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Activity 13 embedded system

Part A: NodeRED and MongoDB
Exercise 1: What is the version of your MongoDB?
Your result:

```
cc@cc-VirtualBox:~$ mongo --version
MongoDB shell version v3.6.8
git version: 8e540c0b6db93ce994cc548f000900bdc740f80a
OpenSSL version: OpenSSL 1.1.1f  31 Mar 2020
allocator: tcmalloc
modules: none
build environment:
    distarch: x86_64
    target_arch: x86_64
cc@cc-VirtualBox:~$
```

Exercise 2: Can you check the ouput of the following command? mongo --eval 'db.runCommand({ connectionStatus: 1 })
Your result:

```
cc@cc-VirtualBox:~$ mongo --eval 'db.runCommand({ connectionStatus: 1})'
MongoDB shell version v3.6.8
connecting to: mongodb://127.0.0.1:27017
Implicit session: session { "id" : UUID("052d962a-5b7d-4002-a64a-dca16fd910b5")
}
MongoDB server version: 6.0.3
WARNING: shell and server versions do not match
{
        "authInfo" : {
                "authenticatedUsers" : [ ],
                "authenticatedUserRoles" : [ ]
        },
        "ok" : 1
}
cc@cc-VirtualBox:~$
```

Continue the flow from Activity11 with ESP32 and AHT20. Do the following instructions: 1. Install node-red-contrib-mongodb and node-red-node-mongodb at Manage Palette 2. import Activity13-ESP32-AHT20-NodeRED-MongoDB.txt 3. Add “Mongodb out” from Temperature and Humidity with the properties of 4. Find out the following results on your mongoDB. Go to Ubuntu terminal $ mongo > use Activity13db > db.Temperature.find() > db.Humidity.find()
Your result:

Part B: ESP32 & Firebase

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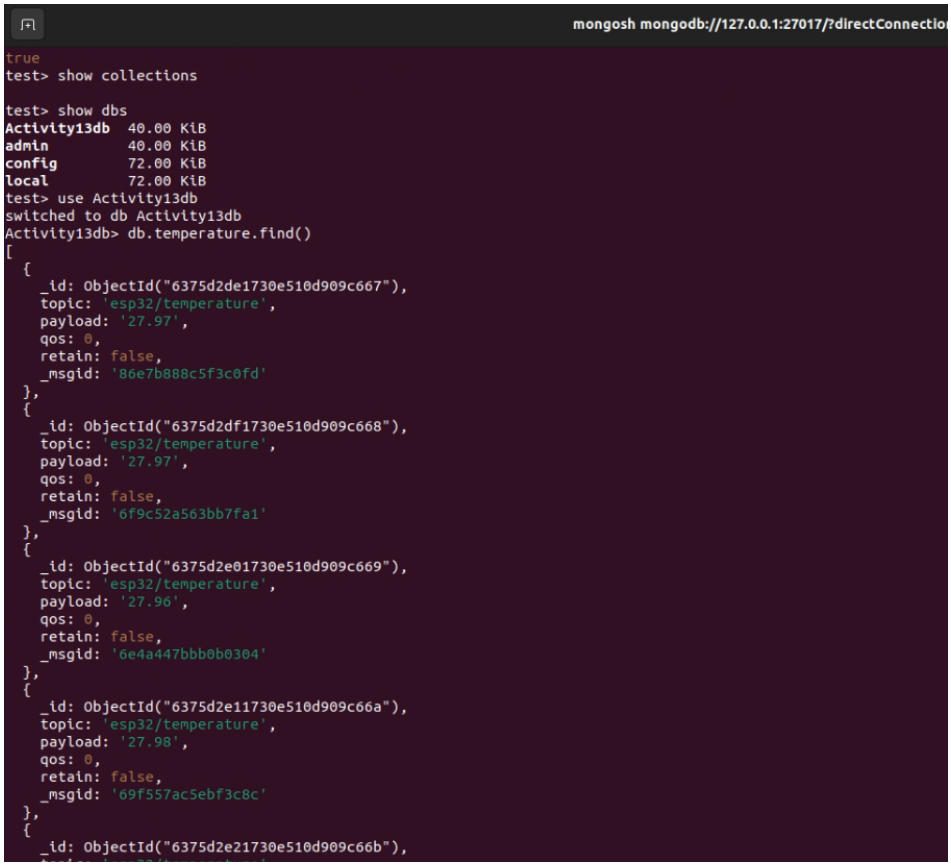
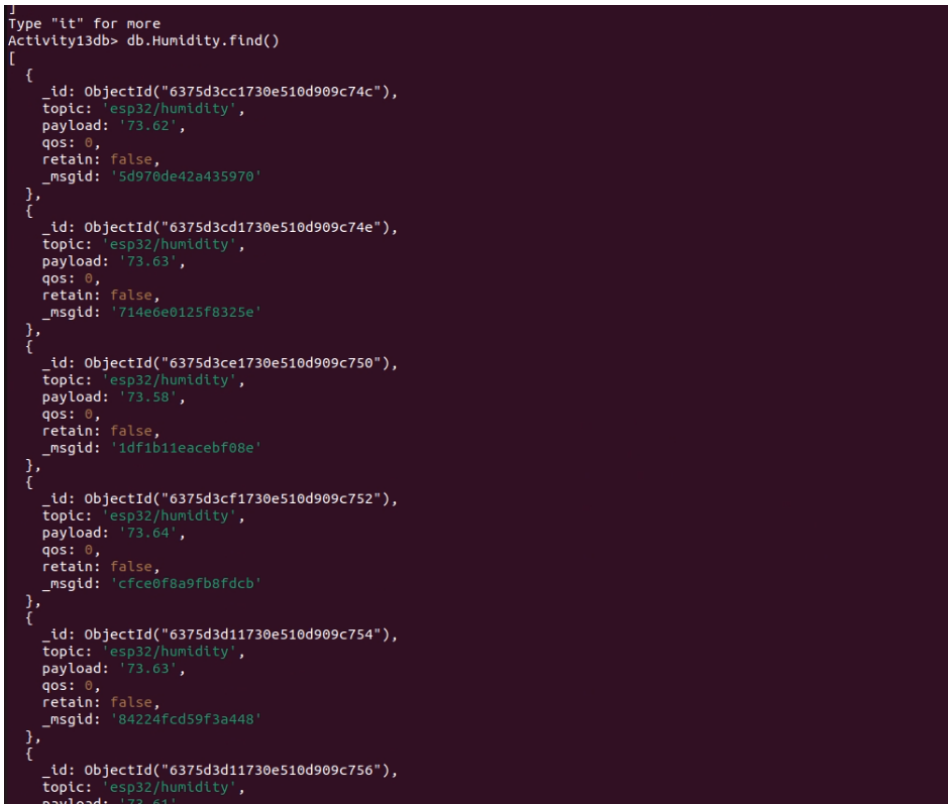


```
mongosh mongodb://127.0.0.1:27017/?directConnectio
true
test> show collections

test> show dbs
Activity13db  40.00 KiB
admin         40.00 KiB
config        72.00 KiB
local         72.00 KiB
test> use Activity13db
switched to db Activity13db
Activity13db> db.temperature.find()
[
  {
    _id: ObjectId("6375d2de1730e510d909c667"),
    topic: 'esp32/temperature',
    payload: '27.97',
    qos: 0,
    retain: false,
    _msgid: '86e7b888c5f3c0fd'
  },
  {
    _id: ObjectId("6375d2df1730e510d909c668"),
    topic: 'esp32/temperature',
    payload: '27.97',
    qos: 0,
    retain: false,
    _msgid: '6f9c52a563bb7fa1'
  },
  {
    _id: ObjectId("6375d2e01730e510d909c669"),
    topic: 'esp32/temperature',
    payload: '27.96',
    qos: 0,
    retain: false,
    _msgid: '6e4a447bbb0b0304'
  },
  {
    _id: ObjectId("6375d2e11730e510d909c66a"),
    topic: 'esp32/temperature',
    payload: '27.98',
    qos: 0,
    retain: false,
    _msgid: '69f557ac5ebf3c8c'
  },
  {
    _id: ObjectId("6375d2e21730e510d909c66b"),
```



```
]
Type "it" for more
Activity13db> db.Humidity.find()
[
  {
    _id: ObjectId("6375d3cc1730e510d909c74c"),
    topic: 'esp32/humidity',
    payload: '73.62',
    qos: 0,
    retain: false,
    _msgid: '5d970de42a435970'
  },
  {
    _id: ObjectId("6375d3cd1730e510d909c74e"),
    topic: 'esp32/humidity',
    payload: '73.63',
    qos: 0,
    retain: false,
    _msgid: '714e6e0125f8325e'
  },
  {
    _id: ObjectId("6375d3ce1730e510d909c750"),
    topic: 'esp32/humidity',
    payload: '73.58',
    qos: 0,
    retain: false,
    _msgid: '1df1b11eacebf08e'
  },
  {
    _id: ObjectId("6375d3cf1730e510d909c752"),
    topic: 'esp32/humidity',
    payload: '73.64',
    qos: 0,
    retain: false,
    _msgid: 'cfce0f8a9fb8fdcb'
  },
  {
    _id: ObjectId("6375d3d11730e510d909c754"),
    topic: 'esp32/humidity',
    payload: '73.63',
    qos: 0,
    retain: false,
    _msgid: '84224fcd59f3a448'
  },
  {
    _id: ObjectId("6375d3d11730e510d909c756"),
    topic: 'esp32/humidity',
```

