

InStep Project: Creating HTTP Triggers to manage Snowflake gas meter table data

1. Steps so far...	2
2. To-do	2
3. Weekly Targets	3
4. Scenario Testing	4

Steps so far...

- Learned from AZ-900 course
- Downloaded VS Code, Python 3.8
- Created an Azure account and a Snowflake account
- Learn about HTTPS protocol and practice implementing it with Python's 'requests' library
- Need to install Snowflake dependency libraries: [GitHub to the dependency list](#)
- Need to install Azure Function core tools: [Core Tools download](#)
- Instantiated an Azure Function to host code on Python 3.8, HTTPSTrigger template
- Learn to use snowflake and its various database creation actions
- CCD Tickets to download various software unresolved so create Azure VM and download all required software on it with no restrictions
- Python 3.9, VS Code, Azure Functions Core Tools, Chrome etc.
- Went to VS, created an HTTPTrigger in the workspace, and deployed it on an Azure Function
- Downloaded Postman
- Test that SnowflakeEndpoint (Function App) page is live, the HTTPTrigger for GET is publicly available and works correctly.
- Create a Snowflake account and a Table to store employee details
- Download the Snowflake-connector-python library along with its required libraries on the VM
- Add the name of the library to the requirements.txt file
- Establish a connection to snowflake from a fresh python file
- Once able to establish a connection, get basic code to create, populate and read from snowflake tables. change table data from Python
- Integrate code into the GET HTTPTrigger so it is done automatically - be able to receive multiple parameters in one GET request, return all rows that match those parameters from the table
- Clean up the output and make sure it is displayed on separate lines
- Backed UP all code to a git repository
- Convert the output to a dictionary form, in JSON format so it can be used later on. Changed Response from a list to {}
- Each response must contain either a status_code (201+) or an error_code (501+) along with a message
- Create a POST HTTP trigger, configure it so that it only works with POST requests, add logic to check whether all 3 parameters are present in the request body. Validate the date of birth using the Datetime library. Add this library name to the requirements.txt file too.
- Finally, if all conditions are met, add a new row to the snowflake table and respond with a successful status code and message otherwise each validation step should return its own error code.
- Use KeyVault to log in/connect to the snowflake API so the code doesn't contain the programmer's password
- Terminal not working so test with 'func start --verbose' in cmd
- Change the GET response output so that it is returned nested within the JSON response
- POST should only accept request body and GET should only accept params
- Backed up files on Git again
- DELETE(removing), and PUT(editing information) following the same process as before, and add snowflake functionality to each, all on the same Function App
- Constantly tested everything using Postman
- Deployed all 4 triggers and test if they work
- Created new 4 new triggers now for actual meter data given by Anji
- Created and hard-coded (pattern matched) parts of a new POST trigger to populate a new snowflake table with given data
- Created GET function for this new data too, allowing users to also ask for all values within a given date range
- Finished POST trigger with extensive error handling
- Creating DELETE AND PUT triggers for this new meter data
- Understand Azure Vault.
- Follow lots of documentation to try to create a User-assigned identity, Managed identity, a key vault, a new secret, creating and retrieving this secret through Python code. downloading Azure CLI to work with azure commands in local terminal, downloaded libraries like Azure Identity and Azure-key vault-secrets
- Create a managed identity and grant it access to the KeyVault. Now connect the Azure function to the identity so it can access KeyVault
- Add client ID field to the default credentials referring to the managed identity in the Python code
- Copy over this code to all triggers
- Back up code again
- Move all data and triggers to a new Azure account due to trial expiring including all settings
- Create a system architecture diagram on draw.io

To-do

HTTPS Endpoint Project **PROJECT**

- ☐ Final Presentation
- ☒ Study other Azure services
- ☒ Create a System Architecture Diagram
- ☒ Create error and solution documentation
- ☒ Create scenario testing documentation
- ☒ Create new Azure account and move all settings and triggers over
- ☒ Backup All code on Github

Admin **ADMIN**

- ☐ Final presentation
- ☒ Update all documentation
- ☒ Prep for BizHacks
- ☒ Form BizHacks Team (send email)
- ☒ Create Mid-term presentation
- ☒ Update documentation of steps

