

Inlämnings uppgift G nivå

Julia Gu

Azure konto

- skapa Azure konto - pay as you go
- skapa IoT hub
- skapa cosmos DB
- skapa Azure function

Recent resources

Name



juliaiothubdemo1



Azure subscription 1



juliacosmosdemo1



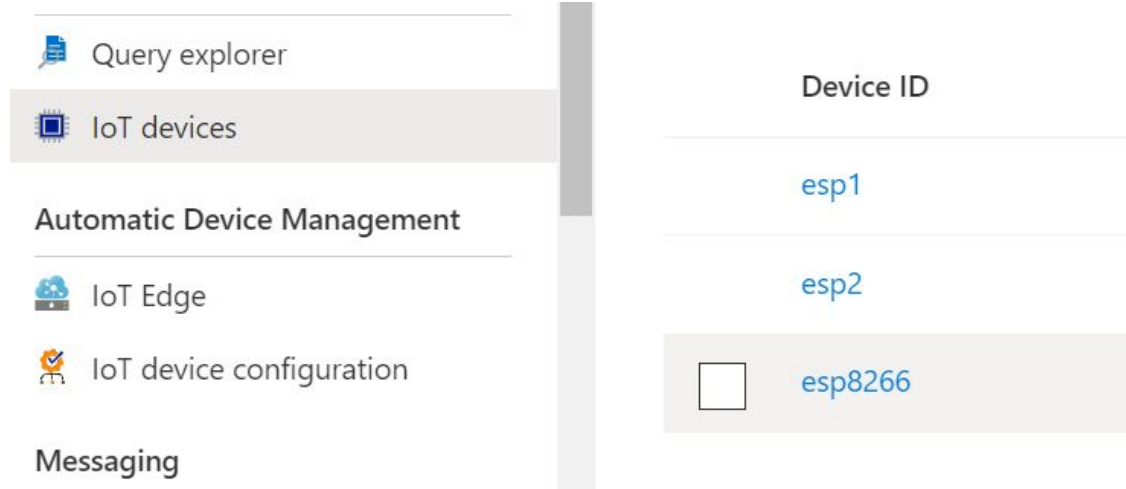
juliafunctiondemo1



GROUP1

Arduino sketch -- C++

- använda device esp32
- skapa device på IoT hub
- sketch använder Wifi, IoT Hub, DHT, json, epochtime lib
- git ignore securities.h
- kör sketch så att IoT Hub kan få DHT meddelande från esp32



Visual Studio 2019 -- C#

- skapa projekt för Azure function
- skriva IoT Hub connection på json filen
- skapa två metoder: SaveToCosmos och GetAllFromCosmosDb(senaste 10)
- kör SaveToCosmos för att fånga meddelande från IoT Hub och skicka till cosmos DB som json filen
- sen kör GetAllFromCosmosDb för att kan få hela data från cosmos DB
- när lokal kör success, sen kan publicera till Azure. Då Azure kan köra funktion automatiskt

Visual Studio Code -- Javascript

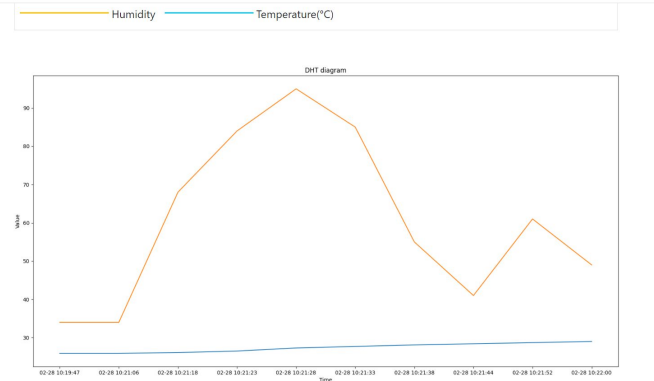
- använda React ramverk
- bygga frontend sida att anropa
GetAllFromCosmosDb
api från Azure
- kan visa tabel för DHT
- kan visa diagram för DHT

Inlämningskrav Table Diagram

#	DeviceId	Timestamp	Temperature	Humidity
e9dc08b7-3968-4961-8dc0-17b70ea0b3b9	esp2	2021-02-28 10:22:00	29	49
f65bb877-7945-4169-95f2-85458413d9e4	esp2	2021-02-28 10:21:52	28.7	61
b0ac80df-5eb8-46f0-a143-310164a00222	esp2	2021-02-28 10:21:44	28.4	41
b789bf69-2dff-4c58-9a0e-4d5d71b71ede	esp2	2021-02-28 10:21:38	28.1	55
14790f9b-bcc2-405a-ae1-6407c573497c	esp2	2021-02-28 10:21:33	27.7	85
62b940d3-37e1-4223-b4d6-e6e91391b09e	esp2	2021-02-28 10:21:28	27.3	95
529ab316-0392-4eda-9ba5-72c3e48cdc8d	esp2	2021-02-28 10:21:23	26.5	84
de529b81-f65a-4493-be1c-4378dee509e3	esp2	2021-02-28 10:21:18	26.1	68
b18aa583-946c-485d-96cf-d4eb635b4c75	esp2	2021-02-28 10:21:06	25.9	34
cbfe6d04-fed9-4d61-92ca-1da5d09fb813	esp2	2021-02-28 10:19:47	25.9	34

