

CREATING A STORAGE ACCOUNT

home > Storage center | Storage accounts (blobs) >

Create a storage account ...

BasicsAdvancedNetworkingData protectionEncryptionTagsReview + create

[View automation template](#)

Basics

Subscription	MML Learners
Resource group	rg-azuser4829_mml.local-ECCvG
Location	Central India
Storage account name	casestudystorage123
Preferred storage type	Azure Blob Storage or Azure Data Lake Storage Gen 2
Primary workload	
Performance	Standard
Replication	Read-access geo-redundant storage (RA-GRS)

Advanced

Enable hierarchical namespace	Disabled
Enable SFTP	Disabled
Enable network file system v3	Disabled
Allow cross-tenant replication	Disabled
Access tier	Hot

Previous

Next

Create

CREATING A NEW CONTAINER

Home > casestudystorage123_1761126200243 | Overview > casestudystorage123

casestudystorage123 | Containers ☆ ...

Storage account

Search

◦ ◀

+ Add container ↑ Upload ↻ Refresh | 🗑 Delete 🔒 Change access level 🔁 Restore containers ▾ 🛠 Edit columns

Search containers by prefix

Showing all 1 items

<input type="checkbox"/>	Name	Last modified
<input type="checkbox"/>	\$logs	22/10/2025, 3

New container

×

Name *
salescsvfiles ✓

Anonymous access level ⓘ
Private (no anonymous access) ▾

📘 The access level is set to private because anonymous access is disabled on this storage account.

Advanced ▾

Create

Give feedback 🗨

UPLOADING THE CSV FILE

Home > casestudystorage123_1761126200243 | Overview > casestudystorage123 | Containers >

salescsvfiles

Container

Search

◊ ◀

+ Add Directory

↑ Upload

🔒 Change access level

🔄 Refresh

🗑 Delete

📄 Copy

📄 Paste

🔄 Rename

🔑 Acquire lease

🔑 Break lease

🔗 Edit columns

Overview

🔧 Diagnose and solve problems

🔑 Access Control (IAM)

> Settings

salescsvfiles

Authentication method: Access key (Switch to Microsoft Entra user account)

🔍 Add filter

🔍 Search blobs by prefix (case-sensitive)

Only show active blobs ▾

Showing all 1 items

<input type="checkbox"/>	Name	Last modified	Access tier	Blob type	Size	Lease state	
<input type="checkbox"/>	📄 Retail_Sales_500_rows_Preview.csv	22/10/2025, 3:16:53 pm	Hot (Inferred)	Block blob	2.93 KiB	Available	⋮

ACCESS TOKENS

Home > casestudystorage123_1761126200243 | Overview > casestudystorage123 | Containers > salescsvfiles

salescsvfiles | Shared access tokens

Container

Search

×

◀

Overview

🔧 Diagnose and solve problems

🔑 Access Control (IAM)

⌵ Settings

🔗 Shared access tokens

🔑 Access policy

📄 Properties

📘 Metadata

Signing key ⓘ

Key 1 ▾

Stored access policy

None ▾

Permissions * ⓘ

Read ▾

Start and expiry date/time ⓘ

Start

10/22/2025 📅 3:03:35 PM

(UTC+05:30) Chennai, Kolkata, Mumbai, New Delhi ▾

Expiry

10/22/2025 📅 11:18:35 PM

(UTC+05:30) Chennai, Kolkata, Mumbai, New Delhi ▾

Allowed IP addresses ⓘ

for example, 168.1.5.65 or 168.1.5.65-168.1....

Allowed protocols ⓘ

☒ HTTPS only ☐ HTTPS and HTTP

Generate SAS token and URL

GENERATING SAS TOKENS

Home > casestudystorage123_1761126200243 | Overview > casestudystorage123 | Containers > salescsvfiles

salescsvfiles | Shared access tokens ...

Container

Search

Overview

Diagnose and solve problems

Access Control (IAM)

Settings

Shared access tokens

Access policy

Properties

Metadata

Permissions

Read

Start and expiry date/time

Start

10/22/2025 3:03:35 PM

(UTC+05:30) Chennai, Kolkata, Mumbai, New Delhi

Expiry

10/22/2025 11:18:35 PM

(UTC+05:30) Chennai, Kolkata, Mumbai, New Delhi

Allowed IP addresses

for example, 168.1.5.65 or 168.1.5.65-168.1.5.65

Allowed protocols

☒ HTTPS only ☐ HTTPS and HTTP

Generate SAS token and URL

Blob SAS token

sp=r&st=2025-10-22T09:33:35Z&se=2025-10-22T17:48:35Z&spr=https&sv=2024-11-04&sr=c&sig=06ONFBQbbg47otxeJyILW4rDBK%2FjteurqCEXdQw%289X0%3D

Blob SAS URL

https://casestudystorage123.blob.core.windows.net/salescsvfiles?sp=r&st=2025-10-22T09:33:35Z&se=2025-10-22T17:48:35Z&spr=https&sv=2024-11-04&sr=c&sig=06ONFBQbbg47otxeJyILW4rDBK%2F...

CREATING DATABASE , SCHEMA AND TABLES

ACCOUNTADMIN · COMPUTE_WH (X-Small) SALES_CASE_DB SALES_CASE_SCHEMA

```
1 CREATE OR REPLACE DATABASE sales_case_db;
2 USE DATABASE sales_case_db;
3
4
5
6 CREATE OR REPLACE SCHEMA sales_case_schema1;
7 USE SCHEMA sales_case_schema1;
8
9 CREATE OR REPLACE TABLE sales_case_table (
10     ORDER_ID STRING,
11     ORDER_DATE DATE,
12     MONTH_OF_SALE STRING,
13     CUSTOMER_ID STRING,
14     CUSTOMER_NAME STRING,
15     COUNTRY STRING,
16     REGION STRING,
17     CITY STRING,
```

Results (just now)

Table Chart

1 row 179ms

status

1 Table SALES_CASE_TABLE successfully created.

Query History

Current file All files

just now 179ms CREATE OR REPLACE TABLE sales_case_table (ORDER_ID STRING, ORDER_DATE DATE, MONTH_OF_SALE STRING, ... 01bfe0b7-0001-66d1-000c-5e16

1 minute ago 31ms USE SCHEMA sales_case_schema1; 01bfe0b5-0001-66dd-000c-5e16

FILE FORMAT

My Workspace > casestudy.sql

ACCOUNTADMIN COMPUTE_WH (X-Small) SALES_CASE_DB SALES_CASE_SCHEMA1

```
24 ;
25
26 CREATE OR REPLACE FILE FORMAT ff_sales_csv
27     TYPE = CSV
28     FIELD_DELIMITER = ','
29     SKIP_HEADER = 1
30     FIELD_OPTIONALLY_ENCLOSED_BY = ''
31     NULL_IF = ('', 'NULL');
32
33
34
```

Results (just now)

Table Chart

1 row 66ms

status
File format FF_SALES_CSV successfully created.

Query History

Current file All files

just now 66ms CREATE OR REPLACE FILE FORMAT ff_sales_csv TYPE = CSV FIELD_DELIMITER = ',' SKIP_HEADER = 1 FIELD_O...

2 minutes ago 179ms CREATE OR REPLACE TABLE sales_case_table (ORDER_ID STRING, ORDER_DATE DATE, MONTH_OF_SALE STRING, ...

3 minutes ago 31ms USE SCHEMA sales_case_schema1;

3 minutes ago 62ms CREATE OR REPLACE SCHEMA sales_case_schema1;

Feedback

STAGING

```
32
33 CREATE OR REPLACE STAGE sales_case_stage
34     URL = 'azure://casestudystorage123.blob.core.windows.net/salescsvfiles'
35     CREDENTIALS = (AZURE_SAS_TOKEN = '?sp=r&st=2025-10-22T09:33:35Z&se=2025-10-22T17:48:35Z&spr=https&sv=2024-11-04&sr=c&sig=06ONFB0bbg47otxeJy1LW4rDBK%2FjteurqCEXdQw%2B9X0%3D')
36     FILE_FORMAT = (FORMAT_NAME = ff_sales_csv);
37 | Ctrl+I to generate
38
```

Results (just now)

Table Chart

1 row 125ms

status
Stage area SALES_CASE_STAGE successfully created.

CHECKING STAGE CONTENTS

```
33 CREATE OR REPLACE STAGE sales_case_stage
34     URL = 'azure://casestudystorage123.blob.core.windows.net/salescsvfiles'
35     CREDENTIALS = (AZURE_SAS_TOKEN = '?sp=r&st=2025-10-22T09:33:35Z&se=2025-10-22T17:48:35Z&spr=https&sv=2024-11-04&sr=c&sig=8Mglg%2BLBX2HZ9N0cMhN%2BN%2Fgol204mgLRYf%2FOLUGGJHg%3D')
36     FILE_FORMAT = (FORMAT_NAME = ff_sales_csv);
37
38
39 LIST @sales_case_stage;
40
41
42
```

Results (1 minute ago)

Table Chart

1 row 77ms

name	size	md5	last_modified
azure://casestudystorage123.blob.core.windows.r	3004	a38163e0b0e75a2fc23a0509023fd874	Wed, 22 Oct 2025 09:46:53 GMT

COPYING DATA FROM STAGE TO SNOWFLAKE TABLE

My Workspace > casestudy.sql

ACCOUNTADMIN COMPUTE_WH (X-Small) SALES_CASE_DB SALES_CASE_SCHEMA1

```
40
41 COPY INTO sales_case_table
42 FROM @sales_case_stage
43 FILE_FORMAT = (FORMAT_NAME = ff_sales_csv)
44 ON_ERROR = 'CONTINUE';
45
46
47
48 Ctrl+I to generate
49
50
```

Results (just now)

Table Chart 1 row 2.3s

file	status	# rows_parsed	# rows_loaded	# error_limit	# errors_seen	first_error	first_error_line	first_error_text
azure://casestudystora	LOADED	25	25	25	0	null	null	

Query History

Current file All files

- just now 2.3s COPY INTO sales_case_table FROM @sales_case_stage FILE_FORMAT = (FORMAT_NAME = ff_sales_csv) ON_ERR... 01bfe0c3-0001-6727-000c-5e1600028072
- 2 minutes ago 77ms LIST @sales_case_stage; 01bfe0c0-0001-6723-000c-5e1600026066
- 2 minutes ago 122ms CREATE OR REPLACE STAGE sales_case_stage URL = 'azure://casestudystorage123.blob.core.windows.net/s... 01bfe0c0-0001-672b-000c-5e160002707e

My Workspace > casestudy.sql

ACCOUNTADMIN COMPUTE_WH (X-Small) SALES_CASE_DB SALES_CASE_SCHEMA1

```
40
41 COPY INTO sales_case_table
42 FROM @sales_case_stage
43 FILE_FORMAT = (FORMAT_NAME = ff_sales_csv)
44 ON_ERROR = 'CONTINUE';
45
46
47 SELECT * FROM sales_case_table
48 LIMIT 10;
49
50
```

Results (just now)

Table Chart 10 rows 1.4s

ORDER_ID	ORDER_DATE	MONTH_OF_SAI	CUSTOMER_ID	CUSTOMER_NAME	COUNTRY	REGION	CITY	CATEGORY	SUBCATE
ORD-4F...	10.0%	2024-08	20.0%	CUST10...	10.0%	Aarav Iyer	10.0%	India	60.0%
ORD-5F8...	10.0%	2024-10	20.0%	CUST10...	10.0%	Ananya Das	10.0%	UAE	20.0%
+8 more		+6 more	+8 more	+8 more	+2 more	+3 more	+3 more	+1 more	+6 more
1	ORD-5F8D6FOC	2024-10-08	2024-10	CUST1000	Ananya Sharma	India	South	Mumbai	Office Supplies
2	ORD-BF0078E4	2024-08-11	2024-08	CUST1001	Aarav Iyer	India	Central	Lucknow	Technology
3	ORD-B6CD58A3	2024-06-12	2024-06	CUST1002	Arjun Sharma	USA	East	Kolkata	Furniture

Query History

Current file All files

- just now 1.4s SELECT * FROM sales_case_table LIMIT 10; 01bfe0c4-0001-66dd-000c-5e16000250c2

DATABRICKS PART

INSTALLING SNOWFLAKE LIBRARY

```
Just now (12s) 1 Python

%pip install snowflake-connector-python snowflake-sqlalchemy
%pip install pyspark

Generate (Ctrl + I)

Downloading pyopenssl-25.3.0-py3-none-any.whl.metadata (17 kB)
Requirement already satisfied: pyjwt<3.0.0 in /databricks/python3/lib/python3.12/site-packages (from snowflake-connector-python) (2.10.1)
Requirement already satisfied: pytz in /databricks/python3/lib/python3.12/site-packages (from snowflake-connector-python) (2024.1)
Requirement already satisfied: requests<3.0.0 in /databricks/python3/lib/python3.12/site-packages (from snowflake-connector-python) (2.32.3)
Requirement already satisfied: packaging in /databricks/python3/lib/python3.12/site-packages (from snowflake-connector-python) (24.1)
Requirement already satisfied: charset_normalizer<4,>=2 in /databricks/python3/lib/python3.12/site-packages (from snowflake-connector-python) (3.3.2)
Requirement already satisfied: idna<4,>=2.5 in /databricks/python3/lib/python3.12/site-packages (from snowflake-connector-python) (3.7)
Requirement already satisfied: certifi>=2017.4.17 in /databricks/python3/lib/python3.12/site-packages (from snowflake-connector-python) (2025.1.31)
Requirement already satisfied: typing_extensions<5,>=4.3 in /databricks/python3/lib/python3.12/site-packages (from snowflake-connector-python) (4.12.2)
Requirement already satisfied: filelock<4,>=3.5 in /usr/local/lib/python3.12/dist-packages (from snowflake-connector-python) (3.18.0)
Requirement already satisfied: sortedcontainers>=2.4.0 in /databricks/python3/lib/python3.12/site-packages (from snowflake-connector-python) (2.4.0)
Requirement already satisfied: platformdirs<5.0.0,>=2.6.0 in /databricks/python3/lib/python3.12/site-packages (from snowflake-connector-python) (3.10.0)
Collecting tomlkit (from snowflake-connector-python)
  Downloading tomlkit-0.13.3-py3-none-any.whl.metadata (2.8 kB)
Requirement already satisfied: boto3>=1.24 in /databricks/python3/lib/python3.12/site-packages (from snowflake-connector-python) (1.36.2)
Requirement already satisfied: botocore>=1.24 in /databricks/python3/lib/python3.12/site-packages (from snowflake-connector-python) (1.36.3)
Collecting snowflake-connector-python
  Downloading snowflake_connector_python-3.18.0-cp312-cp312-manylinux_2_17_aarch64.manylinux2014_aarch64.whl.metadata (74 kB)
Collecting sqlalchemy>=1.4.19 (from snowflake-sqlalchemy)
  Downloading sqlalchemy-2.0.44-cp312-cp312-manylinux_2_17_aarch64.manylinux2014_aarch64.whl.metadata (9.5 kB)
Requirement already satisfied: cffi<2.0.0,>=1.9 in /databricks/python3/lib/python3.12/site-packages (from snowflake-connector-python) (1.17.1)
```


```
Just now (3s) 2 Python

Options = {
    "sfURL": "gqgyqc-jp73258.snowflakecomputing.com",
    "sfDatabase": "SALES_CASE_DB",
    "sfSchema": "SALES_CASE_SCHEMA1",
    "sfWarehouse": "COMPUTE_WH",
    "sfRole": "ACCOUNTADMIN",
    "sfUser": "Deepta",
    "sfPassword": "#Deeptasermaraj2468"
}

df = (spark.read
    .format("snowflake")
    .options(**Options)
    .option("dbtable", "sales_case_table")
    .load())

df: pyspark.sql.connect.dataframe.DataFrame = [ORDER_ID: string, ORDER_DATE: date ... 12 more fields]
```