- ✓ Implement keyvault access through managed identity into code
- ✓ Configure all access permissions so Function can access KV through managed identity
- ✓ Create a managed Identity
- ✓ Implement keyVault authentication
- ✓ Adjust PUT function for new data
- ✓ Adjust DELETE with new data
- ✓ Adjust POST to work with new data
- ✓ Get real data from Anji and adjust GET req code to work for it
- ✓ Deploy all 4 functions to Azure and test
- ✓ Back up everything on Git
- ✓ Extensive error handling covering all cases for all 4 triggers
- ✓ Create DELETE trigger functions
- ✓ Create PUT trigger function
- ✓ Update all status and error codes and keep a record of it
- ✓ Start working on the function
- ✓ Make sure function is live on public URLs
- ✓ Connect to snowflake table from python connector
- ✓ Get basic snowflake code down to create, populate and read tables
- ✓ Understand schema and cursor
- ✓ Integrate that snowflake code into GET request trigger
- ✓ Create a function for POST trigger
- ✓ Post trigger should work by itself
- ✓ Escalate Azure functions Core Tools download ticket
- ✓ Follow up on Snowflake connector lib download ticket
- ✓ Try Snowflake (create a database, warehouse, schema, table, role, like 1, external stage, file format, copy into)
- ✓ Create an Azure VM and download all req softwares

Weekly Targets

	Weekly Aim PROJECT	End Of Week Target
1	Learn about Azure and Snowflake	Finish AZ-900 course and try Snowflake 24 Jun 2022 COMPLETE
2	Finish courses and set up local Env	Finish VM local Env Set up 01 Jul 2022 COMPLETE
3	Resolve Env Set up issues using Azure VM + Create first Azure function + setup Snowflake connector	Get connected to Snowflake locally + Start on HTTP trigger 08 Jul 2022 COMPLETE
4	Finish all 4 HTTP triggers + Deploy code to Azure cloud and debug all issues	Finish testing and deploying first set of HTTP triggers 15 Jul 2022 COMPLETE
5	Create 4 new HTTP triggers adjusted to work for real meter data + Mid-term presentation	Finish testing and deploying second set of HTTP triggers 22 Jul 2022 COMPLETE
6	Set up Azure Managed Identity and Key Vault authentication + Create some documentation for the project	Finish project and start working on documentation and debugging 29 Jul 2022 COMPLETE

7	Finsh documentation + Study other Azure services	Finish the Project + explore other Azure services05 Aug 2022 COMPLETE
8	Work on final presentation + extensions and testing	Present Project + finish studying for AZ-900 certification12 Aug 2022 ONGOING

Scenario Testing

T e s t O b j e c t i v e	Input	Output
	<p>POST</p> <p>POST Trigger Works as expected when deployed on Azure Function</p>	
	<p>POST</p> <p>POST Trigger not given a Meter Number</p>	

POST

POST Trigger not provided an interval date

POST

POST Trigger not provided a valid date in the right format

POST

https://snowflakeendpoint.azurewebsites.net/api/POSTMETERDATA?code=NSzaYRgw1IU13F9_tGB69srYfx4sGAfSQW_GwA5Y6D7xAzFu-dzQhw== ...

Send

Params

Authorization

Headers (9)

Body

Pre-request Script

Tests

Settings

none

form-data

x-www-form-urlencoded

raw

binary

GraphQL

JSON

1

2

3

4

5

6

7

8

9

10

"MeterEventDateTime": "2023-06-06T00:00:00",

"MeterNumber": "M2",

"DeviceNumber": "TESTDEVICE",

"MeterType": "ELECTRICITYMETER",

"IntervalRegister": {

... "INT_00_VAL": "15",

... "INT_01_VAL": "122",

... "INT_02_VAL": "142"

Body

Cookie

Pretty

1

2

3

4

POST

https://snowflakeendpoint.azurewebsites.net/api/POSTMETERDATA?code=NSzaYRgw1IU13F9_tGB69srYfx4sGAfSQW_GwA5Y6D7xAzFu-dzQhw== ...

