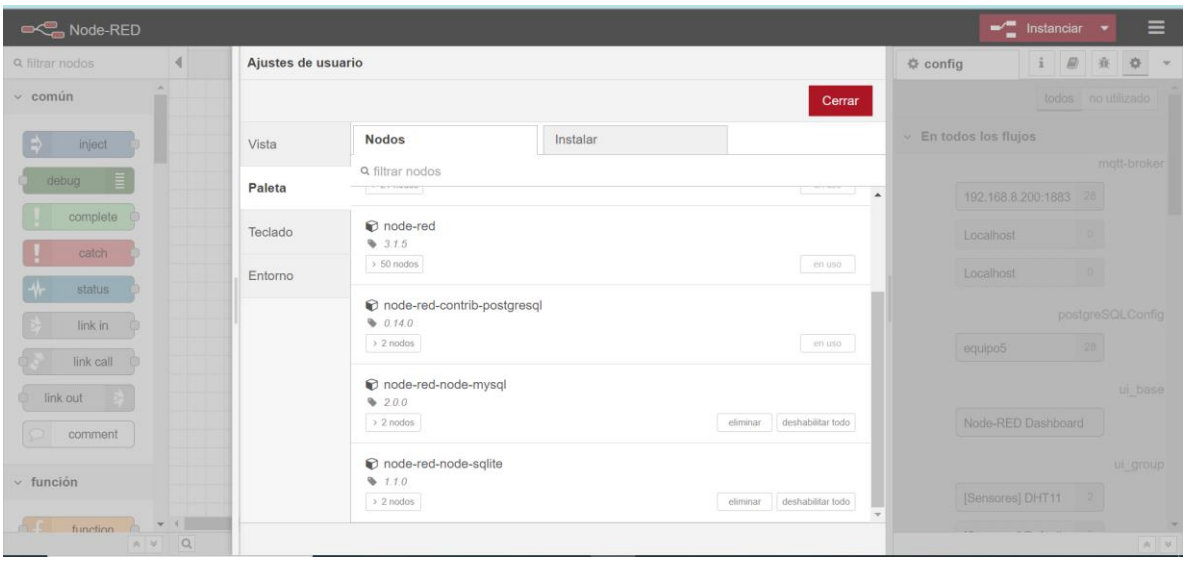



```
equipo5@equipo5:~ $ sudo apt install default-mysql-server
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  galera-4 gawk libcgi-fast-perl libcgi-pm-perl libclone-perl
  libconfig-inifiles-perl libdbd-mariadb-perl libdbi-perl libencode-locale-perl
  libfcgi-bin libfcgi-perl libfcgi0ldbl libhtml-parser-perl libhtml-tagset-perl
  libhtml-template-perl libhttp-date-perl libhttp-message-perl libio-html-perl
  liblwp-mediatypes-perl libmariadb3 libregexp-ipv6-perl libsigsegv2
  libterm-readkey-perl libtimedate-perl liburi-perl liburing2 mariadb-client
  mariadb-client-core mariadb-common mariadb-plugin-provider-bzip2
  mariadb-plugin-provider-lz4 mariadb-plugin-provider-lzma
  mariadb-plugin-provider-lzo mariadb-plugin-provider-snappy mariadb-server
  mariadb-server-core mysql-common pv socat
Suggested packages:
  gawk-doc libmldbm-perl libnet-daemon-perl libsql-statement-perl
  libdata-dump-perl libipc-sharedcache-perl libbusiness-isbn-perl libwww-perl
  mailx mariadb-test netcat-openbsd doc-base
The following NEW packages will be installed:
  default-mysql-server galera-4 gawk libcgi-fast-perl libcgi-pm-perl libclone-perl
  libconfig-inifiles-perl libdbd-mariadb-perl libdbi-perl libencode-locale-perl
  libfcgi-bin libfcgi-perl libfcgi0ldbl libhtml-parser-perl libhtml-tagset-perl
  libhtml-template-perl libhttp-date-perl libhttp-message-perl libio-html-perl
  liblwp-mediatypes-perl libmariadb3 libregexp-ipv6-perl libsigsegv2
  libterm-readkey-perl libtimedate-perl liburi-perl liburing2 mariadb-client
```

```
equipo5@equipo5:~ $ sudo systemctl status mysql
● mariadb.service - MariaDB 10.11.6 database server
     Loaded: loaded (/lib/systemd/system/mariadb.service; enabled; preset: enabled)
     Active: active (running) since Tue 2024-03-26 15:33:20 CST; 1min 2s ago
       Docs: man:mariadbd(8)
             https://mariadb.com/kb/en/library/systemd/
   Main PID: 3640 (mariadbd)
     Status: "Taking your SQL requests now..."
      Tasks: 9 (limit: 1578)
        CPU: 1.039s
     CGroup: /system.slice/mariadb.service
             └─3640 /usr/sbin/mariadbd

Mar 26 15:33:20 equipo5 mariadbd[3640]: 2024-03-26 15:33:20 0 [Note] InnoDB: log sequence number 46980; transaction id 14
Mar 26 15:33:20 equipo5 mariadbd[3640]: 2024-03-26 15:33:20 0 [Note] InnoDB: Loading buffer pool(s) from /var/lib/mysql/ib_buffer_pool
Mar 26 15:33:20 equipo5 mariadbd[3640]: 2024-03-26 15:33:20 0 [Note] Plugin 'FEEDBACK' is disabled.
Mar 26 15:33:20 equipo5 mariadbd[3640]: 2024-03-26 15:33:20 0 [Warning] You need to use --log-bin to make --expire-logs-days or --binlog-expire-logs-seconds work.
Mar 26 15:33:20 equipo5 mariadbd[3640]: 2024-03-26 15:33:20 0 [Note] Server socket created on IP: '127.0.0.1'.
Mar 26 15:33:20 equipo5 mariadbd[3640]: 2024-03-26 15:33:20 0 [Note] InnoDB: Buffer pool(s) load completed at 240326 15:33:20
Mar 26 15:33:20 equipo5 mariadbd[3640]: 2024-03-26 15:33:20 0 [Note] /usr/sbin/mariadbd: ready for connections.
Mar 26 15:33:20 equipo5 mariadbd[3640]: Version: '10.11.6-MariaDB-0+deb12u1'  socket: '/run/mysqld/mysqld.sock'  port: 3306  Debian 12
Mar 26 15:33:20 equipo5 systemd[1]: Started mariadb.service - MariaDB 10.11.6 database server.
Mar 26 15:33:20 equipo5 /etc/mysql/debian-start[3670]: Triggering myisam-recover for all MyISAM tables and aria-recover for all Aria tables
```

```
equipo5@equipo5:~ $ sudo mysql -u root -p -h localhost
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 35
Server version: 10.11.6-MariaDB-0+deb12u1 Debian 12

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]>
```



