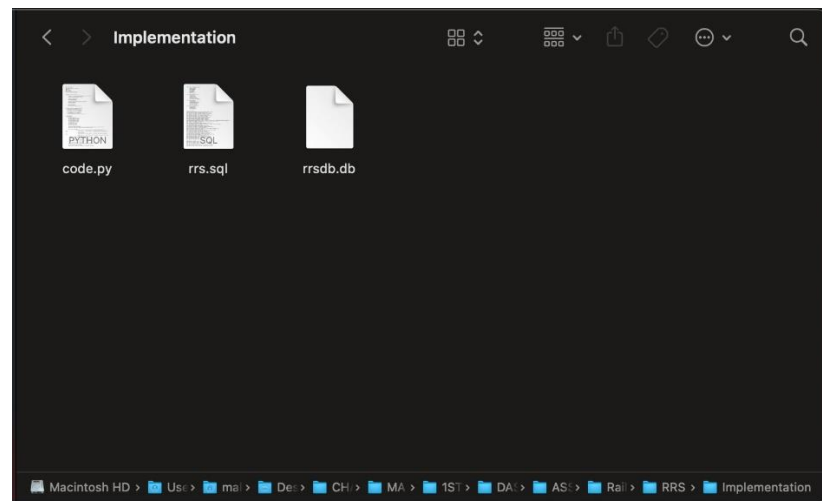


Railway reservation System

[Chirag Hebbal Rudresh (1002160960), Chandan Rudrappa (1002165620)]

INSTRUCTIONS

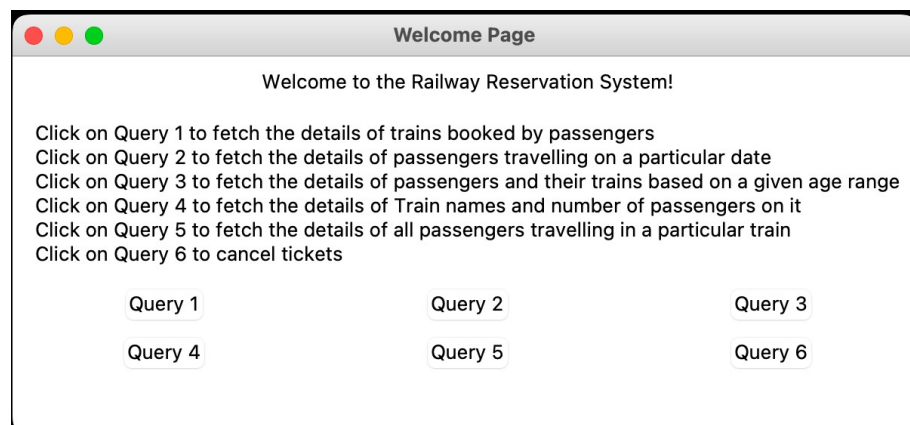
1. Download the Code.py, rss.db, rss.sql files. Make sure Code.py and rss.db (database file) are in the same folder before running the program.



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.

Query 1

First Name: Art

Last Name: Venere

Search Clear Output

First Name	Last Name	Train Name	Status
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- 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.

Query 1

First Name: Art

Last Name: Venere

Search Clear Output

First Name	Last Name	Train Name	Status
Art	Venere	Flying Scottsman	Booked
Art	Venere	Golden Chariot	Booked

- 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}."

Query 1

First Name: James

Last Name: Venere

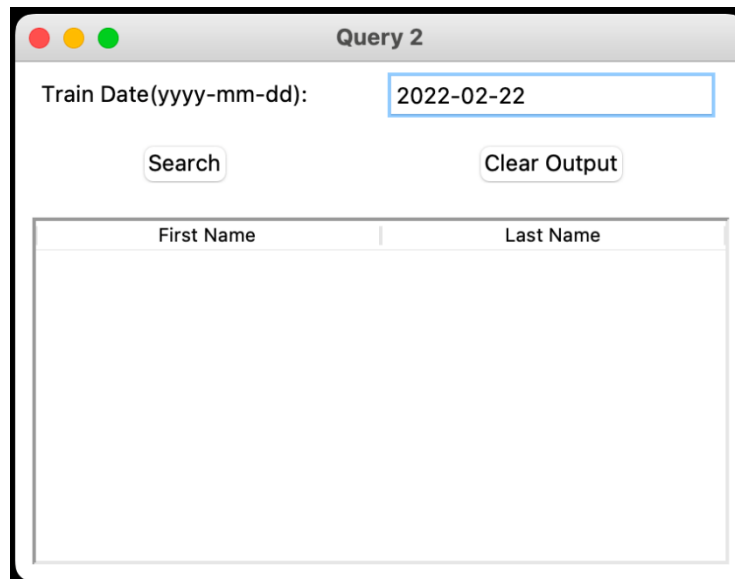
Search Clear Output

First Name	Last Name	Train Name	Status
------------	-----------	------------	--------

No ticket booked for - James Venere

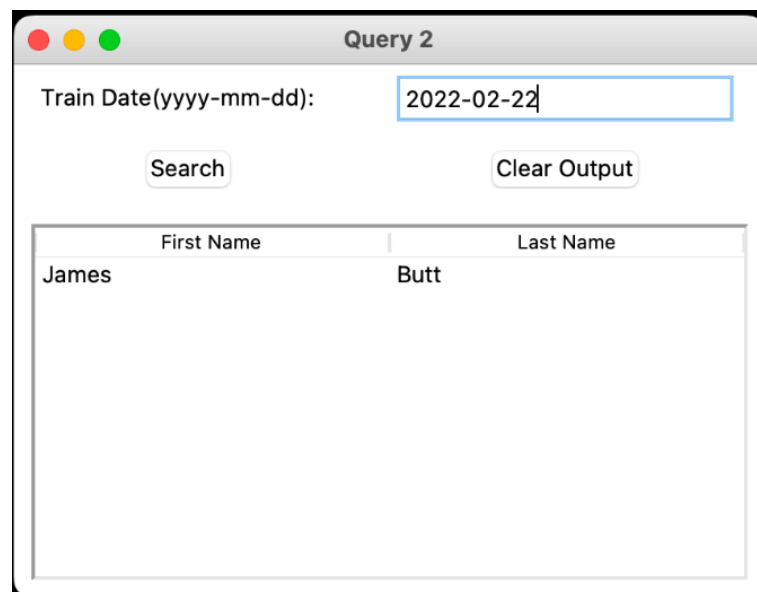
OK

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



The screenshot shows a window titled "Query 2" with a standard macOS-style title bar (red, yellow, green buttons). Inside the window, there is a label "Train Date(yyyy-mm-dd):" followed by a text input field containing "2022-02-22". Below the input field are two buttons: "Search" and "Clear Output". At the bottom of the window is a table with two columns: "First Name" and "Last Name". The table is currently empty.

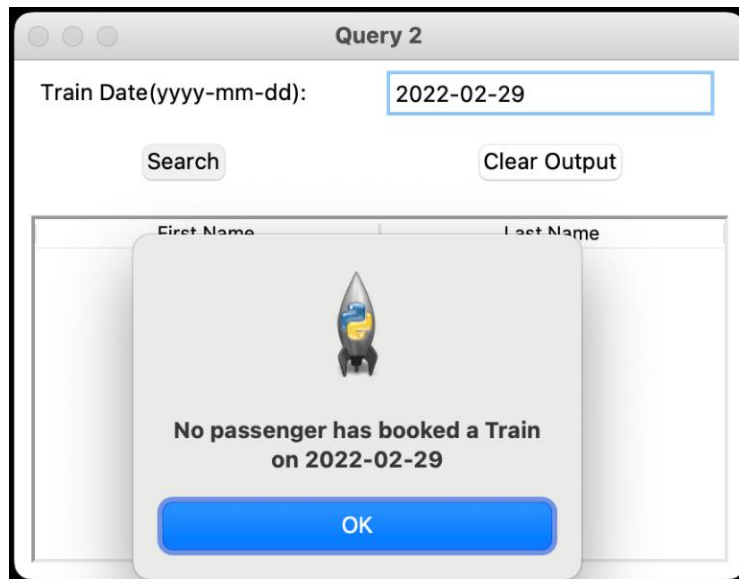
- a. Click on Query 2 button to open query 2 window. Enter the date in [yyyy-mm-dd] format. Then Click on the Search button to execute and the results will be displayed in the blank space.



