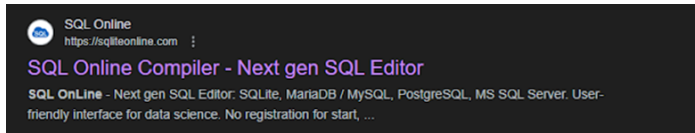# SQL Sandbox tasks

Setup:
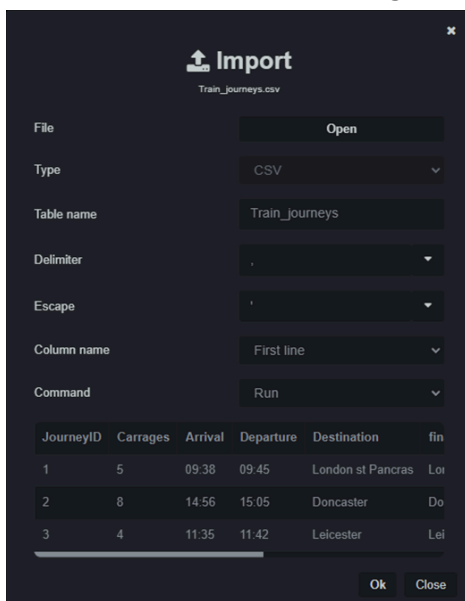
1. Search 'SQL online' and click the first non sponsored link to open SQL

2. In the input block type 'DROP TABLE demo;'

3. Download 'Train_journeys.csv' from the societies GitHub

4. Import it into SQL online with the following settings:
   a. Column name = First line
   b. Escape = single quotation marks

Task 1:

Using the Train_journeys table output all departure times of trains going to London St Pancras using a SELECT statement.

If your query is correct the answer should look like this:

Hint: https://www.w3schools.com/sql/sql_where.asp

Task 2:

If you couldn't already tell, the Train_journeys table is a bit messy and has many unnecessary columns and rows which we need to get rid of.

   a) First we should remove the unnecessary columns using the ALTER statement. Unnecessary columns include - columns that repeat data from another column and columns that are not relevant to the table.

   b) Next we need to remove unnecessary rows of data using a DELETE statement. Unnecessary rows include - rows that repeat data from another row and rows that have too much missing data.

Note: by the end of task 2 there should be no fields with missing data.

Hint: https://www.w3schools.com/sql/sql_alter.asp
Hint: https://www.w3schools.com/sql/sql_delete.asp

Task 3:

To further clean the database we need to make sure the data is consistent across the table. Train_journeys has a mix of data that is both

capitalised and uncapitalised which needs to be fixed using the UPDATE statement.

Hint: https://www.w3schools.com/sql/sql_update.asp

Task 4:

Now Train_journeys has been cleaned to an acceptable degree we are going to add a passenger table using a CREATE statement.

This table must include:
- Columns: email, first_name, phone_no and journey_id
- A foreign key that connects the journey_id in this table to the one in Train_journeys

Hint: https://www.w3schools.com/sql/sql_create_table.asp
Hint: https://www.w3schools.com/sql/sql_foreignkey.asp

Task 5:

Now our table is created and adds at least one row of appropriate values using an INSERT INTO statement.

Hint: https://www.w3schools.com/sql/sql_insert.asp

Task 6:

Finally with both tables connected we can retrieve all data at once using JOIN statements. Your task is to output a single passenger's email, first name, phone number, destination and departure using a JOIN statement.

Hint: https://www.w3schools.com/sql/sql_join.asp

If you have managed to complete all above tasks then congratulations you have learnt the main basics of SQL