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 **Google BigQuery** database called `TFL` with a single table called `JOURNEYS`, including the following data:
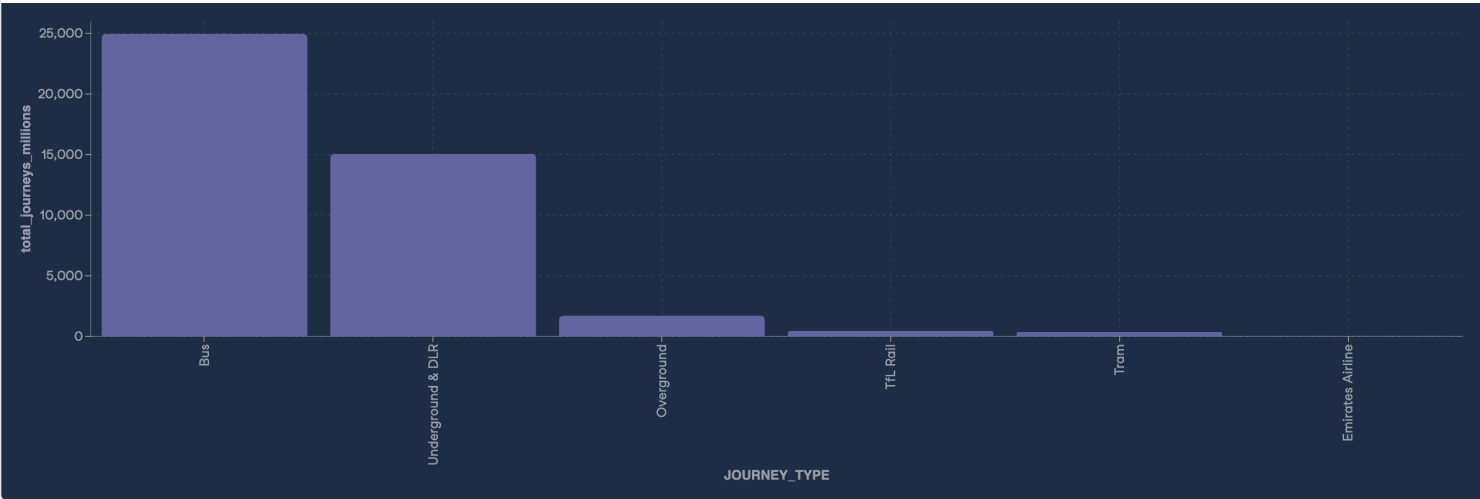
TFL.JOURNEYS

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 the table name is **upper case*** by default.

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

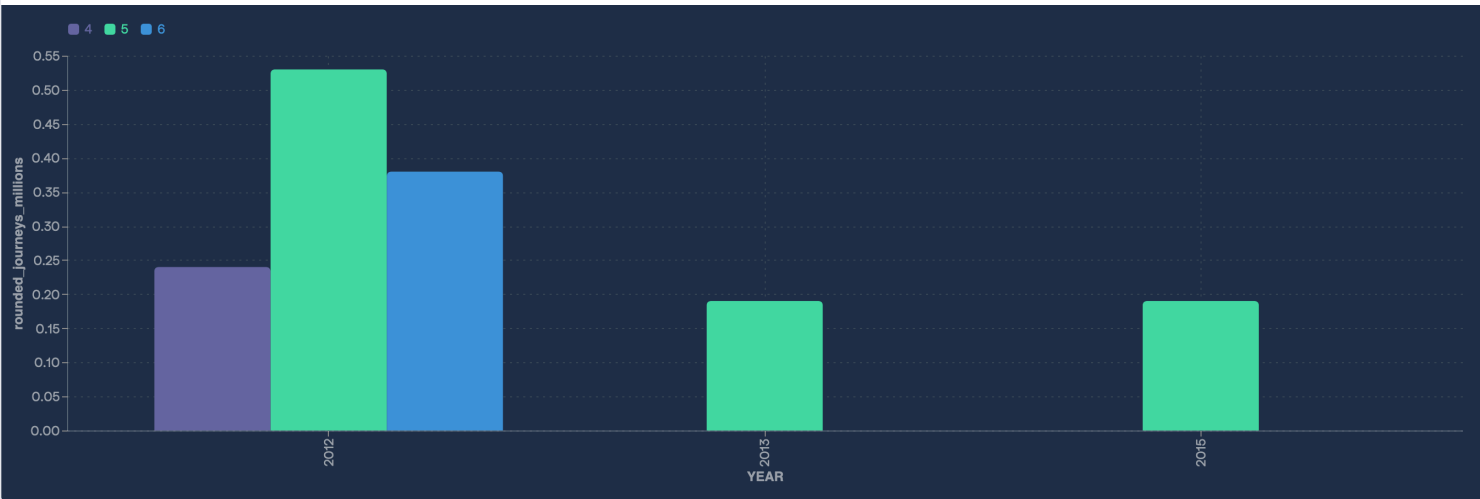London Public Transport   DataFrame as `most_popular_`

```sql
-- most_popular_transport_types
#CREATE VIEW most_popular_transport_types AS
SELECT
    JOURNEY_TYPE,
    SUM(ROUND(JOURNEYS_MILLIONS, 2)) AS total_journeys_millions
FROM TFL.JOURNEYS
GROUP BY JOURNEY_TYPE
ORDER BY total_journeys_millions DESC;
```

Bus and Tube are the MOST popular transport types

London Public Transport   DataFrame as `emirates_`

```sql
-- emirates_airline_popularity
#CREATE VIEW emirates_airline_popularity AS
SELECT
    MONTH,
    YEAR,
    SUM(ROUND(JOURNEYS_MILLIONS, 2)) AS rounded_journeys_millions
FROM TFL.JOURNEYS
WHERE JOURNEY_TYPE = 'Emirates Airline' AND JOURNEYS_MILLIONS IS NOT NULL
GROUP BY YEAR, MONTH
ORDER BY
    rounded_journeys_millions DESC,
    YEAR ASC
LIMIT 5;
```

2012 was the most popular year, and May is the most popular month

```sql
-- least_popular_years_tube
#CREATE VIEW least_popular_years_tube AS
SELECT
    YEAR,
    JOURNEY_TYPE,
    SUM(ROUND(JOURNEYS_MILLIONS, 2)) AS total_journeys_millions,
FROM TFL.JOURNEYS
WHERE JOURNEY_TYPE = 'Underground & DLR' AND JOURNEYS_MILLIONS IS NOT NULL
GROUP BY
    YEAR, JOURNEY_TYPE
ORDER BY
    total_journeys_millions ASC
LIMIT 5;
```

2020 was the least popular year for the tube


```sql
-- least_popular_years_tube
#CREATE VIEW least_popular_years_tube AS
SELECT
    YEAR,
    JOURNEY_TYPE,
    SUM(ROUND(JOURNEYS_MILLIONS, 2)) AS total_journeys_millions,
FROM TFL.JOURNEYS
WHERE JOURNEY_TYPE = 'Underground & DLR' AND JOURNEYS_MILLIONS IS NOT NULL
```