tower bridge

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!

underground train leaving a platform

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.

In [12]:
```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;
```

Out[12]:

	JOURNEY_TYPE	TOTAL_JOURNEYS_MILLIONS
0	Bus	24905.193947
1	Underground & DLR	15020.466544
2	Overground	1666.845666
3	TfL Rail	411.313421
4	Tram	314.689875
5	Emirates Airline	14.583718

In [13]:
```sql
-- emirates_airline_popularity
SELECT MONTH, YEAR, ROUND(JOURNEYS_MILLIONS, 2) AS ROUNDED_JOURNEYS_MILLIONS
FROM TFL.JOURNEYS
WHERE ROUNDED_JOURNEYS_MILLIONS IS NOT NULL AND JOURNEY_TYPE = 'Emirates Airline'
ORDER BY ROUNDED_JOURNEYS_MILLIONS DESC
LIMIT 5;
```

Out[13]:

	MONTH	YEAR	ROUNDED_JOURNEYS_MILLIONS
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

In [14]:
```sql
-- least_popular_years_tube
SELECT YEAR, JOURNEY_TYPE, SUM(JOURNEYS_MILLIONS) AS TOTAL_JOURNEYS_MILLIONS
FROM TFL.JOURNEYS
WHERE JOURNEY_TYPE LIKE 'Underground & DLR'
GROUP BY YEAR, JOURNEY_TYPE
ORDER BY TOTAL_JOURNEYS_MILLIONS ASC
LIMIT 5;
```

Out[14]:

	YEAR	JOURNEY_TYPE	TOTAL_JOURNEYS_MILLIONS
0	2020	Underground & DLR	310.179316
1	2021	Underground & DLR	748.452544
2	2022	Underground & DLR	1064.859009
3	2010	Underground & DLR	1096.145588
4	2011	Underground & DLR	1156.647654