Send

Params

Authorization

Headers (9)

Body

Pre-request Script

Tests

Settings

none

form-data

x-www-form-urlencoded

raw

binary

GraphQL

JSON

1

2

3

4

5

6

7

8

9

10

"MeterEventDateTime": "2023-06-06T00:00:00",

"MeterNumber": "M2",

"DeviceNumber": "TESTDEVICE",

"MeterType": "ELECTRICITYMETER",

"IntervalDate": "2000-06-06",

"IntervalRegister": {

... "INT_00_VAL": "15",

... "INT_01_VAL": "122",

... "INT_02_VAL": "142"

Body

Cookie

Pretty

Raw

1

2

3

4

"IntervalDate": "2000-20-06",

"IntervalRegister": {

POST

POST Trigger not provided an entry for a date on which that meter number already has an entry in the table

```
1 {
2   "MeterEventDateTime": "2023-06-06T00:00:00",
3   "MeterNumber": "M7",
4   "DeviceNumber": "TESTDEVICE",
5   "MeterType": "ELECTRICITYMETER",
6   "IntervalDate": "2022-06-06",
7   "IntervalRegister": {
8     "INT_00_VAL": "15",
9     "INT_01_VAL": "122",
10    "INT_02_VAL": "142"
```

Row	METEREVENTDATE	METERNUMBER	DEVICENUMBER	METERTYPE	INTERVALDATE	INT_00_VAL	INT_01_VAL	INT_02_VAL	INT_03_VAL	INT_04_VAL	INT_05_VAL	INT_06_VAL
1	2022-06-06...	M7	TESTDEVICE	ELECTRICIT...	2022-06-06	112	112	122	122	5	5.34	1.34

```
1 {
2   "error":
3   "message":
```

POST

POST Trigger request not provided a MeterEventDateTime field

```
{
  "MeterNumber": "M7",
  "DeviceNumber": "TESTDEVICE",
  "MeterType": "ELECTRICITYMETER",
  "IntervalDate": "2022-06-06",
  "IntervalRegister": {
    "INT_00_VAL": "15",
    "INT_01_VAL": "122",
    "INT_02_VAL": "142"
```

```
1 {
2   "error":
3   "message":
```

<div>POST</div> <div>POST Trigger not provided a valid MeterEventDateTime in the right format</div>	<div>"MeterEventDateTime": "2023-13-07T25:00:00",</div>	<div><div>1234</div><div>{</div><div>"e1"</div><div>"me"</div></div>
<div>POST</div> <div>POST Trigger not provided a meter number field</div>	<div>1 {</div> <div>2 "MeterEventDateTime": "2022-06-07T00:00:00",</div> <div>3 "MeterNumber": "M7",</div> <div>4 "DeviceNumber": "TESTDEVICE",</div> <div>5</div> <div>6 "IntervalDate": "2022-06-07",</div> <div>7 "IntervalRegister": {</div> <div>8 "INT_00_VAL": "15",</div> <div>9 "INT_01_VAL": "122",</div> <div>10 "TNT 02 VAI " : "142"</div>	<div><div>1234</div><div>{</div><div>"</div><div>"</div><div>}</div></div>
<div>POST</div> <div>POST Trigger not provided a device number field</div>	<div>1 ✓ {</div> <div>2 "MeterEventDateTime": "2022-06-07T25:00:00",</div> <div>3 "MeterNumber": "M7",</div> <div>4</div> <div>5 "MeterType": "ELECTRICITYMETER",</div> <div>6 "IntervalDate": "2022-06-07",</div> <div>7 ✓ "IntervalRegister": {</div> <div>8 "INT_00_VAL": "15",</div> <div>9 "INT_01_VAL": "122",</div> <div>10 "TNT 02 VAI " : "142"</div>	<div><div>1234</div><div>{</div><div>"</div><div>"</div><div>}</div></div>

<div>POST</div> <div>POST Trigger not provided an interval register field</div>	<div>1 {</div> <div>2 "MeterEventDateTime": "2022-06-07T00:00:00",</div> <div>3 "MeterNumber": "M7",</div> <div>4 "DeviceNumber": "TESTDEVICE",</div> <div>5 "MeterType": "ELECTRICITYMETER",</div> <div>6 "IntervalDate": "2022-06-07"</div> <div>7 }</div>	<div>Body Cool</div> <div>Pretty</div> <div>1 {</div> <div>2</div> <div>3</div> <div>4 }</div>
<div>POST</div> <div>POST Trigger not provided an interval register with exactly 25 values</div>	<div>3 "MeterNumber": "M7",</div> <div>4 "DeviceNumber": "TESTDEVICE",</div> <div>5 "MeterType": "ELECTRICITYMETER",</div> <div>6 "IntervalDate": "2022-06-07",</div> <div>7 "IntervalRegister": {</div> <div>8 "INT_00_VAL": "15",</div> <div>9 "INT_01_VAL": "122",</div> <div>10 "INT_02_VAL": "142",</div> <div>11 "INT_03_VAL": "122",</div> <div>12 "INT_04_VAL": "5",</div> <div>13 .</div> <div>14 "INT_06_VAL": "1.34",</div> <div>15 "INT_07_VAL": "0",</div> <div>16 "INT_08_VAL": "1.34",</div> <div>17 "INT_09_VAL": "1.34",</div> <div>18 "INT_10_VAL": "1.34",</div>	<div>1 {</div> <div>2 "error":</div> <div>3 "message":</div> <div>4 }</div>