READING THE AZURE CONTAINERS USING PANDA

```
df = 
    spark.read
    .format("snowflake")
    .options(**sfOptions)
    .option("dbtable", "sales_case_table")
    .load()

df.show(5)
```

> [See performance \(1\)](#) Optimize

df: pyspark.sql.connect.dataframe.DataFrame = [ORDER_ID: string, ORDER_DATE: date ... 12 more fields]

ORDER_ID	ORDER_DATE	MONTH_OF_SALE	CUSTOMER_ID	CUSTOMER_NAME	COUNTRY	REGION	CITY	CATEGORY	SUBCATEGORY	QUANTITY	DISCOUNT	SALES	PROFIT
ORD-5F8D6F0C	2024-10-08	2024-10	CUST1000	Ananya Sharma	India	South	Mumbai	Office Supplies	Paper	9	0.0	2700.0	780.43
ORD-BF0078E4	2024-08-11	2024-08	CUST1001	Aarav Iyer	India	Central	Lucknow	Technology	Networking	4	0.15	27200.0	4135.6
ORD-86CD58A3	2024-06-12	2024-06	CUST1002	Arjun Sharma	USA	East	Kolkata	Furniture	Tables	4	0.1	31500.0	5676.96
ORD-FB0CD2D9	2024-12-18	2024-12	CUST1003	Ananya Das	India	North	Kolkata	Office Supplies	Appliances	9	0.0	36000.0	11783.22
ORD-EF35596B	2024-10-27	2024-10	CUST1004	Ishaan Bhat	UK	Central	Chennai	Furniture	Storage	4	0.0	24000.0	4189.98

only showing top 5 rows

BASIC TRANSFORMATIONS IN DATABRICKS AND VERIFYING RESULT

```
from pyspark.sql.functions import col, round
df_transformed = df.withColumn(
    "Profit_Margin", round(col("Profit") / col("Sales") * 100, 2)
)
df_high_profit = df_transformed.filter(col("Profit_Margin") > 20)
df_high_profit.show(5)
```

> [See performance \(1\)](#) Optimize

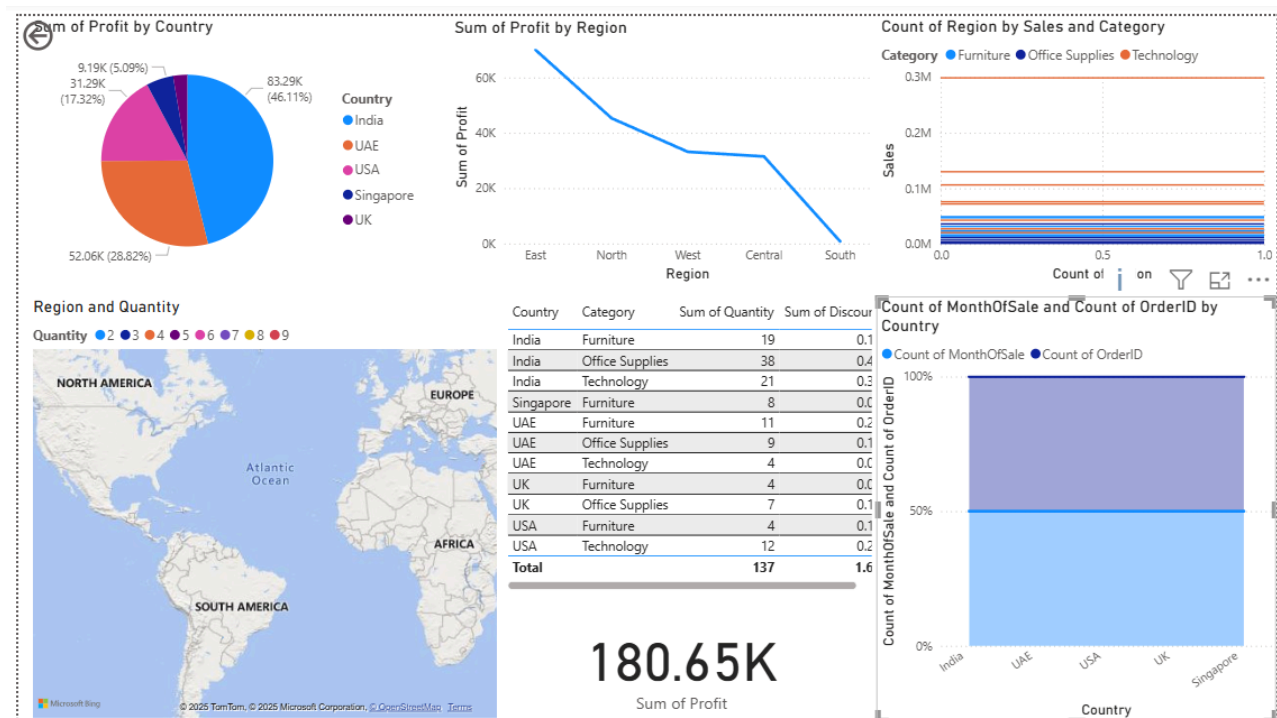
df_high_profit: pyspark.sql.connect.dataframe.DataFrame = [ORDER_ID: string, ORDER_DATE: date ... 13 more fields]