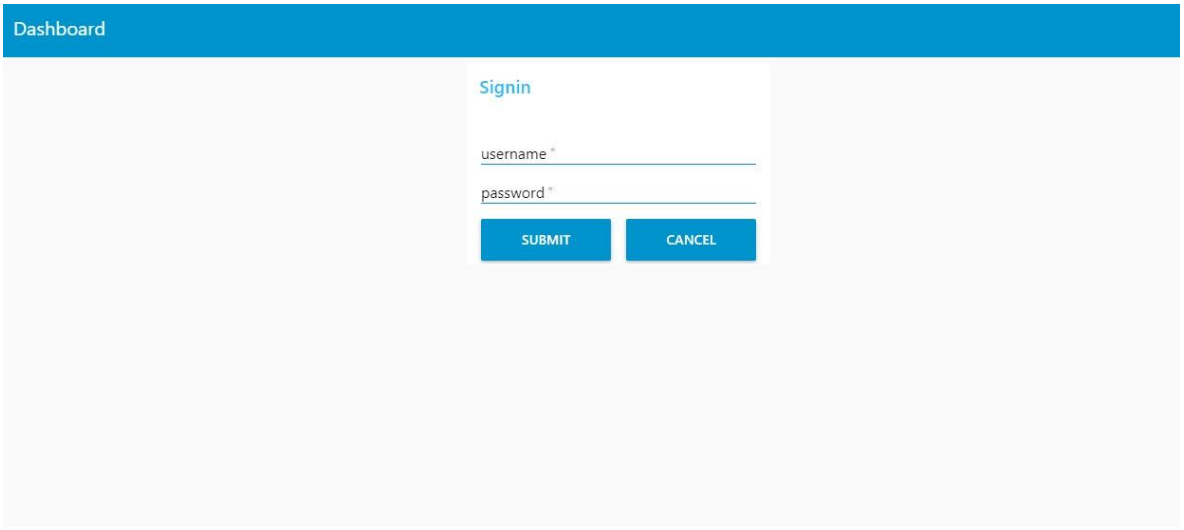


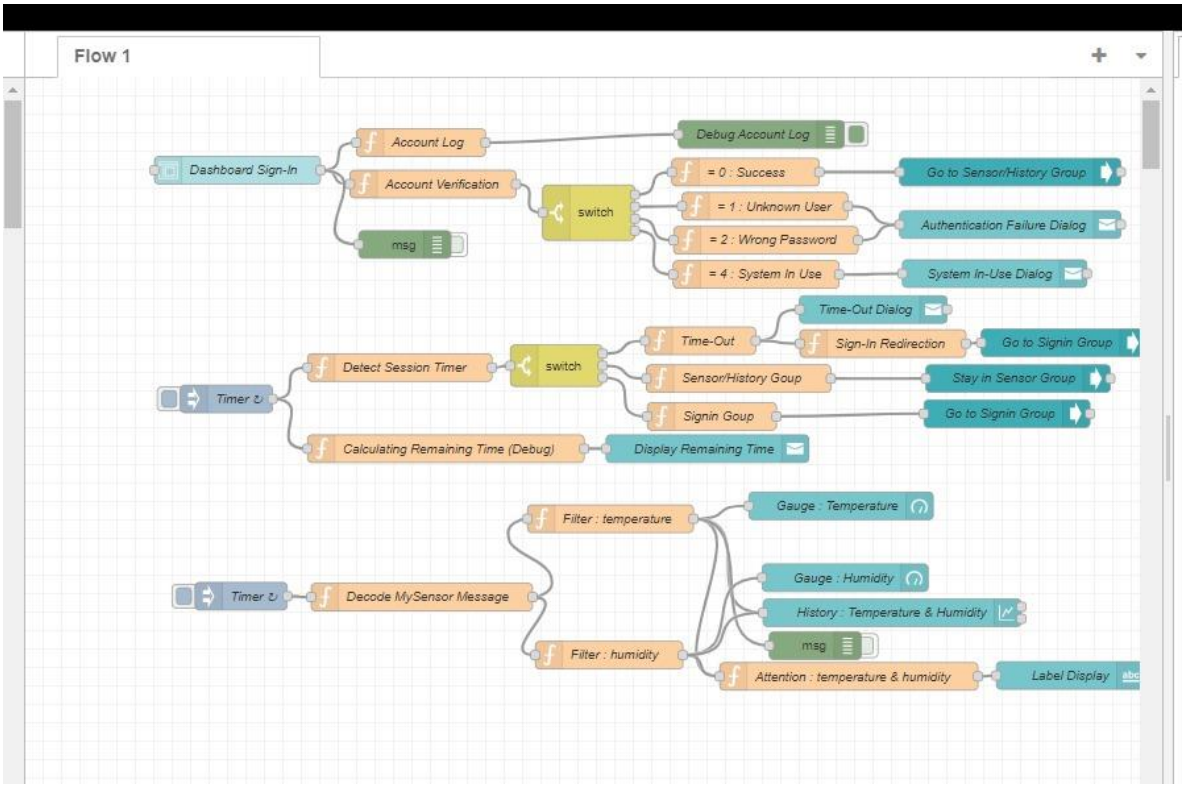
CREAR BASE DE DATO Y TABLA

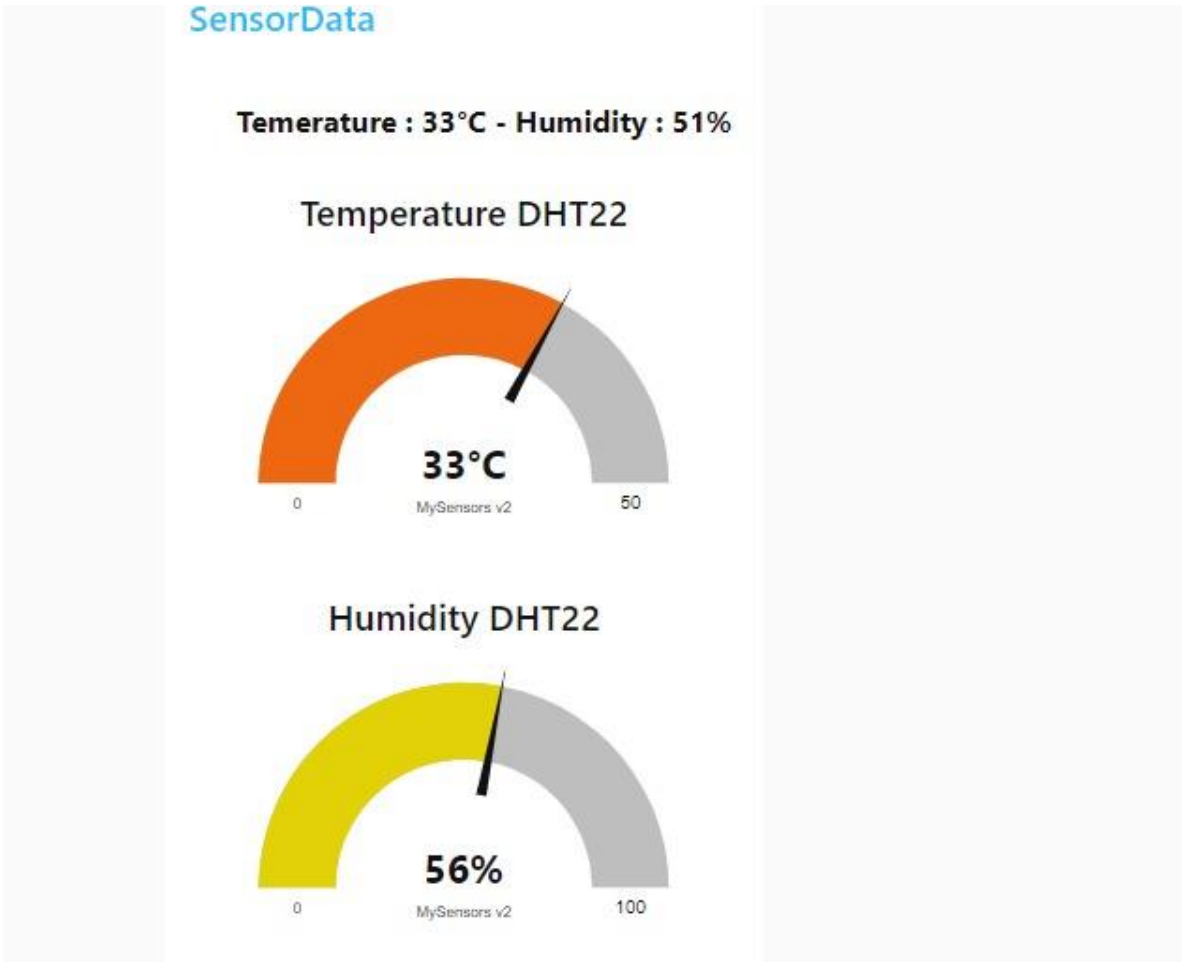
```
equipo5@equipo5:~ $ sudo mysql -u u_equipo5 -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 107
Server version: 10.11.6-MariaDB-0+deb12u1 Debian 12

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> CREATE DATABASE IF NOT EXISTS equipo5;
Query OK, 0 rows affected, 1 warning (0.001 sec)

MariaDB [(none)]> use equipo5;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
MariaDB [equipo5]> CREATE TABLE IF NOT EXISTS sensor_states (
    -> URRENT_TIMESTAMP    ->     id INT AUTO_INCREMENT PRIMARY KEY,
    ->     ->     sensor_name VARCHAR(255) NOT NULL,
    ->     ->     state VARCHAR(255) NOT NULL,
    ->     ->     timestamp TIMESTAMP DEFAULT CURRENT_TIMESTAMP
    ->     -> );
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near '->     id INT A
UTO_INCREMENT PRIMARY KEY,
    ->     sensor_name VARCHAR(255)...' at line 2
MariaDB [equipo5]> CREATE DATABASE IF NOT EXISTS nombre_basededatos;
E nombQuery OK, 1 row affected (0.001 sec)