GET Trigger Works as expected when deployed on Azure Function given a range of dates

New Collection / Meter Readings Snowflake Endpoint / GET METER DATA

GET

https://snowflakeendpoint.azurewebsites.net/api/GETMETERDATA?code=T8Pr6H7WKRb0zr20eau-a83cMruk1QoeM52QNQInjAnAzFup8SxKA==&meterNumber=M7

Sending...

Params

Authorization

Headers (7)

Body

Pre-request Script

Tests

Settings

Cookies

☒ code

T8Pr6H7WKRb0zr20eau-a83cMruk1QoeM52QNQInjAnAzFu...

☒ meterNumber

M7

☒ start_intervalDate

2022-06-06

☒ end_intervalDate

2024-06-01

Row

METEREVENTID

METERNUMBER

DEVICENUMBER

METERTYPE

INTERVALDATE

INT_00_VAL

INT_01_VAL

INT_02_VAL

INT_03_VAL

INT_04_VAL

INT_05_VAL

INT_06_VAL

INT_07_VAL

INT_08_VAL

INT_09_VAL

INT_10_VAL

1

2022-06-06...

M7

TESTDEVICE

ELECTRICIT...

2022-06-06

112

112

122

122

5

5.34

1.34

0

1.34

1.34

0

2

2022-06-07...

M7

TESTDEVICE

ELECTRICIT...

2022-06-07

15

122

142

122

5

5

1.34

0

1.34

1.34

0

GET Trigger Works as expected when deployed on Azure Function given just a start date, no end date

☒ code

T8Pr6H7WKRb0zr20eau-a83cMruk1QoeM52QNQInjAnAzFu...

☒ meterNumber

M7

☒ start_intervalDate

2022-06-06

☐ end_intervalDate

2024-06-01

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19

Get Request not provided a member field

1 You have received a message from a friend who has just moved to a new house. The message is in a text box. The text box contains the following text: 'YYYY-MM-DD HH:MM:SS'. The text box is empty. The text box is located at the bottom of the page. The text box is located at the bottom of the page.

Cookies

Get Request not provided a start date field

1	{
2	
3	
4	}

Get Request not provided a valid start date

1	{
2	
3	
4	}

<div>GET</div> <div>Get Request not provided a start date in the right format</div>	<div><div><div><div>✓</div></div><div>start_intervalDate</div></div><div>2022/13/06</div></div>	<div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>}</div>												
<div>GET</div> <div>Get Request not provided a date and meter number for which no entry exists in the table</div>	<div><div>Params <div></div>AuthorizationHeaders (7)BodyPre-request ScriptTestsSettings</div><table><tr><td><div>✓</div></td><td>code</td><td>T8Pr6H7WKRb0zr20eau-a83cMruk1QoeM52QNQInjAnAzFu...</td></tr><tr><td><div>✓</div></td><td>meterNumber</td><td>M7</td></tr><tr><td><div>✓</div></td><td>start_intervalDate</td><td>2022-06-08</td></tr><tr><td><div></div></td><td>end_intervalDate</td><td>2024-06-01</td></tr></table></div>	<div>✓</div>	code	T8Pr6H7WKRb0zr20eau-a83cMruk1QoeM52QNQInjAnAzFu...	<div>✓</div>	meterNumber	M7	<div>✓</div>	start_intervalDate	2022-06-08	<div></div>	end_intervalDate	2024-06-01	<div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div> <div>}</div>
<div>✓</div>	code	T8Pr6H7WKRb0zr20eau-a83cMruk1QoeM52QNQInjAnAzFu...												
<div>✓</div>	meterNumber	M7												
<div>✓</div>	start_intervalDate	2022-06-08												
<div></div>	end_intervalDate	2024-06-01												