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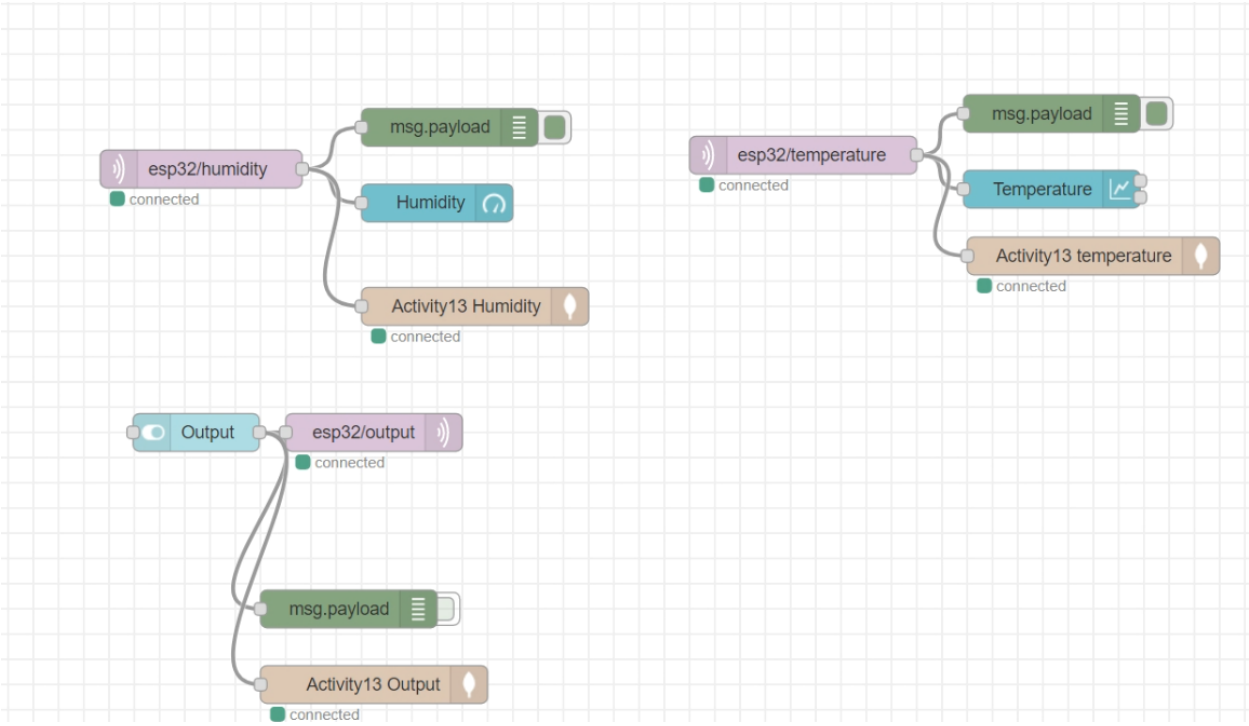