MariaDB [equipo5]> USE nombre_basededatos;
E IF NOT EXISTS sensor_states (
    id INT AUTO_INCREMENT PRIMARY KEY,
    sensor_name VARCHAR(255) NOT NULL,
    state VARCHAR(255) NOT NULL,
    timestamp TIMESTAMP DEFAULT CURRENT_TIMEDatabase changed
MariaDB [nombre_basededatos]>
MariaDB [nombre_basededatos]> CREATE TABLE IF NOT EXISTS sensor_states (
    ->     id INT AUTO_INCREMENT PRIMARY KEY,
    ->     sensor_name VARCHAR(255) NOT NULL,
    ->     state VARCHAR(255) NOT NULL,
```

```
MariaDB [equipo5]> USE nombre_basededatos;
E IF NOT EXISTS sensor_states (
    id INT AUTO_INCREMENT PRIMARY KEY,
    sensor_name VARCHAR(255) NOT NULL,
    state VARCHAR(255) NOT NULL,
    timestamp TIMESTAMP DEFAULT CURRENT_TIMEDatabase changed
MariaDB [nombre_basededatos]>
MariaDB [nombre_basededatos]> CREATE TABLE IF NOT EXISTS sensor_states (
    ->     id INT AUTO_INCREMENT PRIMARY KEY,
    ->     sensor_name VARCHAR(255) NOT NULL,
    ->     state VARCHAR(255) NOT NULL,
    ->     timestamp TIMESTAMP DEFAULT CURRENT_TIMESTAMP
    -> );
Query OK, 0 rows affected (0.012 sec)

MariaDB [nombre_basededatos]>
```

Login


Dashboard
Signin
username *
password *
SUBMIT
CANCEL


Flow 1
Dashboard Sign-In
Account Log
Account Verification
msg
switch
Debug Account Log
= 0 : Success
= 1 : Unknown User
= 2 : Wrong Password
= 4 : System In Use
Go to Sensor/History Group
Authentication Failure Dialog
System In-Use Dialog
Time-Out Dialog
Timer
Detect Session Timer
switch
Time-Out
Sign-In Redirection
Go to Signin Group
Sensor/History Goup
Stay in Sensor Group
Signin Goup
Go to Signin Group
Calculating Remaining Time (Debug)
Display Remaining Time
Filter : temperature
Gauge : Temperature
Timer
Decode MySensor Message
Gauge : Humidity
History : Temperature & Humidity
msg
Filter : humidity
Attention : temperature & humidity
Label Display




```
[
  {
    "id": "88f0bba260c26401",
    "type": "tab",
    "label": "Flow 1",
    "disabled": false,
    "info": ""
  },
  {
    "id": "bc7cbad6568ee864",
    "type": "ui_form",
```

```
"z": "88f0bba260c26401",
"name": "Dashboard Sign-In",
"label": "",
"group": "b82da486.9fc8d8",
"order": 0,
"width": 0,
"height": 0,
"options": [
  {
    "label": "username",
    "value": "username",
    "type": "text",
    "required": true
  },
  {
    "label": "password",
    "value": "password",
    "type": "password",
    "required": true
  }
],
"formValue": {
  "username": "",
  "password": ""
},
"payload": "",
"submit": "submit",
"cancel": "cancel",
"topic": "",
```

```
    "x": 230,
    "y": 100,
    "wires": [
      [
        "39051cc8e20f0a0e",
        "712ea51390dd0b42",
        "35fd025ad57eb273"
      ]
    ]
  },
  {
    "id": "e3fc7436b97f6716",
    "type": "debug",
    "z": "88f0bba260c26401",
    "name": "Debug Account Log ",
    "active": true,
    "tosidebar": true,
    "console": false,
    "tostatus": false,
    "complete": "true",
    "targetType": "full",
    "statusVal": "",
    "statusType": "auto",
    "x": 798.0000915527344,
    "y": 61.00000762939453,
    "wires": []
  },
  {
    "id": "39051cc8e20f0a0e",
```

```
        "type": "function",
        "z": "88f0bba260c26401",
        "name": "Account Log",
        "func": "var accountlog =  flow.get(\"accountlog\") || [] ; \n\naccountlog.push({ accessAt : new Date(), username : msg.payload.username})\n\nflow.set(\"accountlog\", accountlog);\n\nmsg.payload = accountlog;\nreturn msg;",
        "outputs": 1,
        "timeout": "",
        "noerr": 0,
        "initialize": "",
        "finalize": "",
        "libs": [],
        "x": 429.00000762939453,
        "y": 69.99999618530273,
        "wires": [
            [
                "e3fc7436b97f6716"
            ]
        ]
    },
    {
        "id": "712ea51390dd0b42",
        "type": "function",
        "z": "88f0bba260c26401",
        "name": "Account Verification",
        "func": "var accounts =  flow.get(\"accounts\") || [ { username : \"brayan\", password : \"123\"},{ username : \"Kevin\", password : \"123\"}] ; \n\nvar username = msg.payload.username ;\nvar password = msg.payload.password ; \n\nmsg.payload = 1;\n\naccounts.forEach(function ( account ){\n    if ( account.username == username ) {\n        msg.payload = 2;\n        if ( account.password == password ) {\n            msg.payload = 0;\n        } \n    }\n});\n\nif ( msg.payload == 0 ) {\n  var currentsocketid = flow.get(\"clientid\") || undefined;\n  if ( currentsocketid !==
```

undefined && currentsocketid !== msg.socketid) msg.payload = 3;\n}\n// keep the original socketid from msg.socketid;\nreturn msg;",

"outputs": 1,

"timeout": "",

"noerr": 0,

"initialize": "",

"finalize": "",

"libs": [],

"x": 442.0000457763672,

"y": 115.0000057220459,

"wires": [

[

"7de9b46ccf9e7358"

]

]

},

{

"id": "7de9b46ccf9e7358",

"type": "switch",

"z": "88f0bba260c26401",

"name": "",

"property": "payload",

"propertyType": "msg",

"rules": [

{

"t": "eq",

"v": "0",

"vt": "str"

},

```
    {
        "t": "eq",
        "v": "1",
        "vt": "str"
    },
    {
        "t": "eq",
        "v": "2",
        "vt": "str"
    },
    {
        "t": "eq",
        "v": "3",
        "vt": "str"
    }
],
"checkall": "true",
"repair": false,
"outputs": 4,
"x": 611.0000419616699,
"y": 145.9999885559082,
"wires": [
    [
        "b604d2662bcdae65"
    ],
    [
        "5ca67ed069367d1c"
    ],
    [
```

```
            "39ea1cade7e49dcc"
          ],
          [
            "9d8b7b8f677e062f"
          ]
        ]
    },
    {
        "id": "b604d2662bcdae65",
        "type": "function",
        "z": "88f0bba260c26401",
        "name": "= 0 : Success",
        "func": "/* activate session timer /\nvar sessionTimer =  flow.get(\"sessionTimer\") || 0; \nvar currTime = Date.now();\nflow.set(\"sessionTimer\", currTime);\nflow.set(\"clientid\", msg.socketid);\n/ ui-control payload */\nmsg.payload = { group: {\n    show : [\"Dashboard_SensorData\", \"Another_History\"],\n    hide : [\"Dashboard_Signin\"]\n }\n};\n\nreturn msg;",
        "outputs": 1,
        "noerr": 0,
        "x": 780.999885559082,
        "y": 101.99999809265137,
        "wires": [
          [
            "7b4fb650e23b4a2c"
          ]
        ]
    },
    {
        "id": "5ca67ed069367d1c",
        "type": "function",
```

```
    "z": "88f0bba260c26401",
    "name": "= 1 : Unknown User",
    "func": "msg.payload = \"Username Doesn't exist!!!\"\nreturn msg;",
    "outputs": 1,
    "noerr": 0,
    "x": 801.9998931884766,
    "y": 139,
    "wires": [
      [
        "614fbb0fd2618c06"
      ]
    ]
  },
  {
    "id": "39ea1cade7e49dcc",
    "type": "function",
    "z": "88f0bba260c26401",
    "name": "= 2 : Wrong Password",
    "func": "msg.payload = \"Invalid Password\";\nreturn msg;",
    "outputs": 1,
    "noerr": 0,
    "x": 802.9999618530273,
    "y": 176.0000123977661,
    "wires": [
      [
        "614fbb0fd2618c06"
      ]
    ]
  },
```

```
{
    "id": "7b4fb650e23b4a2c",
    "type": "ui_ui_control",
    "z": "88f0bba260c26401",
    "name": "Go to Sensor/History Group",
    "x": 1068.0000686645508,
    "y": 101.9999942779541,
    "wires": [
        []
    ]
},
{
    "id": "614fbb0fd2618c06",
    "type": "ui_toast",
    "z": "88f0bba260c26401",
    "position": "dialog",
    "displayTime": "3",
    "highlight": "",
    "outputs": 1,
    "ok": "OK",
    "cancel": "",
    "topic": "Authentication Failed",
    "name": "Authentication Failure Dialog",
    "x": 1067.9999732971191,
    "y": 159,
    "wires": [
        []
    ]
},
```

```
{
    "id": "cfa578621cb3a16c",
    "type": "inject",
    "z": "88f0bba260c26401",
    "name": "Timer",
    "repeat": "2",
    "crontab": "",
    "once": false,
    "onceDelay": 0.1,
    "topic": "",
    "payload": "",
    "payloadType": "date",
    "x": 233.99996948242188,
    "y": 561.9999046325684,
    "wires": [
        [
            "b8f9f5668c9ec243"
        ]
    ]
},
{
    "id": "ec845bae0880886f",
    "type": "ui_text",
    "z": "88f0bba260c26401",
    "group": "c35e46a8.b04ce8",
    "order": 0,
    "width": 0,
    "height": 0,
    "name": "Label Display",
```

```
    "label": "",
    "format": "{{msg.payload}}",
    "layout": "row-spread",
    "x": 1132.9999618530273,
    "y": 648.0000228881836,
    "wires": []
  },
  {
    "id": "b8f9f5668c9ec243",
    "type": "function",
    "z": "88f0bba260c26401",
    "name": "Decode MySensor Message",
    "func": "\nvar mySensorsMessage = {}\nvar newPayload = {};\nvar timestamp = new Date();\n\nnewPayload.nodeId = 3;\nnewPayload.type = Math.floor( Math.random() * Math.floor(2)); // 0 or 1\nif ( newPayload.type === 0 /* temperature */ ) newPayload.value = Math.floor( Math.random() * Math.floor(30)) + 10; // 10 - 39\nelse newPayload.value = Math.floor( Math.random() * Math.floor(40)) + 40; // 40 - 79\n\nmsg.payload = newPayload; \n\nreturn msg;",
