Railway reservation System

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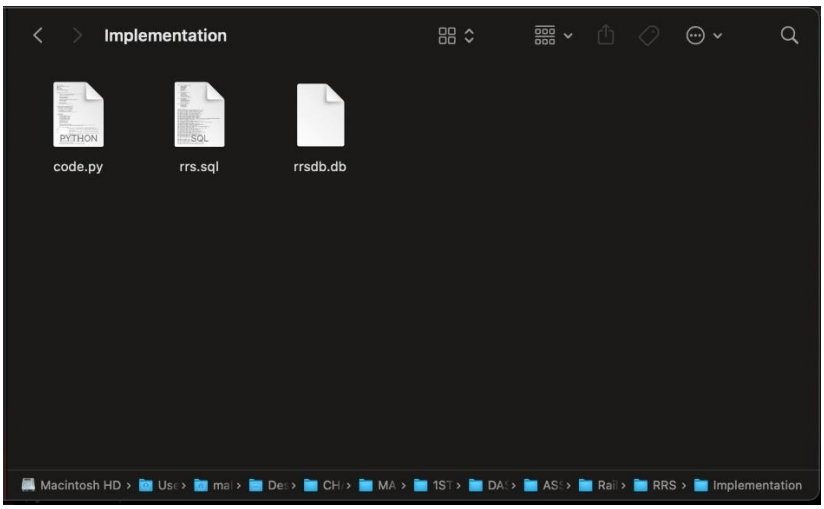
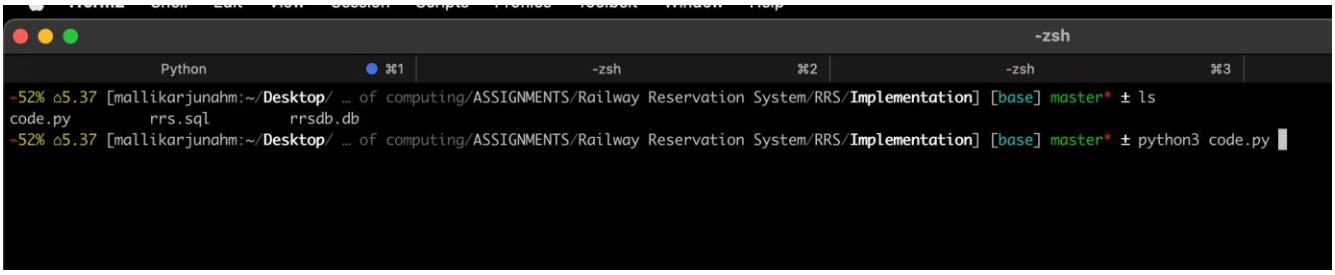
INSTRUCTIONS

1. Download the Code.py, rss.db, rss.sql files. Make sure Code.py and rss.db (database file) are in the same folder before running the program.