<div>UPDATE</div> <div>UPDATE Trigger Works as expected when deployed on Azure Function</div>	<div><div>New Collection / Meter Readings Snowflake Endpoint / UPDATE METER DATA</div><div><div>PUT</div><div>https://snowflakeendpoint.azurewebsites.net/api/UPDATEMETERDATA?code=n1e6xQW72WWX7Nq-KK5oEA1dJT9rg8aZLYlLbiw5cTAzFudqcMZw==...</div><div>Send</div></div><div><div>Params</div><div>Authorization</div><div>Headers (9)</div><div>Body</div><div>Pre-request Script</div><div>Tests</div><div>Settings</div></div><div><div>none</div><div>form-data</div><div>x-www-form-urlencoded</div><div>raw</div><div>binary</div><div>GraphQL</div><div>JSON</div></div><div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div><div>7</div><div>8</div><div>9</div><div>10</div><div>11</div><div>12</div><div>13</div><div>14</div><div>15</div><div>16</div><div>17</div><div>18</div><div>19</div></div><div><div>"MeterNumber": "M2",</div><div>"IntervalDate": "2023-06-06",</div><div>"IntervalRegister": {</div><div>... "INT_00_VAL": "123",</div><div>... "INT_01_VAL": "123",</div><div>... "INT_02_VAL": "000",</div><div>... "INT_03_VAL": "5",</div><div>... "INT_04_VAL": "5",</div><div>... "INT_05_VAL": "5.34",</div><div>... "INT_06_VAL": "1.34",</div><div>... "INT_07_VAL": "0",</div><div>... "INT_08_VAL": "1.34",</div><div>... "INT_09_VAL": "1.34",</div><div>... "INT_10_VAL": "0",</div><div>... "INT_11_VAL": "0",</div><div>... "INT_12_VAL": "5",</div><div>... "INT_13_VAL": "5",</div><div>... "INT_14_VAL": "5",</div></div></div> <div><div>Body</div><div>Cookies</div><div>H</div></div> <div><div>Pretty</div><div>Raw</div></div> <div><div>1</div><div>2</div><div>3</div><div>4</div></div> <div><div>"sta</div><div>"mes</div></div>
---	--

<div>UPDATE</div> <div>UPDATE Trigger not provided a valid interval date</div>	<div>"IntervalDate": "2023-13-06"</div>	<div>1 {</div> <div>2</div> <div>3</div> <div>4 }</div>
<div>UPDATE</div> <div>UPDATE Trigger not provided an interval date in the right format</div>	<div>"IntervalDate": "2023/06/06"</div>	<div>1 {</div> <div>2</div> <div>3</div> <div>4 }</div>
<div>UPDATE</div> <div>UPDATE Trigger not provided an interval register list of values</div>	<div>1 {</div> <div>2 "MeterNumber": "M2",</div> <div>3 "IntervalDate": "2022-06-06"</div> <div>4</div> <div>5 }</div>	<div>1 {</div> <div>2 "t</div> <div>3 "r</div> <div>4 }</div>

UPDATE

UPDATE Trigger not provided an interval register with all 25 values expected present in it

```
4  "IntervalRegister":{
5      "INT_00_VAL": "123",
6      "INT_01_VAL": "123",
7
8      "INT_03_VAL": "5",
9      "INT_04_VAL": "5",
10     "INT_05_VAL": "5.34",
11     "INT_06_VAL": "1.34",
12     "INT_07_VAL": "0",
13     "INT_08_VAL": "1.34",
14     "INT_09_VAL": "1.34",
15     "INT_10_VAL": "0",
16     "INT_11_VAL": "0",
17     "INT_12_VAL": "5",
```

```
1  {
2      "error_
3      "message
4      uns
```

UPDATE

UPDATE Trigger provided an update request for an entry that doesn't already exist in the table

```
1  {
2      "MeterNumber": "M4",
3      "IntervalDate": "2022-06-08",
4      "IntervalRegister":{
5          "INT_00_VAL": "123",
6          "INT_01_VAL": "123",
7          "INT_02_VAL": "000",
8          "INT_03_VAL": "5",
9          "INT_04_VAL": "5",
10         "INT_05_VAL": "5.34"
```

```
1  {
2
3
4  }
```

DELETE

DELETE Trigger Works as expected when deployed on Azure Function

Infosys InStep Project / Meter Readings Snowflake Endpoint / DELETE METER DATA

DELETEhttps://snowflakeendpoint.azurewebsites.net/api/DELETETERMETERDATA?code=_hHzYNY8_tBtSBREHEGI...Send

ParamsAuthorizationHeaders (9)BodyPre-request ScriptTestsSettings

noneform-datax-www-form-urlencodedrawbinaryGraphQLJSON

1{"meterNumber": "M2"}

ResultsData PreviewOpen Histogram

Table: PROJECT_DATABASE PROJECT_SCHEMA.METERDATADataDetails

Filter result...