    "outputs": 1,
    "noerr": 0,
    "x": 429.9999771118164,
    "y": 562.9999122619629,
    "wires": [
      [
        "354c140276844c6f",
        "a233cde30a44bfab"
      ]
    ]
  },
  {
    "id": "354c140276844c6f",
```

```
    "type": "function",
    "z": "88f0bba260c26401",
    "name": "Filter : temperature",
    "func": "if (msg.payload.nodeId == 3 && msg.payload.type === 0) {\n    var msg;\n
msg.payload = msg.payload.value;\n    msg.topic = \"Temperature\"\n    return msg;\n}    ",
    "outputs": 1,
    "noerr": 0,
    "x": 634.5000534057617,
    "y": 478.00002002716064,
    "wires": [
      [
        "317aafd4ab7ded37",
        "6a5f48b78fefd54a",
        "687a17efabf7fbe9",
        "e00ccc4466f779d9"
      ]
    ]
  },
  {
    "id": "317aafd4ab7ded37",
    "type": "ui_gauge",
    "z": "88f0bba260c26401",
    "name": "Gauge : Temperature",
    "group": "c35e46a8.b04ce8",
    "order": 0,
    "width": 0,
    "height": 0,
    "gtype": "gage",
    "title": "Temperature DHT22",
```

```
    "label": "MySensors v2",
    "format": "{{value}}°C",
    "min": 0,
    "max": "50",
    "colors": [
      "#66ccff",
      "#ff8000",
      "#ca3838"
    ],
    "seg1": "",
    "seg2": "",
    "x": 884.5000076293945,
    "y": 463.9999828338623,
    "wires": []
  },
  {
    "id": "a233cde30a44bfab",
    "type": "function",
    "z": "88f0bba260c26401",
    "name": "Filter : humidity",
    "func": "if (msg.payload.nodeId == 3 && msg.payload.type === 1) {\n    var msg;\n
msg.payload = msg.payload.value;\n    msg.topic = \"Humidity\"\n    return msg;\n}    ",
    "outputs": 1,
    "noerr": 0,
    "x": 633.0000762939453,
    "y": 625.9999542236328,
    "wires": [
      [
        "755da6f1bc167cac",
```

```
            "6a5f48b78fefd54a",
            "687a17efabf7fbe9"
        ]
    ]
},
{
    "id": "755da6f1bc167cac",
    "type": "ui_gauge",
    "z": "88f0bba260c26401",
    "name": "Gauge : Humidity",
    "group": "c35e46a8.b04ce8",
    "order": 0,
    "width": "0",
    "height": "0",
    "gtype": "gage",
    "title": "Humidity DHT22",
    "label": "MySensors v2",
    "format": "{{value}}%",
    "min": 0,
    "max": "100",
    "colors": [
        "#1a25ab",
        "#e6e600",
        "#ca3838"
    ],
    "seg1": "",
    "seg2": "",
    "x": 889.0000419616699,
    "y": 541.9999237060547,
```

```
    "wires": []
  },
  {
    "id": "6a5f48b78fefd54a",
    "type": "function",
    "z": "88f0bba260c26401",
    "name": "Attention : temperature & humidity",
    "func": "context.data = context.data || new Object();\n\nswitch (msg.topic) {\n    case \"Temperature\":\n        context.data.temperature = msg.payload;\n        msg = null;\n        break;\n    case \"Humidity\":\n        context.data.humidity = msg.payload;\n        msg = null;\n        break;\n    default:\n        msg = null;\n    \tbreak;\n\n}\n\nif(context.data.temperature !== null && context.data.humidity !== null && context.data.temperature !== undefined && context.data.humidity !== undefined) {\n\tmsgOut = \"\"; //new Object();\n    msgOut = \"Temerature : \" \n    msgOut += context.data.temperature.toString(); \n    msgOut+= \"°C - Humidity : \"; \n    msgOut+= context.data.humidity.toString();\n    msgOut+= \"%\";\n    context.data=null;\n    var msg = {};\n    msg.payload = msgOut;\n\treturn msg;\n} \n//else return msg;",
    "outputs": 1,
    "noerr": 0,
    "x": 892.9999618530273,
    "y": 648.9999828338623,
    "wires": [
      [
        "ec845bae0880886f"
      ]
    ]
  },
  {
    "id": "687a17efabf7fbe9",
    "type": "ui_chart",
    "z": "88f0bba260c26401",
    "name": "History : Temperature & Humidity",
```

```
"group": "4de9506d.e7364",
"order": 1,
"width": "6",
"height": "9",
"label": "Temperature & Humidity",
"chartType": "line",
"legend": "true",
"xformat": "%H:%M",
"interpolate": "linear",
"nodata": "No Data Yet",
"dot": false,
"ymin": "0",
"ymax": "80",
"removeOlder": "12",
"removeOlderPoints": "",
"removeOlderUnit": "3600",
"cutout": "",
"useOneColor": false,
"colors": [
  "#1f77b4",
  "#aec7e8",
  "#ff7f0e",
  "#2ca02c",
  "#98df8a",
  "#d62728",
  "#ff9896",
  "#9467bd",
  "#c5b0d5"
],
```

```
    "outputs": 2,
    "x": 940,
    "y": 580,