df_transformed: pyspark.sql.connect.dataframe.DataFrame = [ORDER_ID: string, ORDER_DATE: date ... 13 more fields]

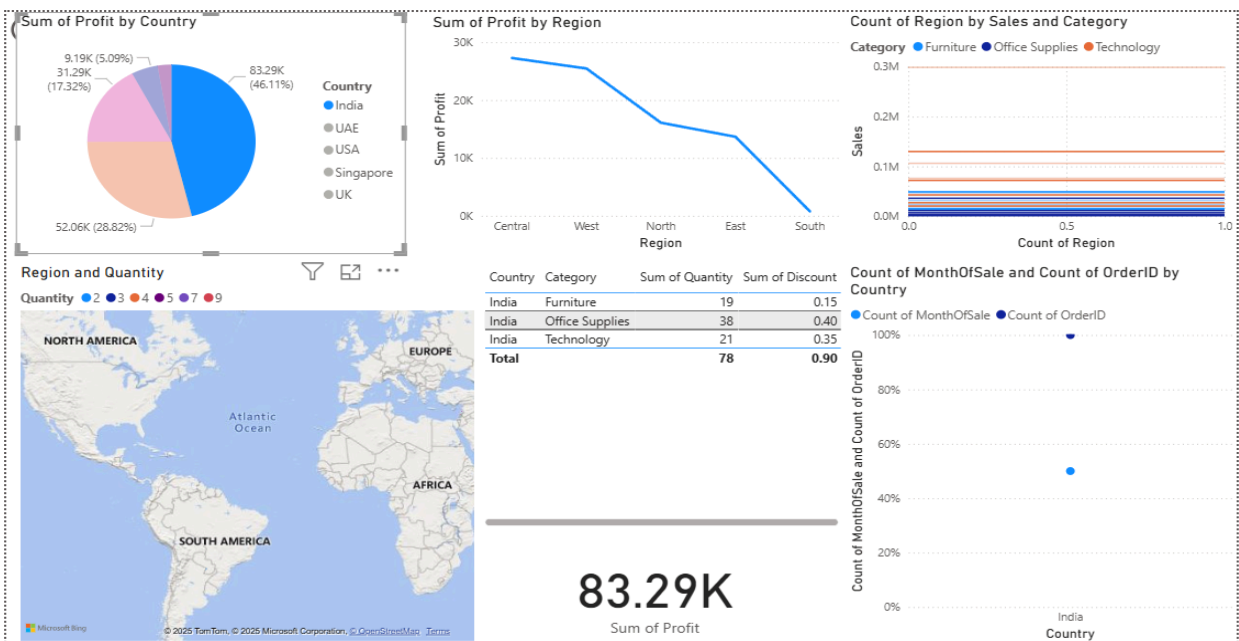
ORDER_ID	ORDER_DATE	MONTH_OF_SALE	CUSTOMER_ID	CUSTOMER_NAME	COUNTRY	REGION	CITY	CATEGORY	SUBCATEGORY	QUANTITY	DISCOUNT	SALES	PROFIT	Profit_Margin
ORD-5F8D6F0C	2024-10-08	2024-10	CUST1000	Ananya Sharma	India	South	Mumbai	Office Supplies	Paper	9	0.0	2700.0	780.43	28.9
ORD-FB0CD2D9	2024-12-18	2024-12	CUST1003	Ananya Das	India	North	Kolkata	Office Supplies	Appliances	9	0.0	36000.0	11783.22	32.73
ORD-60D1DA88	2024-08-26	2024-08	CUST1005	Neha Iyer	UAE	West	Chennai	Furniture	Furnishings	6	0.05	16387.5	3392.51	20.7
ORD-A5081404	2025-09-15	2025-09	CUST1006	Arjun Iyer	India	Central	Jaipur	Office Supplies	Binders	3	0.15	1147.5	307.47	26.79
ORD-4FCB3B05	2025-05-26	2025-05	CUST1008	Kabir Menon	India	West	Jaipur	Technology	Printers	3	0.05	42750.0	8742.33	20.45