Row	METEREVENTID	METERNUMBER	DEVICENUMBER	METERTYPE	INTERVALDATE	INT_00_VAL	INT_01_VAL	INT_02_VAL	INT_03_VAL	INT_04_VAL	INT_05_VAL	INT_06_VAL	INT_07_VAL	INT_08_VAL	INT_09_VAL	INT_10_VAL
1	2022-05-05...	M2	TESTDEVICE	ELECTRICIT...	2022-05-05	123	123	000	5	5	5.34	1.34	0	1.34	1.34	0
2	2022-06-06...	M7	TESTDEVICE	ELECTRICIT...	2022-06-06	112	112	122	122	5	5.34	1.34	0	1.34	1.34	0
3	2023-06-06...	M2	TESTDEVICE	ELECTRICIT...	2023-06-06	123	123	000	5	5	5.34	1.34	0	1.34	1.34	0

BodyCookies

PrettyRaw

12345

"st"
"me"
"ou"

Table: PROJECT_DATABASE

Filter result...

RowMETEREVENTID

12022-06-06...

DELETE

DELETE Trigger provided no meter number field

New Collection / Meter Readings Snowflake Endpoint / DELETE METER DATA

DELETEhttps://snowflakeendpoint.azurewebsites.net/api/DELETETERMETERDATA?code=_hHzYNY8_tBtSBREHEGI11WJOTgfHPRLa9kTX70A6K0wAzFuBGfY0g==...Sending...

ParamsAuthorizationHeaders (9)BodyPre-request ScriptTestsSettings

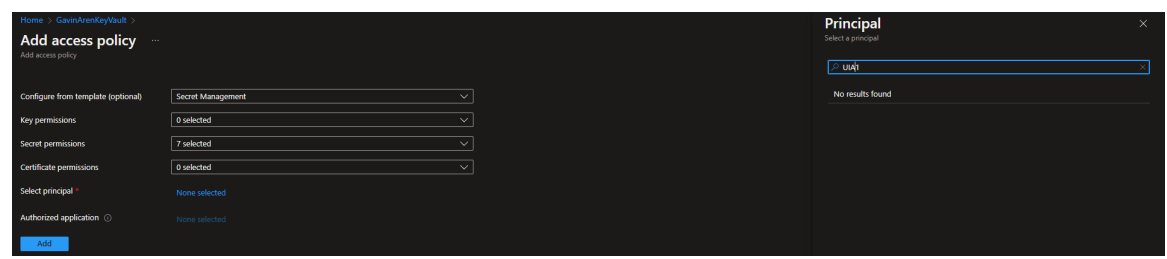
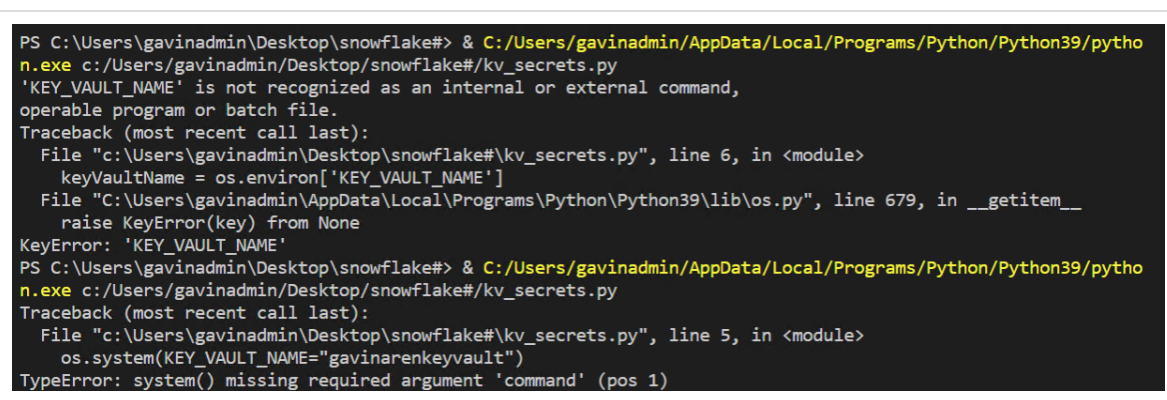
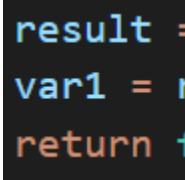
noneform-datax-www-form-urlencodedrawbinaryGraphQLJSON