    "wires": [
      [],
      []
    ]
  },
  {
    "id": "e00ccc4466f779d9",
    "type": "debug",
    "z": "88f0bba260c26401",
    "name": "",
    "active": false,
    "tosidebar": true,
    "console": false,
    "tostatus": false,
    "complete": "true",
    "x": 856.5590438842773,
    "y": 615.6423416137695,
    "wires": []
  },
  {
    "id": "35fd025ad57eb273",
    "type": "debug",
    "z": "88f0bba260c26401",
    "name": "",
    "active": false,
    "tosidebar": true,
```

```
    "console": false,
    "tostatus": false,
    "complete": "true",
    "targetType": "full",
    "statusVal": "",
    "statusType": "auto",
    "x": 411.5000419616699,
    "y": 180.5347557067871,
    "wires": []
},
{
    "id": "ad50aac197858fff",
    "type": "ui_toast",
    "z": "88f0bba260c26401",
    "position": "dialog",
    "displayTime": "3",
    "highlight": "",
    "outputs": 1,
    "ok": "OK",
    "cancel": "",
    "topic": "System In Use.",
    "name": "System In-Use Dialog",
    "x": 1051.1111793518066,
    "y": 212.1215353012085,
    "wires": [
        []
    ]
},
{
```

```
    "id": "9d8b7b8f677e062f",
    "type": "function",
    "z": "88f0bba260c26401",
    "name": "= 4 : System In Use",
    "func": "msg.payload = \"System is used by other user.\";\nreturn msg;",
    "outputs": 1,
    "noerr": 0,
    "x": 792.4443283081055,
    "y": 213.12152862548828,
    "wires": [
      [
        "ad50aac197858fff"
      ]
    ]
  },
  {
    "id": "84bbbbc8193fcbb2",
    "type": "function",
    "z": "88f0bba260c26401",
    "name": "Detect Session Timer",
    "func": "var sessionTimer =  flow.get(\"sessionTimer\") || 0; \nvar currTime = Date.now();\nvar SESSION_TIMEOUT = 20000; //20 secs\n\nif ( sessionTimer === 0 /* */ ) {\n msg.payload = 2;\n} else {\n    if ( currTime - sessionTimer > SESSION_TIMEOUT ) {\n msg.payload = 0;  \n    } else {\n      msg.payload = 1;        \n    }\n}\nreturn msg;",
    "outputs": 1,
    "timeout": "",
    "noerr": 0,
    "initialize": "",
    "finalize": "",
    "libs": [],
```

```
    "x": 406.00003814697266,
    "y": 314.00000762939453,
    "wires": [
      [
        "3e6db22a3b5115b7"
      ]
    ]
  },
  {
    "id": "1cbef793c1a5f4d3",
    "type": "inject",
    "z": "88f0bba260c26401",
    "name": "Timer",
    "repeat": "3",
    "crontab": "",
    "once": false,
    "onceDelay": 0.1,
    "topic": "",
    "payload": "",
    "payloadType": "date",
    "x": 218.00000762939453,
    "y": 347.99999237060547,
    "wires": [
      [
        "84bbbbc8193fcbb2",
        "5bd21c2be501f56e"
      ]
    ]
  },
```

```
{
    "id": "3e6db22a3b5115b7",
    "type": "switch",
    "z": "88f0bba260c26401",
    "name": "",
    "property": "payload",
    "propertyType": "msg",
    "rules": [
        {
            "t": "eq",
            "v": "0",
            "vt": "str"
        },
        {
            "t": "eq",
            "v": "1",
            "vt": "str"
        },
        {
            "t": "eq",
            "v": "2",
            "vt": "str"
        }
    ],
    "checkall": "true",
    "repair": false,
    "outputs": 3,
    "x": 576.000072479248,
    "y": 312.00000762939453,
```

```
    "wires": [
      [
        "4e7de052e721025c"
      ],
      [
        "a1bfaafffc087548"
      ],
      [
        "5a8e16a2399ed6f5"
      ]
    ]
  },
  {
    "id": "5bd21c2be501f56e",
    "type": "function",
    "z": "88f0bba260c26401",
    "name": "Calculating Remaining Time (Debug)",
    "func": "var sessionTimer =  flow.get(\"sessionTimer\") || 0; \nvar currTime = Date.now();\nvar remainingSecs = Math.floor((20000 - (currTime - sessionTimer))/1000) + 1;\n\nif ( sessionTimer == 0 /* Inactive, No user signed in */ ) {\n    return null;\n} else {\n    \n    if ( remainingSecs <= 7 ) msg.payload = \"Remaining : \" + remainingSecs + \" secs\";  \n    else return null;\n}\n\nmsg.socketid = flow.get(\"clientid\") || \"B1234\";\nreturn msg;",
    "outputs": 1,
    "timeout": "",
    "noerr": 0,
    "initialize": "",
    "finalize": "",
    "libs": [],
    "x": 456.0000305175781,
    "y": 402.00002002716064,
```

```
    "wires": [
      [
        "7366aa25af68881c"
      ]
    ]
  },
  {
    "id": "4e7de052e721025c",
    "type": "function",
