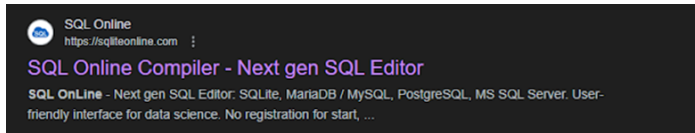


# SQL Sandbox tasks

## Setup:

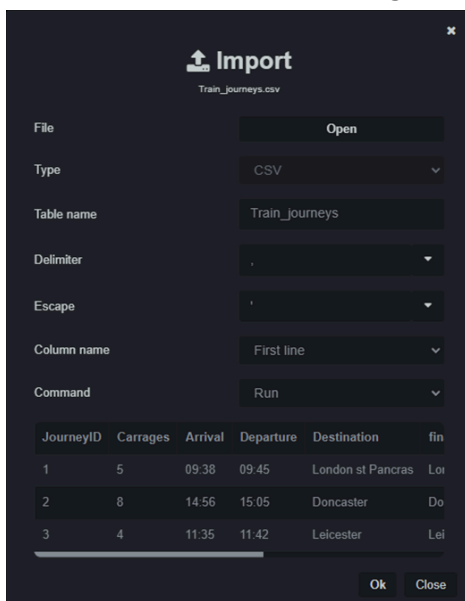
1. Search 'SQL online' and click the first non sponsored link to open SQL



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:

A screenshot of a SQL query result in a dark-themed terminal. The first row is a header with the column name 'departure'. Below it are seven rows of departure times: 09:45, 09:45, 20:34, 16:20, 11:39, and 11:39.

departure
09:45
09:45
20:34
16:20
11:39
11:39

Hint: [https://www.w3schools.com/sql/sql\\_where.asp](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.

- 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.
- 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](https://www.w3schools.com/sql/sql_alter.asp)

Hint: [https://www.w3schools.com/sql/sql\\_delete.asp](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](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 JourneyID
- 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](https://www.w3schools.com/sql/sql_create_table.asp)

Hint: [https://www.w3schools.com/sql/sql\\_foreignkey.asp](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](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](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**