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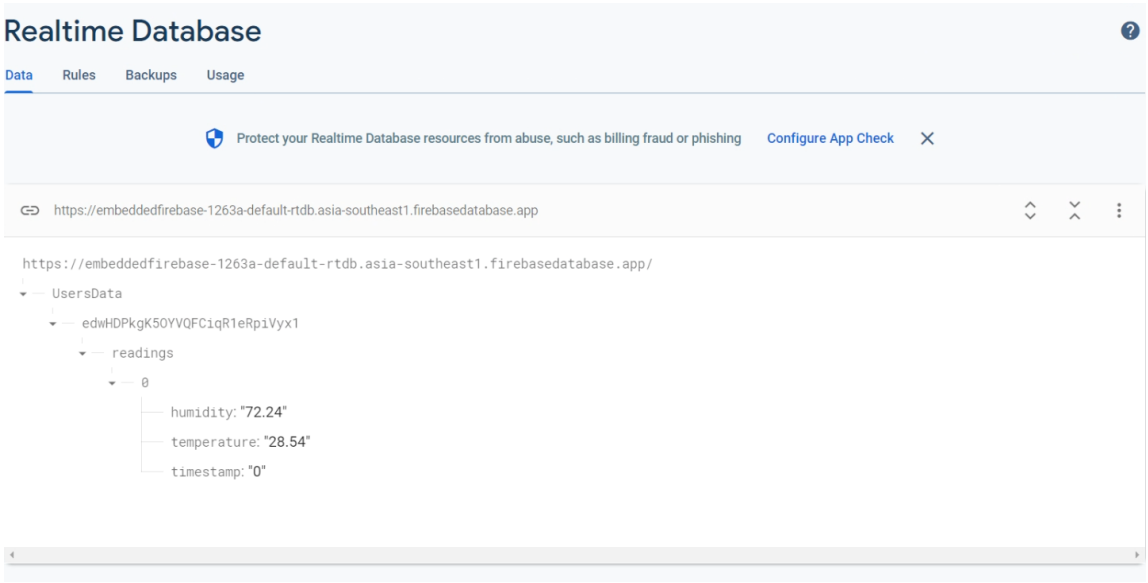
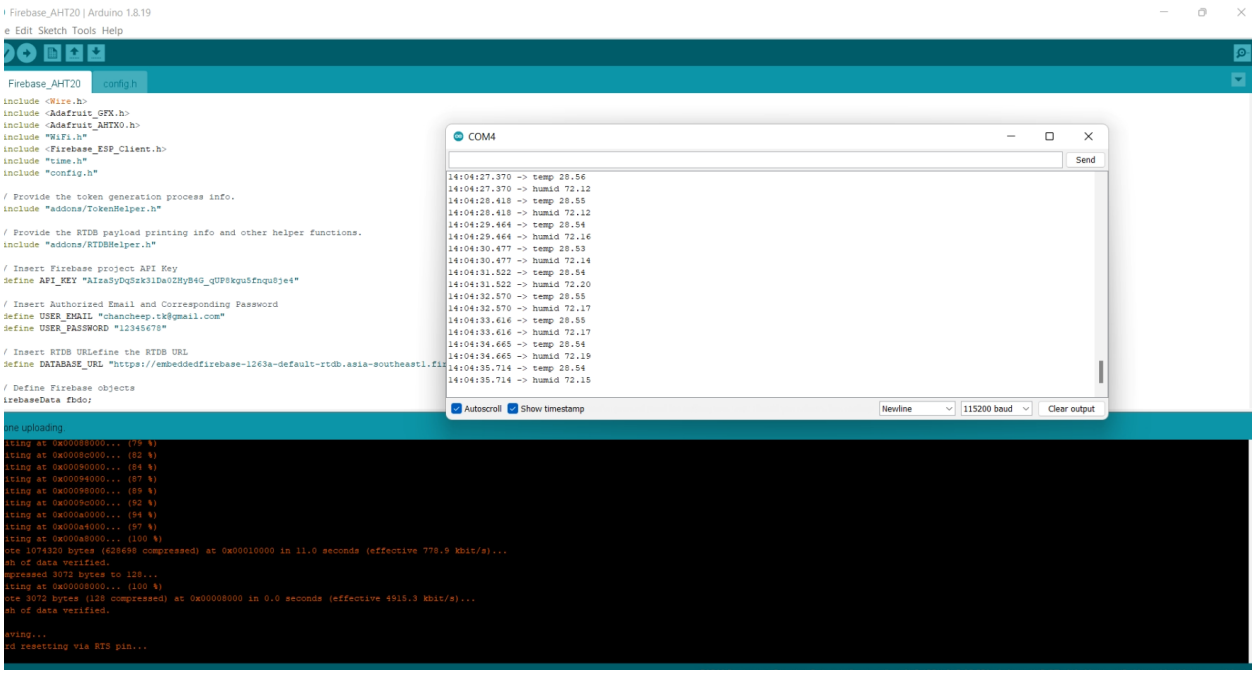
Part B: ESP32 & Firebase Process Flow
Your result:





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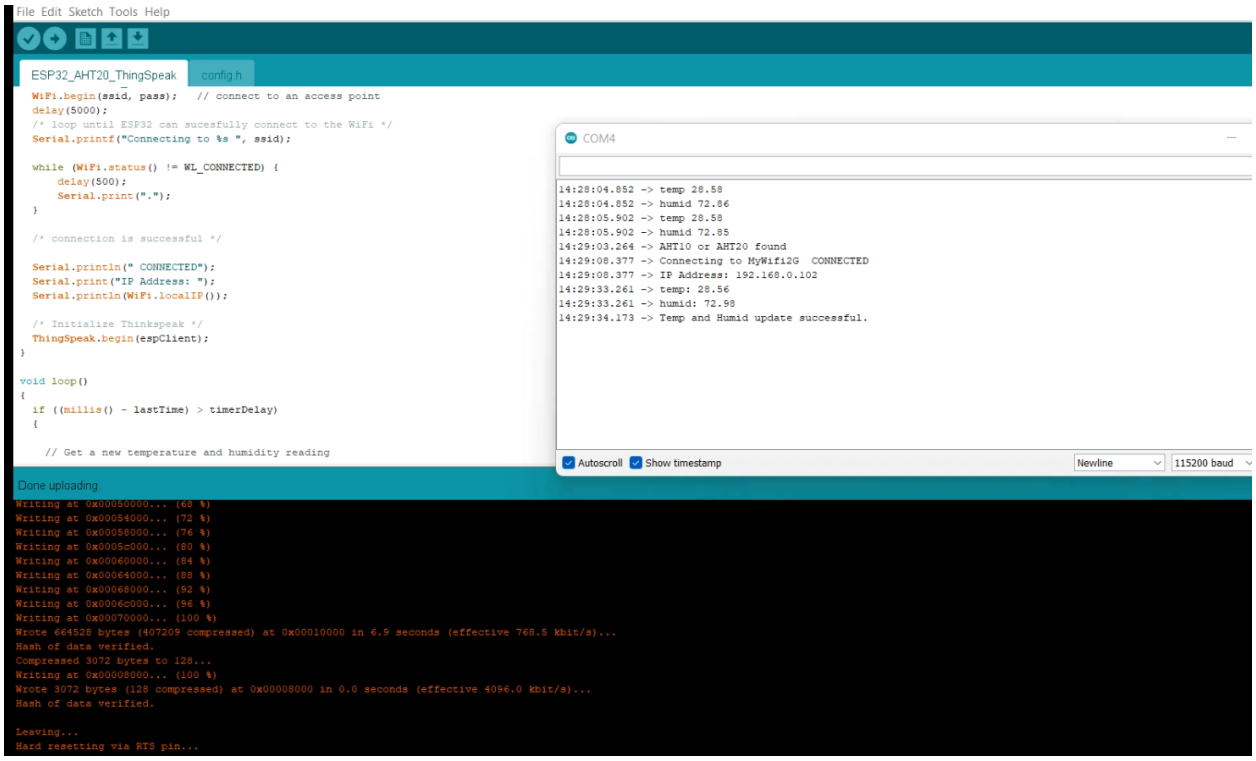
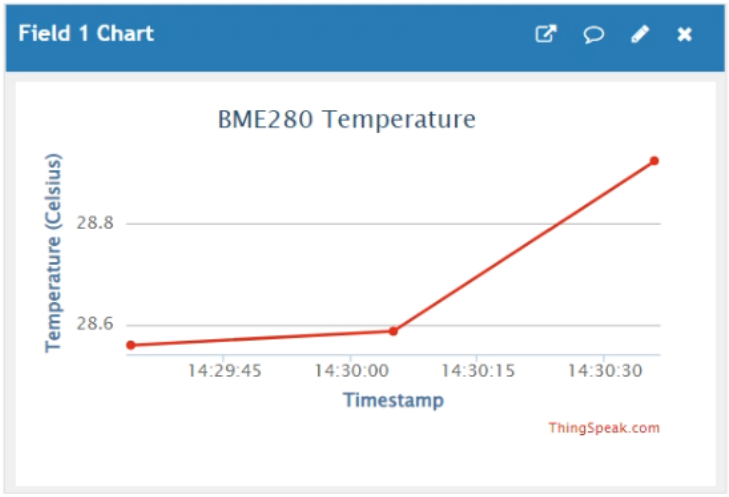
Part C: ESP32 & ThingSpeak

Your result:



Channel Stats

Created: 6 minutes ago
Last entry: less than a minute ago
Entries: 3



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Sending Multiple Fields (Temperature, and Humidity)
Your result: