

INTERNET OF THINGS(IOT)

SMART BILLING SYSTEM FOR WATER SUPPLIERS

NODE-RED CODE:

```
[
  {
    "id": "b4cebfd261883356",
    "type": "tab",
    "label": "Flow 7",
    "disabled": false,
    "info": "",
    "env": []
  },
  {
    "id": "fbbb78df6cc07468",
    "type": "ibmiot out",
    "z": "b4cebfd261883356",
    "authentication": "apiKey",
    "apiKey": "",
    "outputType": "cmd",
    "deviceId": "12345",
    "deviceType": "streetlight",
    "eventCommandType": "test",
    "format": "String",
    "data": "Data",
    "qos": 0,
    "name": "IBM IoT",
    "service": "registered",
    "x": 1100,
    "y": 160,
    "wires": []
  },
  {
    "id": "f153cef746832e9c",
    "type": "debug",
    "z": "b4cebfd261883356",
    "name": "debug 12",
    "active": true,
    "tosidebar": true,
    "console": false,
```

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    "tostatus": false,
    "complete": "false",
    "statusVal": "",
    "statusType": "auto",
    "x": 360,
    "y": 300,
    "wires": []
  },
  {
    "id": "a10d8fbaaa72435e",
    "type": "ibmiot out",
    "z": "b4cebfd261883356",
    "authentication": "apiKey",
    "apiKey": "1fa68f6f6ed1ebcf",
    "outputType": "cmd",
    "deviceId": "12345",
    "deviceType": "Relay",
    "eventCommandType": "test",
    "format": "String",
    "data": "Data",
    "qos": 0,
    "name": "IBM IoT",
    "service": "registered",
    "x": 580,
    "y": 340,
    "wires": []
  },
  {
    "id": "4653cc0a16b48f37",
    "type": "ibmiot in",
    "z": "b4cebfd261883356",
    "authentication": "apiKey",
    "apiKey": "1fa68f6f6ed1ebcf",
    "inputType": "evt",
    "logicalInterface": "",
    "ruleId": "",
    "deviceId": "12345",
    "applicationId": "",
    "deviceType": "Relay",
    "eventType": "+",
    "commandType": "",
    "format": "json",
    "name": "IBM IoT",
    "service": "registered",
    "allDevices": "",
    "allApplications": "",
    "allDeviceTypes": "",

```

```

    "allLogicalInterfaces": "",
    "allEvents": true,
    "allCommands": "",
    "allFormats": "",
    "qos": 0,
    "x": 170,
    "y": 120,
    "wires": [
        [
            "9d6c07e5afd023a7",
            "208caa2c346590f7"
        ]
    ]
},
{
    "id": "9d6c07e5afd023a7",
    "type": "debug",
    "z": "b4cebfd261883356",
    "name": "debug 13",
    "active": true,
    "tosidebar": true,
    "console": false,
    "tostatus": false,
    "complete": "payload",
    "targetType": "msg",
    "statusVal": "",
    "statusType": "auto",
    "x": 500,
    "y": 140,
    "wires": []
},
{
    "id": "208caa2c346590f7",
    "type": "function",
    "z": "b4cebfd261883356",
    "name": "motor bill",
    "func": "msg.payload=msg.payload.motorbill\nif(msg.payload==0){\n\nmsg.payload=\"The motor is switched on!\"+\"->Billing started\";\n}\nelse{\n\nmsg.payload=\"The motor is switched off!\"+\"->Elapsed motor bill\nis:\"+msg.payload+\"RUPEES\";\n}\nreturn msg;",
    "outputs": 1,
    "noerr": 0,
    "initialize": "",
    "finalize": "",
    "libs": [],
    "x": 320,
    "y": 200,

```

```

    "wires": [
      [
        "6507a4e5c5e4e715"
      ]
    ]
  },
  {
    "id": "6507a4e5c5e4e715",
    "type": "ui_text",
    "z": "b4cebfd261883356",
    "group": "b7771ab55bf3a9e9",
    "order": 3299,
    "width": 0,
    "height": 0,
    "name": "",
    "label": "Motor Bill",
    "format": "{{msg.payload}}",
    "layout": "col-center",
    "className": "",
    "x": 580,
    "y": 240,
    "wires": []
  },
  {
    "id": "a6c3cc3a889e83fb",
    "type": "ui_switch",
    "z": "b4cebfd261883356",
    "name": "",
    "label": "SWITCH FOR MOTOR",
    "tooltip": "",
    "group": "b7771ab55bf3a9e9",
    "order": 1,
    "width": "15",
    "height": "4",
    "passthru": true,
    "decouple": "false",
    "topic": "topic",
    "topicType": "msg",
    "style": "",
    "onvalue": "true",
    "onvalueType": "bool",
    "onicon": "",
    "oncolor": "",
    "offvalue": "false",
    "offvalueType": "bool",
    "officon": "",
    "offcolor": "",
  }

```

```
"animate": false,
"className": "",
"x": 340,
"y": 440,
"wires": [
  [
    "a10d8fbaaa72435e",
    "f153cef746832e9c"
  ]
]
},
{
  "id": "1fa68f6f6ed1ebcf",
  "type": "ibmiot",
  "name": "apikey",
  "keepalive": "60",
  "serverName": "1z668o.messaging.internetofthings.ibmcloud.com",
  "cleansession": true,
  "appld": "",
  "shared": false
},
{
  "id": "b7771ab55bf3a9e9",
  "type": "ui_group",
  "name": "Motor Switch and Bill",
  "tab": "fac361559fed2381",
  "order": 1,
  "disp": true,
  "width": "22",
  "collapse": false,
  "className": ""
},
{
  "id": "fac361559fed2381",
  "type": "ui_tab",
  "name": "Smart Water Billing System",
  "icon": "dashboard",
  "disabled": false,
  "hidden": false
}
]
```