1

1 You have re-persona

<div>DELETE</div> <div>DE LE TE</div> <div>Trig ger pro vid ed a met er nu mb er that deo sn' t exis t in the table</div>	<div>1</div> <div>{ "meterNumber": "M2" }</div>	<div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>}</div>
---	---	--

Error/Problem	Solution
<p>The user, group or application 'appid=47d7abef-645e-4f73-9e31-e9572d4cd420;oid=5d2bc07f-b18f-48cc-8a17-47c839efc73b;iss=https://sts.windows.net/63ce7d59-2f3e-42cd-a8cc-be764cff5eb6/ does not have secrets get permission on key vault 'GavinArenKeyVault;location=EastUS'. For help resolving this issue, please see https://go.microsoft.com/fwlink/?linkid=2125287</p>	<p>Assigned managed https://docs.microsoft.com/...</p>
<p>Connecting to Azure KeyVault locally through python</p>	<p>Followed this docum https://docs.microsoft.com/...</p>
<p>Response status: 401 Response headers: 'Cache-Control': 'no-cache' 'Pragma': 'no-cache' 'Content-Length': '97' 'Content-Type': 'application/json; charset=utf-8' 'Expires': '-1' 'WWW-Authenticate': 'Bearer authorization="https://login.windows.net/63ce7d59-2f3e-42cd-a8cc-be764cff5eb6/", resource="https://vault.azure.net/"' 'x-ms-keyvault-region': 'EastUS' 'x-ms-client-request-id': '30e5d270-0daa-11ed-9853-00155d7f2fea' 'x-ms-request-id': 'c9ca109a-5a91-4551-9bf4-40ec8a2d11b9' 'x-ms-keyvault-service-version': '1.9.472.5' 'x-ms-keyvault-network-info': 'conn_type=Ipv4;addr=20.108.117.212;act_addr_fam=InterNetwork;' 'X-Content-Type-Options': 'REDACTED' 'Strict-Transport-Security': 'REDACTED' 'Date': 'Wed, 27 Jul 2022 12:46:53 GMT'</p>	<p>Save all policies aft Created a managec</p>
<pre> ### ESTABLISHING SNOWFLAKE CONNECTION AND USING THE RIGHT TABLE credential = DefaultAzureCredential() secret_client = SecretClient(vault_url="https://gavinarenkeyvault.vault.azure.net/", credential=credential) con = snowflake.connector.connect(user=(secret_client.get_secret("snowflakeusername")).value, password=(secret_client.get_secret("snowflakepassword")).value, account=(secret_client.get_secret("accountidentifier")).value) mycursor = con.cursor() print("Connection esablished with Snowflake and got the cursor") ###CONNECTION ESTABLISHED </pre>	<p>DefaultAzureCre</p>

	Managed identityne
	Followed this docum https://docs.microsc
Date input into the GET trigger needs to be raneg of values	SQL : <div data-bbox="1352 846 1495 1089"><pre>select where and ir end_ir</pre></div>
Unable to display snowflake output to the browser/postman in a JSON format	