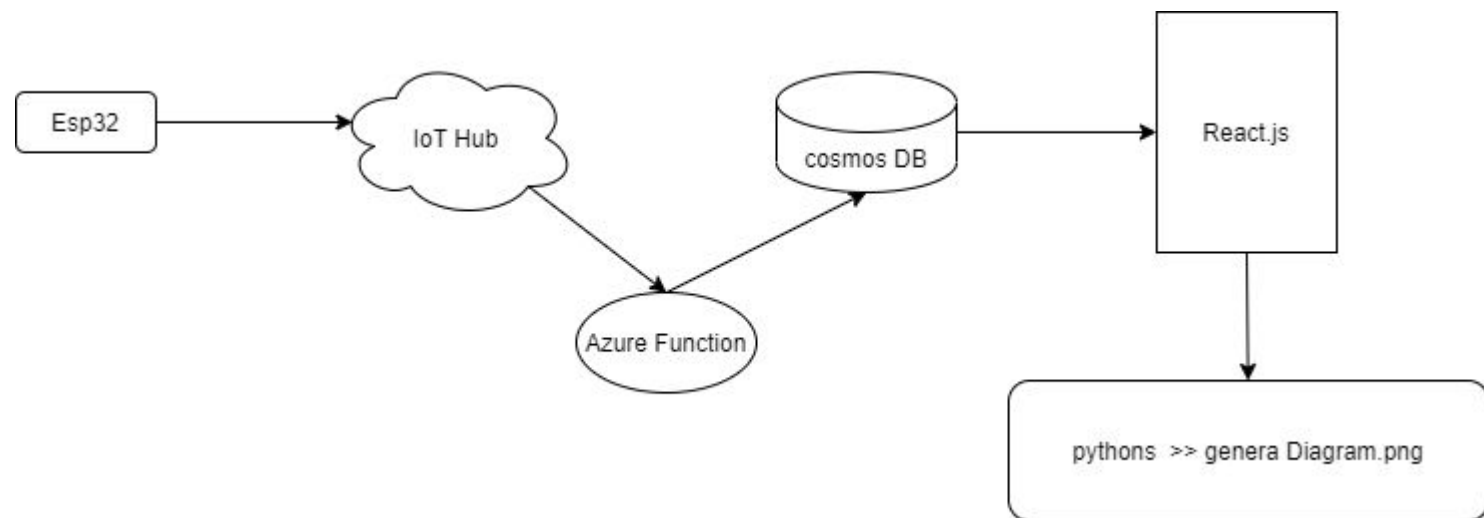
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Source (public repo): <https://github.com/JuliaGu808>



Pycharm -- python

- skriva python kod att generera diagram
- använda flask, matplotlib, numpy lib
- spara diagram till en png så att frontend kan visas på webbsidan



COM9

29.90
1.10
Info: >>>IoTHubClient_LL_SendEventAsync accepted message for transmission
Info: >>>Confirmation[5] received for message tracking id = 5 with result Confirmed
29.90
31.00
1.10
Info: >>>IoTHubClient_LL_SendEventAsync accepted message for transmission
Info: >>>Confirmation[6] received for message tracking id = 6 with result Confirmed
28.80
29.90
1.10
Info: >>>IoTHubClient_LL_SendEventAsync accepted message for transmission
Info: >>>Confirmation[7] received for message tracking id = 7 with result Confirmed

id

3c53a...
99e8...
ca7c7...
0911...
0472...
f0666...

2
3
4
5
6
7
8
9
10
11
12
13

```
"deviceId": "esp2",  
"temperature": 28.8,  
"humidity": 33,  
"school": "Nackademin IoT 20",  
"name": "Julia Gu",  
"ts": 1614560324,  
"id": "f066695b-ed38-44fe-ac10-6  
" _rid": "W1VyAPSvi34ZAAAAAAAAAA=  
" _self": "dbs/W1VyAA==/colls/W1V  
" _etag": "\"0b007e3b-0000-0d00-0  
" _attachments": "attachments/",  
" _ts": 1614560324
```

< >

☒ Autoscroll ☐ Show timestamp Newline 115200 baud Clear output

19
20 [IoTHubTrigger("messages/events", Connection = "IoTHu
CosmosDB(
100 % No issues found

Locals
Search (Ctrl+E) Search Depth:
Name Value Type

```
[2021-03-01T00:57:34.866Z] Executed 'SaveToCosmos' (Succeeded, Id=bd0c4f2b-699e-4f6d-89ca-  
leaf, Duration=90ms)  
[2021-03-01T00:58:46.753Z] Executing 'SaveToCosmos' (Reason='(null)', Id=82074ab4-82a5-45f  
8a820440b6)  
[2021-03-01T00:58:46.760Z] Trigger Details: PartitionId: 0, Offset: 77384, EnqueueTimeUtc: 2  
021-03-01T00:58:44.3730000Z, SequenceNumber: 173, Count: 1  
[2021-03-01T00:58:46.772Z] C# IoT Hub trigger function processed a message: {"deviceId": "e  
sp2", "temperature": 28.8, "humidity": 33, "school": "Nackademin IoT 20", "name": "Julia Gu", "ts":  
1614560324}  
[2021-03-01T00:58:46.822Z] Executed 'SaveToCosmos' (Succeeded, Id=82074ab4-82a5-45f0-bf13-  
278a820440b6, Duration=71ms)
```