    "z": "88f0bba260c26401",
    "name": "Time-Out",
    "func": "/* activate session timer */\nvar sessionTimer =  flow.get(\"sessionTimer\") || 0;
\nflow.set(\"sessionTimer\", 0);\n\nmsg.socketid = flow.get(\"clientid\") ||
undefined;\nmsg.payload = \"Session Expired! Please singin again!\";\nreturn msg;",
    "outputs": 1,
    "noerr": 0,
    "x": 731.9999847412109,
    "y": 285.0000114440918,
    "wires": [
      [
        "603c2ffdad9eaf2b",
        "70396d82b2174cbf"
      ]
    ]
  },
  {
    "id": "a1bfaafffc087548",
    "type": "function",
    "z": "88f0bba260c26401",
    "name": "Sensor/History Goup",
```

```
    "func": "var msg = {};\nmsg.socketid = flow.get(\"clientid\") || undefined;\nmsg.payload = { group: {\n    show : [\"Dashboard_SensorData\", \"Dashboard_History\"],\n    hide : [\"Dashboard_Signin\"]\n}\n};\nreturn msg;",
    "outputs": 1,
    "noerr": 0,
    "x": 773.5000305175781,
    "y": 326.00000381469727,
    "wires": [
      [
        "55db954467dc40b6"
      ]
    ]
  },
  {
    "id": "5a8e16a2399ed6f5",
    "type": "function",
    "z": "88f0bba260c26401",
    "name": "Signin Goup",
    "func": "var msg = {};\nmsg.payload = { group: {\n    hide : [\"Dashboard_SensorData\", \"Dashboard_History\"],\n    show : [\"Dashboard_Signin\"]\n}\n};\nreturn msg;",
    "outputs": 1,
    "noerr": 0,
    "x": 744.5000915527344,
    "y": 367.0000419616699,
    "wires": [
      [
        "707f237da178f2be"
      ]
    ]
  },
```

```
{
    "id": "7366aa25af68881c",
    "type": "ui_toast",
    "z": "88f0bba260c26401",
    "position": "bottom right",
    "displayTime": "1",
    "highlight": "",
    "outputs": 0,
    "ok": "OK",
    "cancel": "",
    "topic": "Timer",
    "name": "Display Remaining Time",
    "x": 739.7222023010254,
    "y": 401.99999237060547,
    "wires": []
},
{
    "id": "603c2ffdad9eaf2b",
    "type": "ui_toast",
    "z": "88f0bba260c26401",
    "position": "dialog",
    "displayTime": "3",
    "highlight": "",
    "sendall": true,
    "outputs": 1,
    "ok": "OK",
    "cancel": "",
    "raw": false,
    "className": "",
```

```
    "topic": "Session Timeout",
    "name": "Time-Out Dialog",
    "x": 919.500114440918,
    "y": 251.0000114440918,
    "wires": [
      []
    ]
  },
  {
    "id": "70396d82b2174cbf",
    "type": "function",
    "z": "88f0bba260c26401",
    "name": "Sign-In Redirection",
    "func": "var msg = {};\n\nmsg.socketid = flow.get(\"clientid\") || undefined;\nmsg.payload = { group: {\n    hide : [\"Dashboard_SensorData\", \n          \"Dashboard_History\"],\n    show : [\"Dashboard_Signin\"]\n}\n};\n\nflow.set(\"clientid\", undefined);\nreturn msg;",
    "outputs": 1,
    "noerr": 0,
    "x": 930.0000228881836,
    "y": 288.00000762939453,
    "wires": [
      [
        "32095b3be68ddb26"
      ]
    ]
  },
  {
    "id": "55db954467dc40b6",
    "type": "ui_ui_control",
    "z": "88f0bba260c26401",
```

```
    "name": "Stay in Sensor Group",
    "x": 1076.500099182129,
    "y": 326.0000057220459,
    "wires": [
      []
    ]
  },
  {
    "id": "707f237da178f2be",
    "type": "ui_ui_control",
    "z": "88f0bba260c26401",
    "name": "Go to Signin Group",
    "x": 1064.5002479553223,
    "y": 364.0000419616699,
    "wires": [
      []
    ]
  },
  {
    "id": "32095b3be68ddb26",
    "type": "ui_ui_control",
    "z": "88f0bba260c26401",
    "name": "Go to Signin Group",
    "x": 1126.5000324249268,
    "y": 286.99999618530273,
    "wires": [
      []
    ]
  },
```

```
{
    "id": "b82da486.9fc8d8",
    "type": "ui_group",
    "name": "Signin",
    "tab": "d65502b1.ee517",
    "order": 1,
    "disp": true,
    "width": "6",
    "collapse": false,
    "className": ""
},
{
    "id": "c35e46a8.b04ce8",
    "type": "ui_group",
    "name": "SensorData",
    "tab": "d65502b1.ee517",
    "order": 2,
    "disp": true,
    "width": "6",
    "collapse": false
},
{
    "id": "4de9506d.e7364",
    "type": "ui_group",
    "name": "History",
    "tab": "d65502b1.ee517",
    "order": 3,
    "disp": true,
    "width": "6",
```

```
        "collapse": false
    },
    {
        "id": "d65502b1.ee517",
        "type": "ui_tab",
        "name": "Dashboard",
        "icon": "dashboard",
        "order": 1
    }
]
```