Created a worked ir

```
File "C:\Users\gavin02.TRN\AppData\Local\Temp\pip-build-env-qjzun0xg\overlay\Lib\site-packages\setuptools\_init_.py", line 159, in setup
    return distutils.core.setup(**attrs)
File "c:\program files (x86)\python38-32\lib\distutils\core.py", line 148, in setup
    dist.run_commands()
File "c:\program files (x86)\python38-32\lib\distutils\dist.py", line 966, in run_commands
    self.run_command(cmd)
File "c:\program files (x86)\python38-32\lib\distutils\dist.py", line 985, in run_command
    cmd_obj.run()
File "C:\Users\gavin02.TRN\AppData\Local\Temp\pip-build-env-qjzun0xg\overlay\Lib\site-packages\wheel\bdist_wheel.py", line 299, in run
    self.run_command('build')
File "c:\program files (x86)\python38-32\lib\distutils\cmd.py", line 313, in run_command
    self.distribution.run_command(command)
File "c:\program files (x86)\python38-32\lib\distutils\dist.py", line 985, in run_command
    cmd_obj.run()
File "c:\program files (x86)\python38-32\lib\distutils\command\build.py", line 135, in run
    self.run_command(cmd_name)
File "c:\program files (x86)\python38-32\lib\distutils\cmd.py", line 313, in run_command
    self.distribution.run_command(command)
File "c:\program files (x86)\python38-32\lib\distutils\dist.py", line 985, in run_command
    cmd_obj.run()
File "setup.py", line 96, in run
    self._run_cmake()
File "setup.py", line 288, in _run_cmake
    raise RuntimeError('Not supported on 32-bit Windows')
RuntimeError: Not supported on 32-bit Windows
[end of output]

note: This error originates from a subprocess, and is likely not a problem with pip.
ERROR: Failed building wheel for pyarrow
Failed to build pyarrow
ERROR: Could not build wheels for pyarrow, which is required to install pyproject.toml-based projects
[end of output]

note: This error originates from a subprocess, and is likely not a problem with pip.
error: subprocess-exited-with-error

× pip subprocess to install build dependencies did not run successfully.
  exit code: 1
  → See above for output.

note: This error originates from a subprocess, and is likely not a problem with pip.
C:\Users\gavin02.TRN>
```

Your Request [RQ73025221](#) to "Infosys Service Desk" has been completed and awaits 'User Acceptance'.
The completion comment is as follows :

Completion Comment

Hi Gavin, Please raise an AHD under the correct category Software.Request with download URL and other required details to validate and provide the software. Please raise an AHD request through Sparsh([<<Webapps>>Software](http://sparshv2) Suggestion Portal)>>Search for software>>Search>>It will give you a popup to log AHD>>click on it and submit the request so that the concerned team can help you in providing the software. For any further clarifications, requesting you to drop a mail to rachana.j@infosys.com by providing the request number in the subject line.
Regards, Rachana Infosys IT

Unable to download Azure Core Tools and other Python libraries due to permission issues

```
C:\Users\gavin02.TRN>pip install requests
Defaulting to user installation because normal site-packages is not writeable
WARNING: Retrying (Retry(total=4, connect=None, read=None, redirect=None, status=None)) after connection broken by 'NewConnectionError(<pip._vendor.urllib3.connection.HTTPSConnection object at 0x000001F106195390>: Failed to establish a new connection: [Errno 11002] getaddrinfo failed)': /simple/requests/
WARNING: Retrying (Retry(total=3, connect=None, read=None, redirect=None, status=None)) after connection broken by 'NewConnectionError(<pip._vendor.urllib3.connection.HTTPSConnection object at 0x000001F1061956C0>: Failed to establish a new connection: [Errno 11002] getaddrinfo failed)': /simple/requests/
WARNING: Retrying (Retry(total=2, connect=None, read=None, redirect=None, status=None)) after connection broken by 'NewConnectionError(<pip._vendor.urllib3.connection.HTTPSConnection object at 0x000001F106195930>: Failed to establish a new connection: [Errno 11002] getaddrinfo failed)': /simple/requests/
WARNING: Retrying (Retry(total=1, connect=None, read=None, redirect=None, status=None)) after connection broken by 'NewConnectionError(<pip._vendor.urllib3.connection.HTTPSConnection object at 0x000001F106195BA0>: Failed to establish a new connection: [Errno 11002] getaddrinfo failed)': /simple/requests/
WARNING: Retrying (Retry(total=0, connect=None, read=None, redirect=None, status=None)) after connection broken by 'NewConnectionError(<pip._vendor.urllib3.connection.HTTPSConnection object at 0x000001F106195E10>: Failed to establish a new connection: [Errno 11002] getaddrinfo failed)': /simple/requests/
ERROR: Could not find a version that satisfies the requirement requests (from versions: none)
ERROR: No matching distribution found for requests
C:\Users\gavin02.TRN>
```

Nomal pip commands weren't working

Added extra comm

py -m