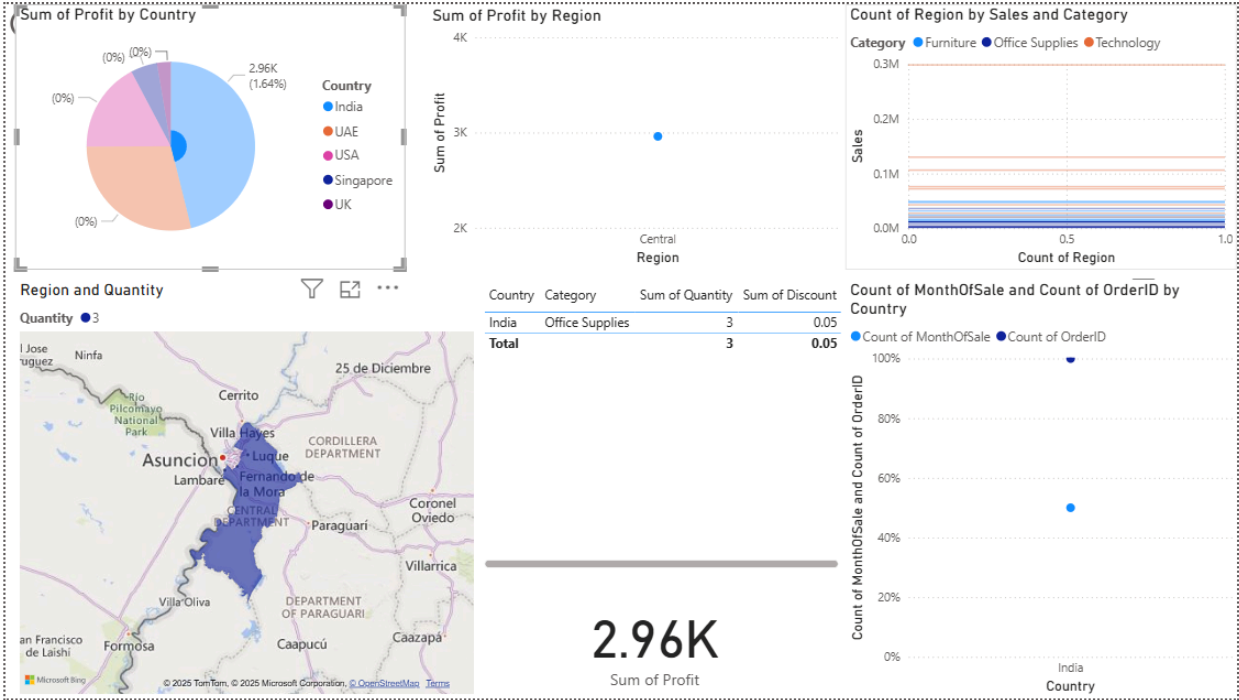
POWERBI

CREATING DASHBOARDS IN POWERBI, EXTRACTING THE DATAS FROM SNOWFLAKE



INTERACTING WITH THE DASHBOARDS





2.96K

Sum of Profit