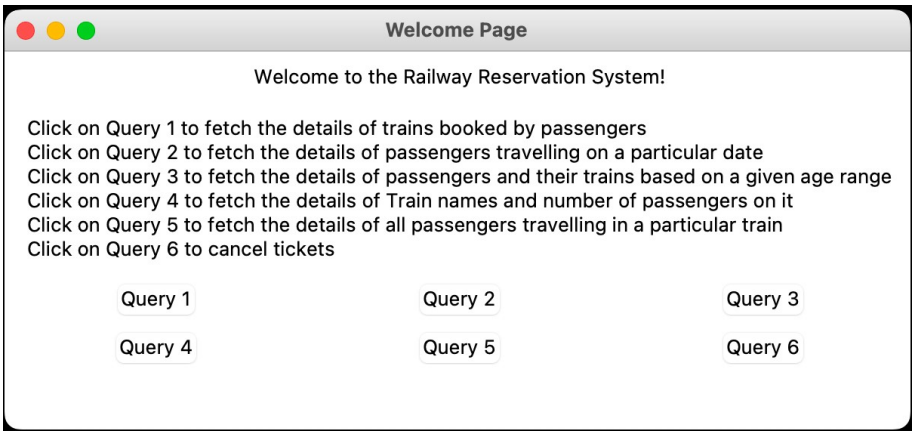


2. Open terminal in the same folder where the code.py file was downloaded.

3. Run the python file using the following command in the terminal: **python3 code.py**

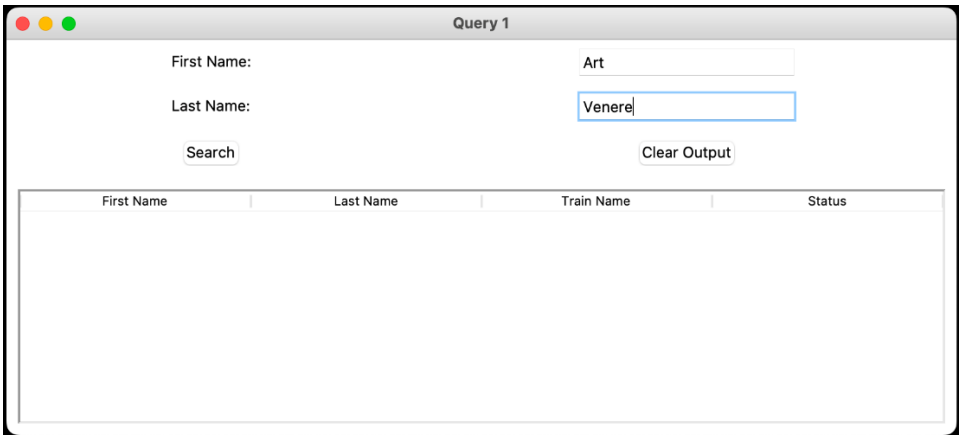


4. Step 3 will open a graphical user interface that is used to run queries on the database.

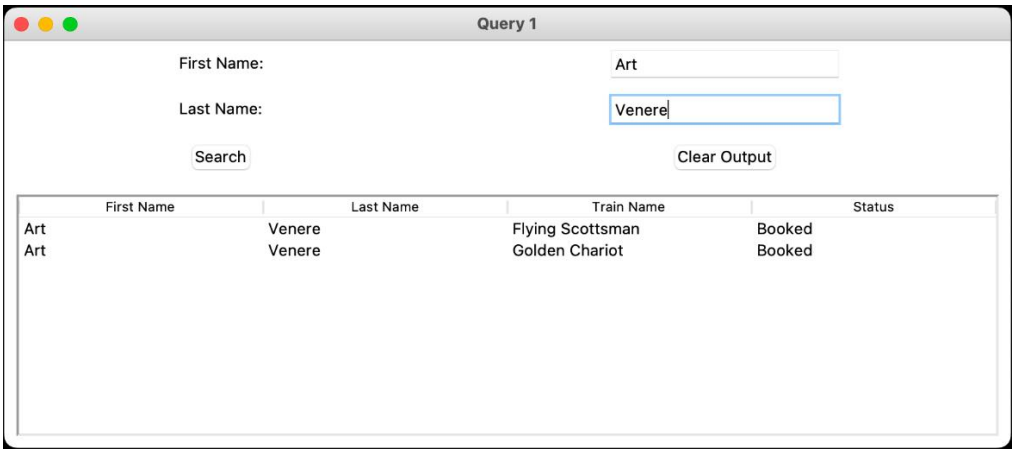


SOLUTIONS

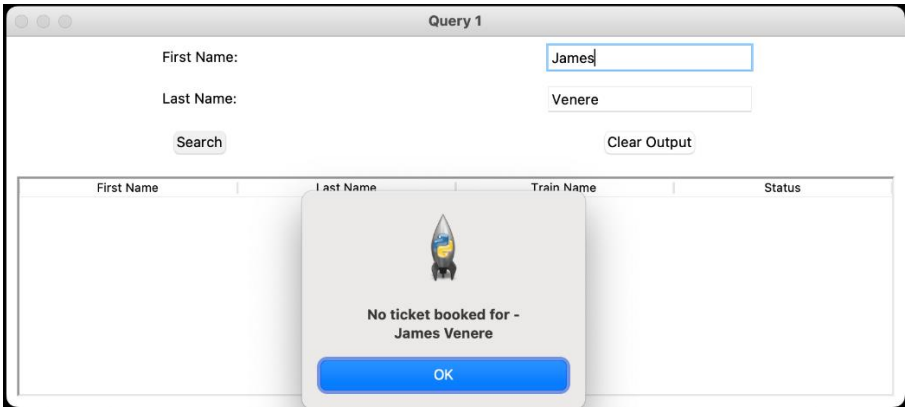
1. **Query 1**- To fetch details of the train booked using passenger name as input.



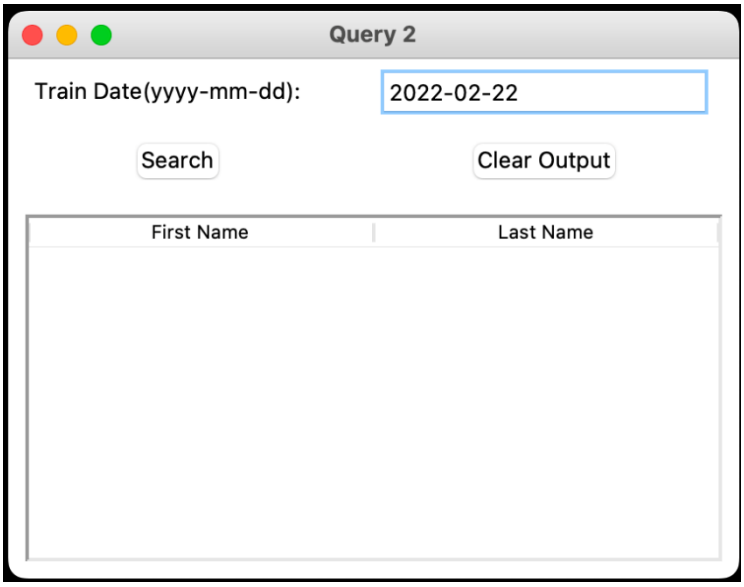
   a. Click on Query 1 button to open query 1 window. Enter the First and last name of the passenger. Then Click on the Search button to execute and the results will be displayed in the blank space.



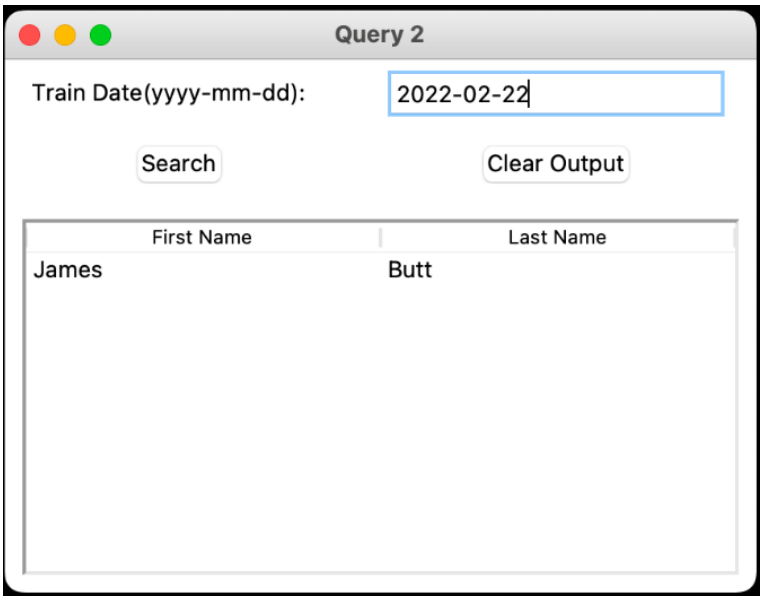
   b. The output can be cleared manually by Clicking on the Clear output button.
   c. In case the passenger's name entered does not match with names in the database, an error message will appear that states "No ticket is booked for {passenger name}."



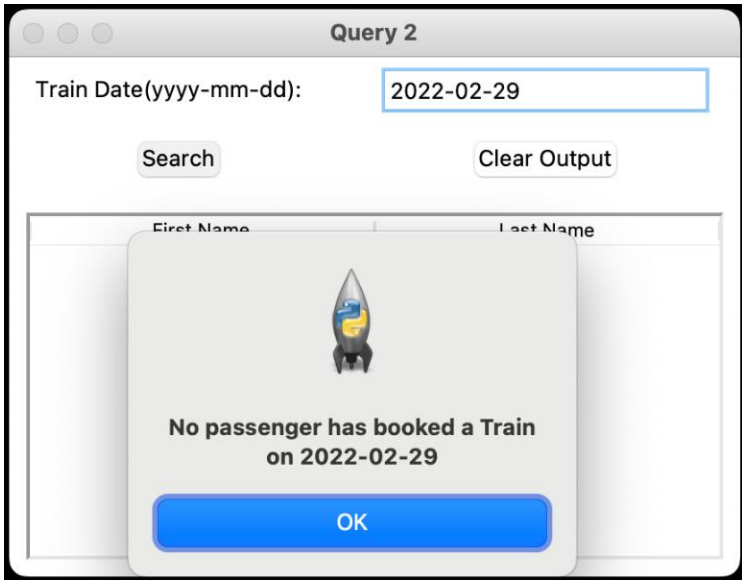
2. **Query 2**- To fetch details of all passenger names travelling on a particular date.



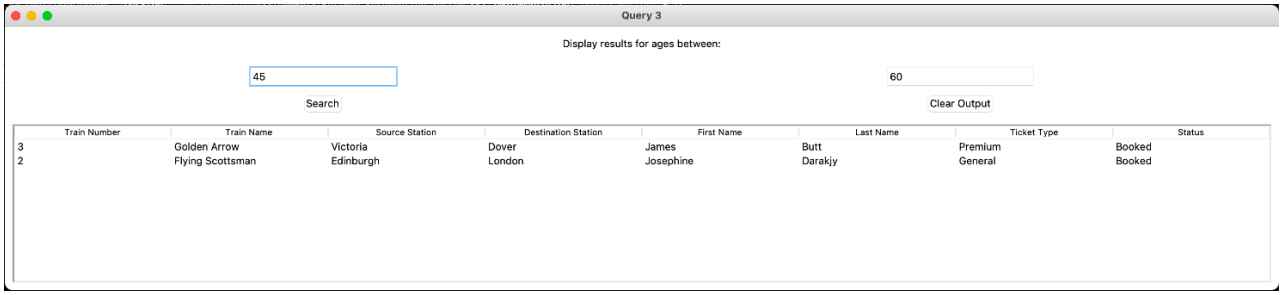
a. Click on Query 2 button to open query 2 window. Enter the date in [yyyy-mm-dd] format. Then Click on the Search button to execute and the results will be displayed in the blank space.



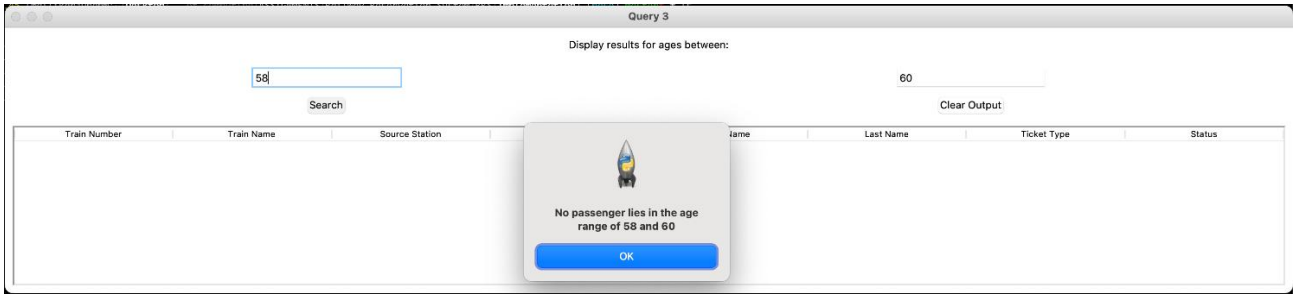
b. The output can be cleared manually by Clicking on the Clear output button.
c. In case the date entered does not have any bookings in the database, an error message will appear that states “No passenger has booked a train on {date}.”



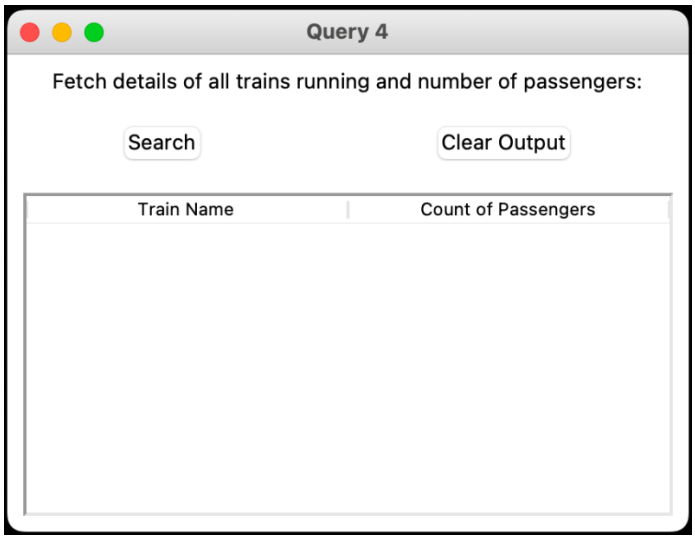
3. **<u>Query 3</u>**- To fetch all passenger and train details for a given age range.
    a. Click on Query 3 button to open query 3 window. Enter the lower age limit in the left blank and upper age limit in the right blank. Then Click on the Search button to execute and the results will be displayed in the blank space.



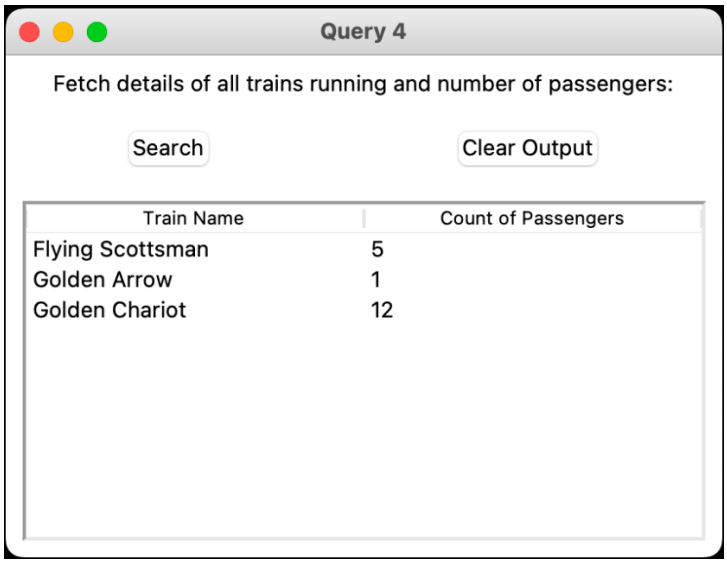
    b. The output can be cleared manually by Clicking on the Clear output button.
    c. In case age range entered does not match with the passengers in database, an error message will appear that states “No passenger lies in the age range of {lower limit} and {upper limit}.”



4. **Query 4**- To fetch details of all running train names and their respective passenger count.

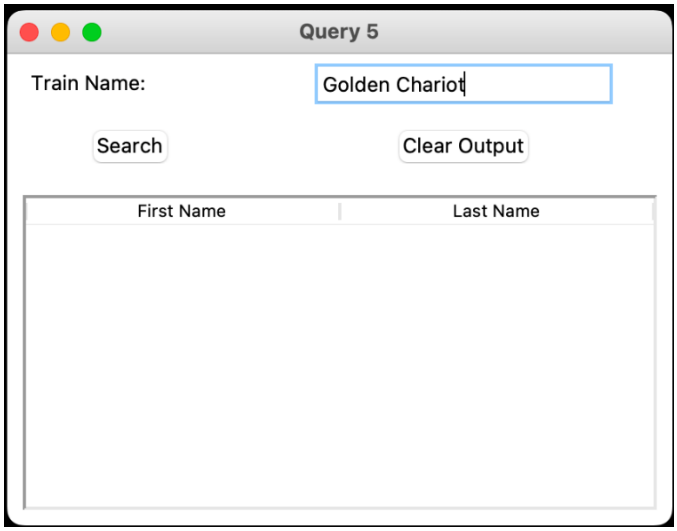


   a. Click on Query 4 button to open query 4 window. Click on the Search button to execute and the results will be displayed in the blank space.

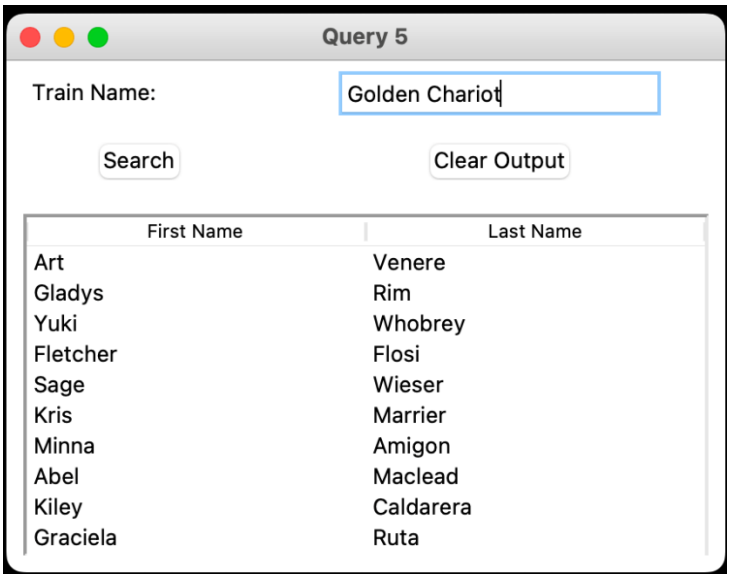


   b. The output can be cleared manually by Clicking on the Clear output button.

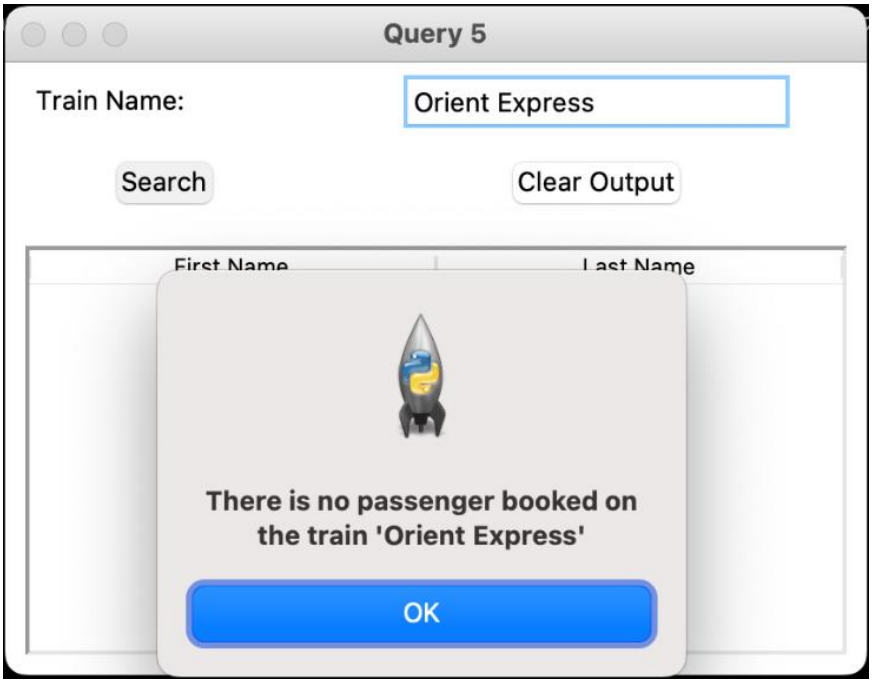
5. **Query 5**- To fetch names of all passengers booked on a particular train.



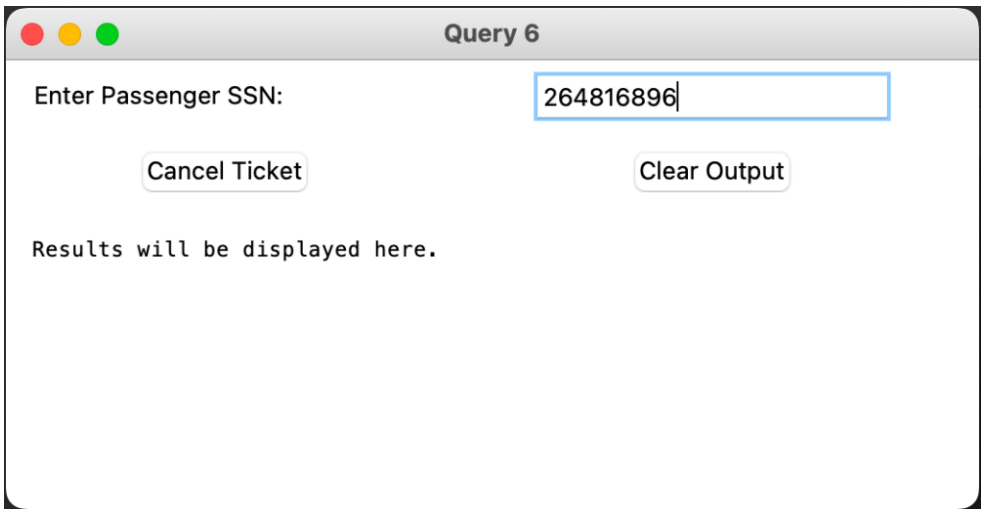
a. Click on Query 5 button to query 5 window. Enter the train name. Then Click on the Search button to execute and the results will be displayed in the blank space.

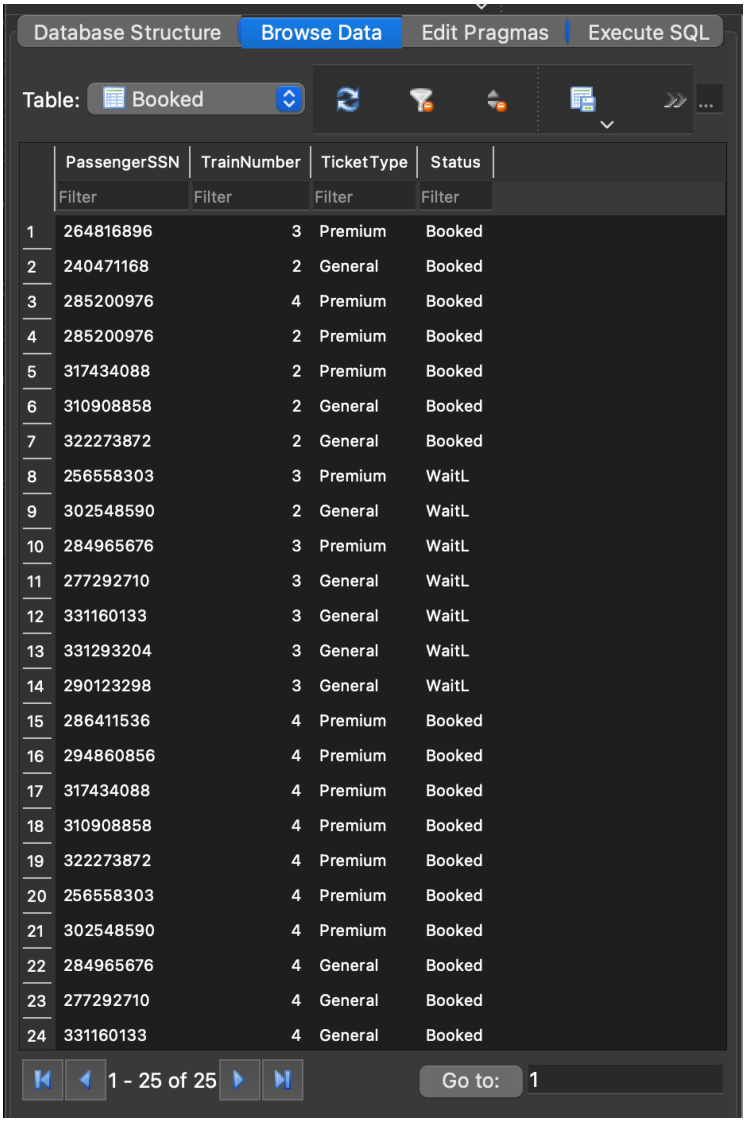


b. The output can be cleared manually by Clicking on the Clear output button.
c. In case the date entered does not have any bookings in the database, an error message will appear that states “There is no passenger booked on the train {train name}.”

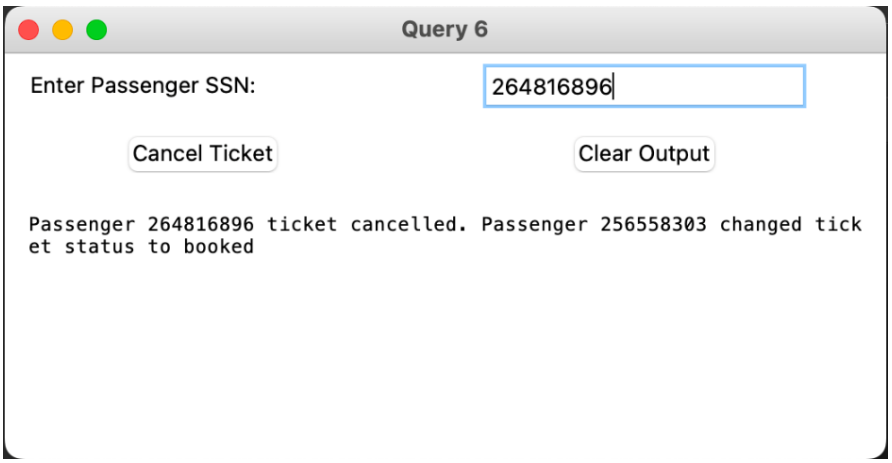


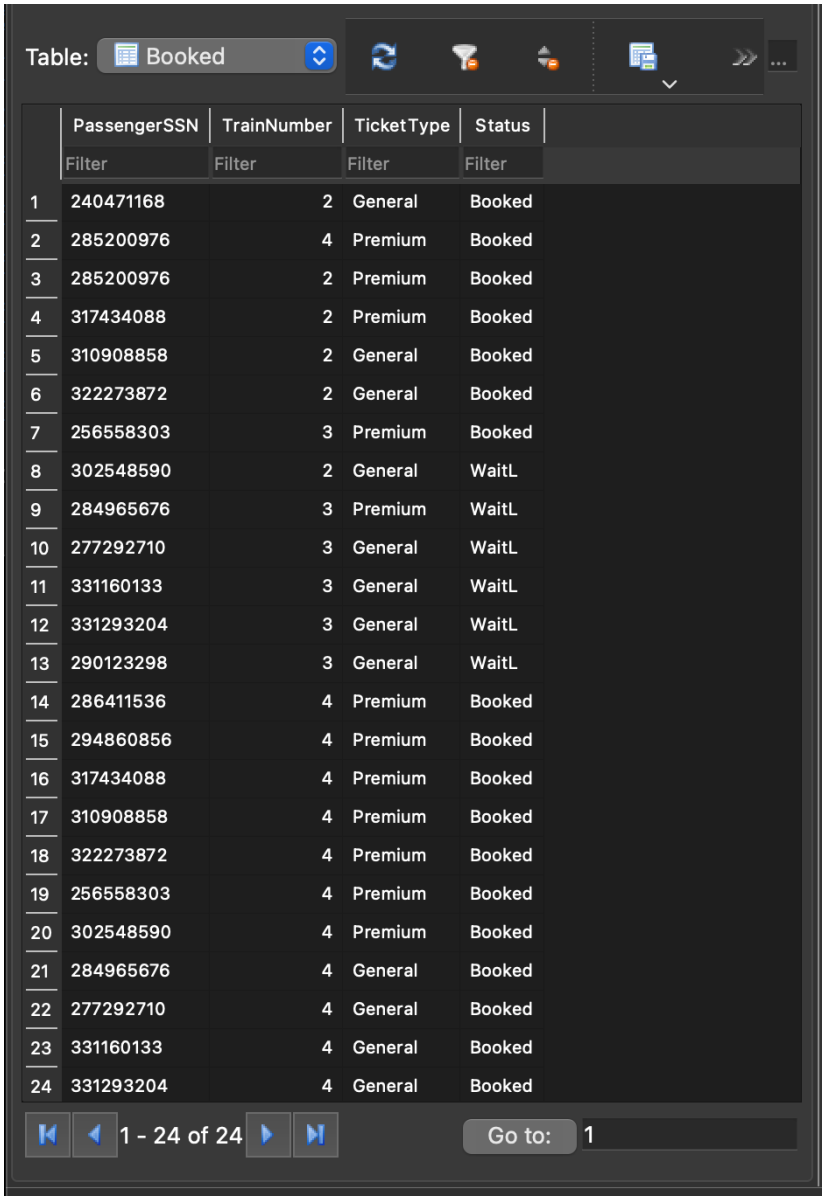
6. **Query 6**- To cancel a passenger's booking and update the booking status of another passenger in wait list.



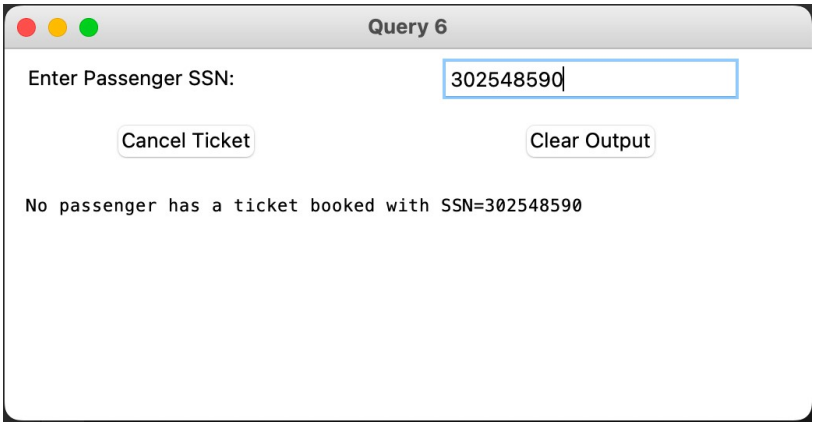


a. Click on Query 6 button to open query 6 window. Enter the SSN of passengers booking to be cancelled. Then Click on the Search button to execute and the booking will be cancelled. The status of the next person in the waiting list will be changed from WaitL to Booked.





b. The output can be cleared manually by Clicking on the Clear output button.
c. In case the ssn entered does not have any bookings in the database, an error message will appear that states “No passenger has a ticket booked with SSN={ssn}”



The output of query 6 was verified by using DB browser to visualize the database.

[Note: The rrs.sql file can be used to create backup database from the original schema and data. To do this, execute the following command in the terminal: **sqlite3 rssdb.db < rss.sql**

Here, rssdb in rssdb.db is the name of the database being created and rss.sql is the sql file with the original schema and data.]