Introduction

You have been tasked with analyzing data about crypto currencies. As a data engineer, your manager has shared some csv files with you containing information needed to answer some questions for your company executives. Use the following instructions to load and analyse the data to help answer relevant business questions

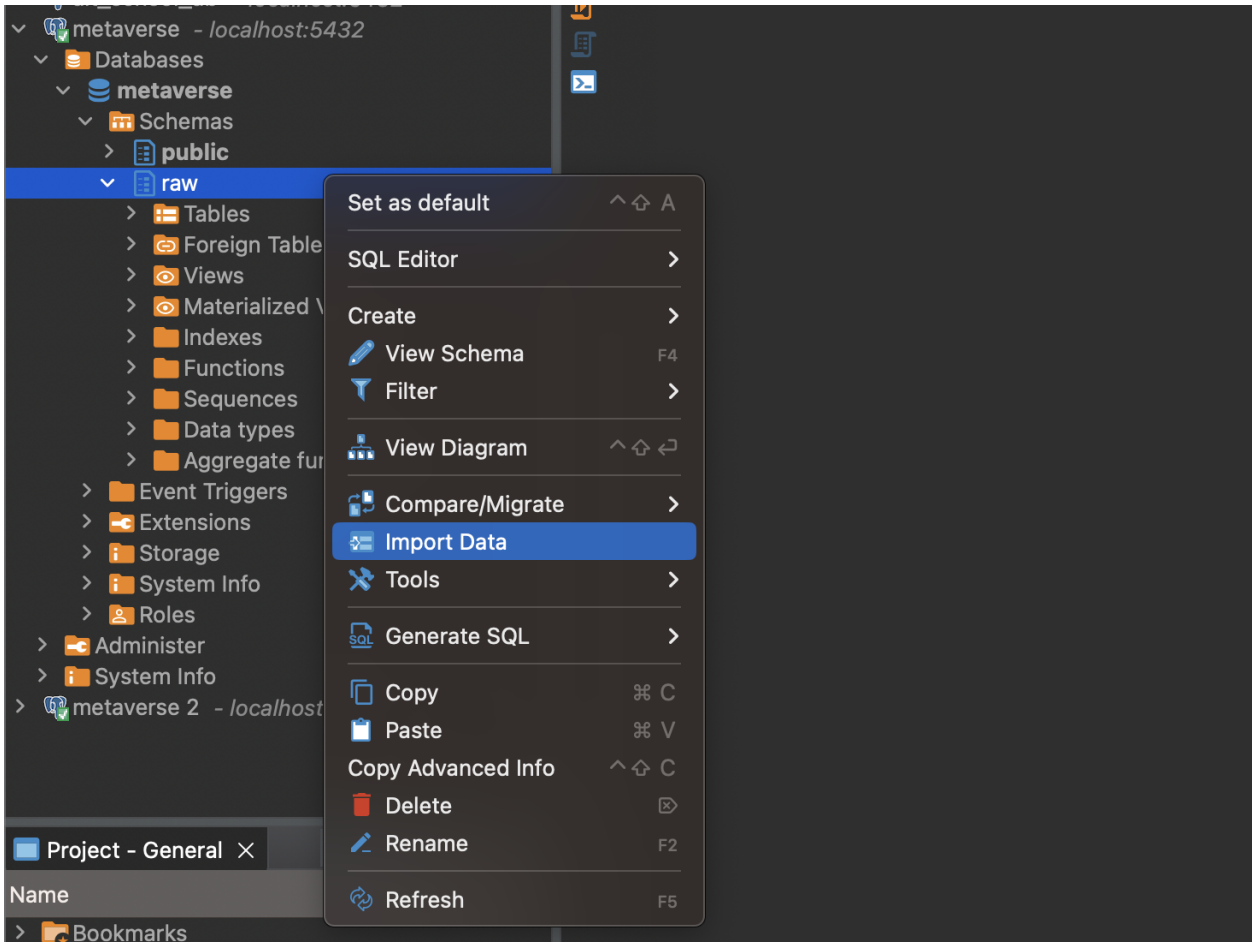
Instructions

Kindly do well to follow the guidelines highlighted in this document to complete the assignment. You are expected to create a python file and add your answers into the file as multi-line strings. **Follow the instructions carefully** so that you can be graded accordingly.

Task 1 - setting up the database

- Create a user called cryptoverse_admin with **CREATEDB** and **CREATEROLE** attributes
- Using the user from the first step, create a database called **metaverse**
- Create a schema in the metaverse database called **raw**

- In your Dbeaver UI right click on the raw schema and choose the **import data** option to add the members, prices and transactions table.



Task 2 - answering business questions

1. How many buy and sell transactions are there for Bitcoin? - your result should **return two columns - txn_type, transaction_count**
2. For each year, calculate the following buy and sell metrics for bitcoin:
    a. Total transaction count
    b. Total quantity
    c. Average quantity

    Kindly note that you are **generating a single query to calculate these metrics** and **you should return exactly 5 columns - txn_year, txn_type, txn_count, total_quantity, average_quantity**
3. What was the **monthly** total quantity **purchased and sold** for Ethereum in 2020? Your query should **return exactly three columns - calendar_month, buy_qunatity, sell_quantity**

4. Who are the top 3 members with the most bitcoin quantity? Your **result should return exactly two columns - first_name, total_quantity**

Task 3 - Preparing your results for submission

Create a python script with using the following convention:

- The name of the script should be **firstname_lastname.py**
- Start the script with a doc block containing the email address you use at altschool
- Each question's SQL statement should be added to a variable representing the question number like in the image below

```
"""
author: computervillage@altschool.com
"""

question_one = """
SELECT txn_type, transaction_count
from table_one
"""


question_two = """
SELECT txn_year, txn_type, txn_count, total_quantity, average_quantity
from table_two
"""


question_one = """
SELECT calendar_month, buy_qunatity, sell_quantity
from table_three
"""


question_four = """
SELECT first_name, total_quantity
from table_four
"""
```

Scoring Criteria

- The script submitted by each student would be graded using custom unit tests. This means that it's important to adhere strictly to instructions to pass the test
- Ensure your queries reference tables using **schema_name.table_name** format for example **select * from raw.transactions**
- Return the columns for each query with the exact column names highlighted in the question and in the exact order highlighted for each question (please don't do ITK, stick to the instructions strictly else you may not get the result you expect.)
- Ensure you name your python file as instructed, do not use hyphens! Use underscores, again, you're advised to adhere strictly to instructions.
- A sample submission file will be attached to the assessment, do well to use it for guidance and rename the file to your own name when submitting!