London, or as the Romans called it "Londonium"! Home to over 8.5 million residents who speak over 300 languages. While the City of London is a little over one square mile (hence its nickname "The Square Mile"), Greater London has grown to encompass 32 boroughs spanning a total area of 606 square miles!

Given the city's roads were originally designed for horse and cart, this area and population growth has required the development of an efficient public transport system! Since the year 2000, this has been through the local government body called **Transport for London**, or *TfL*, which is managed by the London Mayor's office. Their remit covers the London Underground, Overground, Docklands Light Railway (DLR), buses, trams, river services (clipper and Emirates Airline cable car), roads, and even taxis.

The Mayor of London's office make their data available to the public here. In this project, you will work with a slightly modified version of a dataset containing information about public transport journey volume by transport type.

The data has been loaded into a **Snowflake** database called `TFL` with a single table called `JOURNEYS`, including the following data:

TFL.JOURNEYS

Column	Definition	Data type
`MONTH`	Month in number format, e.g., `1` equals January	`INTEGER`
`YEAR`	Year	`INTEGER`
`DAYS`	Number of days in the given month	`INTEGER`
`REPORT_DATE`	Date that the data was reported	`DATE`
`JOURNEY_TYPE`	Method of transport used	`VARCHAR`
`JOURNEYS_MILLIONS`	Millions of journeys, measured in decimals	`FLOAT`

Note that *in Snowflake all databases, tables, and columns are **upper case*** by default.

You will execute SQL queries to answer three questions, as listed in the instructions.

London Public Transport DataFrame as

```sql
-- most_popular_transport_types

SELECT
    journey_type,
    SUM(journeys_millions) as total_journeys_millions
FROM TFL.JOURNEYS
GROUP BY journey_type
ORDER BY total_journeys_millions DESC;
```

	JOURNEY_TY...	TOTAL_JOURNEYS_MIL...
0	Bus	24905.19394699
1	Underground & DLR	15020.466543504
2	Overground	1666.8456664279
3	TfL Rail	411.3134209833
4	Tram	314.6898754821
5	Emirates Airline	14.5837175749

Rows: 6

London Public Transport DataFrame as

```sql
-- emirates_airline_popularity

SELECT
    month,
    year,
    ROUND(journeys_millions, 2) AS rounded_journeys_millions
FROM
    TFL.JOURNEYS
WHERE
    TFL.JOURNEYS.JOURNEY_TYPE = 'Emirates Airline'
    AND TFL.JOURNEYS.JOURNEYS_MILLIONS IS NOT NULL
ORDER BY
    journeys_millions DESC
LIMIT 5;
```

			ROUNDED_JOURNEYS_MIL...
0	5	2012	0.53
1	6	2012	0.38
2	4	2012	0.24
3	5	2013	0.19
4	5	2015	0.19

Rows: 5

London Public Transport DataFrame as

```sql
-- least_popular_years_tube

SELECT
    year,
    journey_type,
    SUM(journeys_millions) AS total_journeys_millions
FROM
    TFL.JOURNEYS
WHERE
    journey_type = 'Underground & DLR'
```

```
GROUP BY
    year,
    journey_type
ORDER BY
    total_journeys_millions ASC
LIMIT 5;
```

		JOURNEY_TY…	TOTAL_JOURNEYS_MIL…
0	2020	Underground & DLR	310.179316314
1	2021	Underground & DLR	748.4525442
2	2022	Underground & DLR	1064.8590086
3	2010	Underground & DLR	1096.14558838
4	2011	Underground & DLR	1156.64765448