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/*--
Tasty Bytes is a fictitious, global food truck network, that is on a mission to serve unique food options with high
quality items in a safe, convenient and cost effective way. In order to drive forward on their mission, Tasty Bytes
is beginning to leverage the Snowflake Data Cloud.

Within this Worksheet, we will walk through the end to end process required to load a CSV file containing Menu specific
data
that is currently hosted in Blob Storage.
--*/

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-- Step 1: To start, let's set the Role and Warehouse context
-- USE ROLE: https://docs.snowflake.com/en/sql-reference/sql/use-role
-- USE WAREHOUSE: https://docs.snowflake.com/en/sql-reference/sql/use-warehouse
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/*--
- To run a single query, place your cursor in the query editor and select the Run button (⌘-Return).
- To run the entire worksheet, select 'Run All' from the dropdown next to the Run button (⌘-Shift-Return).
--*/

--> set the Role
USE ROLE accountadmin;

--> set the Warehouse
USE WAREHOUSE compute_wh;

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-- Step 2: With context in place, let's now create a Database, Schema, and Table
-- CREATE DATABASE: https://docs.snowflake.com/en/sql-reference/sql/create-database
-- CREATE SCHEMA: https://docs.snowflake.com/en/sql-reference/sql/create-schema
-- CREATE TABLE: https://docs.snowflake.com/en/sql-reference/sql/create-table
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--> create the Tasty Bytes Database
CREATE OR REPLACE DATABASE tasty_bytes_sample_data;

--> create the Raw POS (Point-of-Sale) Schema
CREATE OR REPLACE SCHEMA tasty_bytes_sample_data.raw_pos;

--> create the Raw Menu Table
CREATE OR REPLACE TABLE tasty_bytes_sample_data.raw_pos.menu
(
  menu_id NUMBER(19,0),
  menu_type_id NUMBER(38,0),
  menu_type VARCHAR(16777216),
  truck_brand_name VARCHAR(16777216),
  menu_item_id NUMBER(38,0),
  menu_item_name VARCHAR(16777216),
  item_category VARCHAR(16777216),
  item_subcategory VARCHAR(16777216),
  cost_of_goods_usd NUMBER(38,4),
  sale_price_usd NUMBER(38,4),
  menu_item_health_metrics_obj VARIANT
);

--> confirm the empty Menu table exists
SELECT * FROM tasty_bytes_sample_data.raw_pos.menu;

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-- Step 3: To connect to the Blob Storage, let's create a Stage
-- Creating an S3 Stage: https://docs.snowflake.com/en/user-guide/data-load-s3-create-stage
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--> create the Stage referencing the Blob location and CSV File Format
CREATE OR REPLACE STAGE tasty_bytes_sample_data.public.blob_stage
url = 's3://sfquickstarts/tastybytes/'
file_format = (type = csv);

--> query the Stage to find the Menu CSV file
LIST @tasty_bytes_sample_data.public.blob_stage/raw_pos/menu/;

-----
-- Step 4: Now let's Load the Menu CSV file from the Stage
-- COPY INTO <table>: https://docs.snowflake.com/en/sql-reference/sql/copy-into-table
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--> copy the Menu file into the Menu table
COPY INTO tasty_bytes_sample_data.raw_pos.menu

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```
FROM @tasty_bytes_sample_data.public.blob_stage/raw_pos/menu/;
```

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-- Step 5: Query the Menu table
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-- SELECT: https://docs.snowflake.com/en/sql-reference/sql/select
```

```
-- TOP <n>: https://docs.snowflake.com/en/sql-reference/constructs/top\_n
```

```
-- FLATTEN: https://docs.snowflake.com/en/sql-reference/functions/flatten  
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```
---> how many rows are in the table?
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```
SELECT COUNT(*) AS row_count FROM tasty_bytes_sample_data.raw_pos.menu;
```

```
---> what do the top 10 rows look like?
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```
SELECT TOP 10 * FROM tasty_bytes_sample_data.raw_pos.menu;
```

```
---> what menu items does the Freezing Point brand sell?
```

```
SELECT
```

```
    menu_item_name
```

```
FROM tasty_bytes_sample_data.raw_pos.menu
```

```
WHERE truck_brand_name = 'Freezing Point';
```

```
---> what is the profit on Mango Sticky Rice?
```

```
SELECT
```

```
    menu_item_name,
```

```
    (sale_price_usd - cost_of_goods_usd) AS profit_usd
```

```
FROM tasty_bytes_sample_data.raw_pos.menu
```

```
WHERE 1=1
```

```
AND truck_brand_name = 'Freezing Point'
```

```
AND menu_item_name = 'Mango Sticky Rice';
```

```
---> to finish, let's extract the Mango Sticky Rice ingredients from the semi-structured column
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```
SELECT
```

```
    m.menu_item_name,
```

```
    obj.value:"ingredients"::ARRAY AS ingredients
```

```
FROM tasty_bytes_sample_data.raw_pos.menu m,
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```
    TASTY_BYTES_SAMPLE_DATA.RAW_POS.MENU (input => m.menu_item_health_metrics_obj:menu_item_health_metrics) obj
```

```
WHERE 1=1
```

```
AND truck_brand_name = 'Freezing Point'
```

```
AND menu_item_name = 'Mango Sticky Rice';
```