The screenshot shows the same "Query 2" window after a search. The "Train Date(yyyy-mm-dd):" input field still contains "2022-02-22". The "Search" button is highlighted. The table below now contains one row of data:

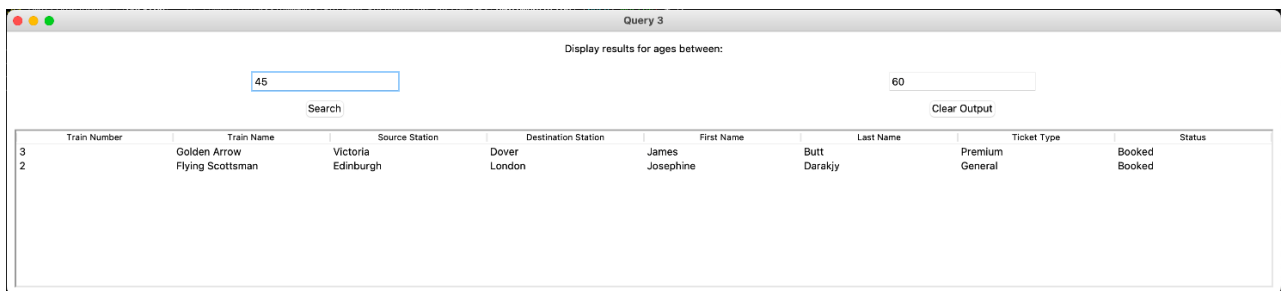
First Name	Last Name
James	Butt

- 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. **Query 3**- To fetch all passenger and train details for a given age range.

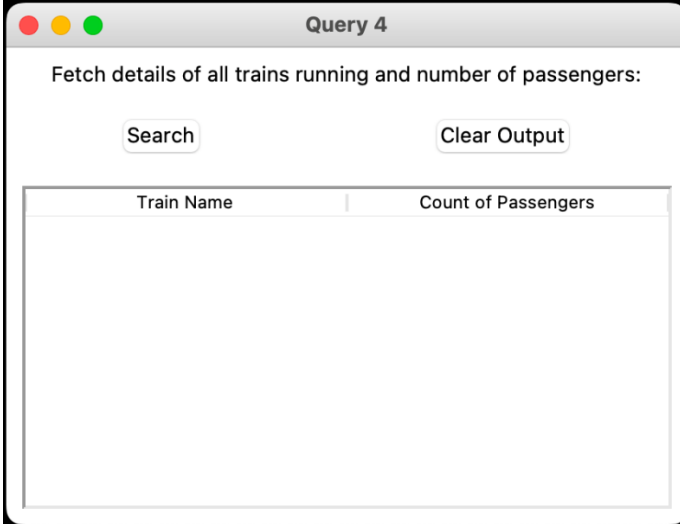
- Click on Query 3 button to open query 3 window. Enter the lower age limit in the left blank and upper age limit in the right blank. Then Click on the Search button to execute and the results will be displayed in the blank space.



- The output can be cleared manually by Clicking on the Clear output button.
- 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}.”

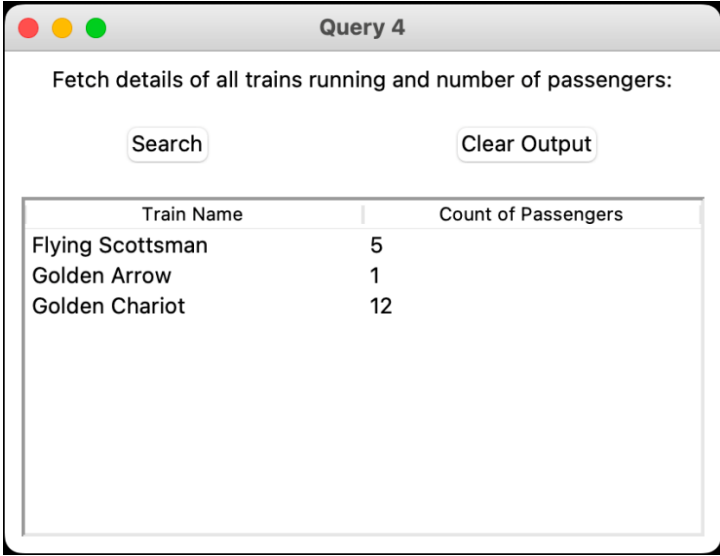


4. **Query 4**- To fetch details of all running train names and their respective passenger count.



The image shows a window titled "Query 4" with a standard macOS-style title bar (red, yellow, green buttons). Inside the window, the text "Fetch details of all trains running and number of passengers:" is displayed. Below this text are two buttons: "Search" and "Clear Output". Underneath the buttons is a table with two columns: "Train Name" and "Count of Passengers". The table is currently empty, showing only the headers.

- 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.



The image shows the same "Query 4" window as before, but now it displays search results. The "Search" button is highlighted. The table has two columns: "Train Name" and "Count of Passengers". The table contains three rows of data:

Train Name	Count of Passengers
Flying Scotsman	5
Golden Arrow	1
Golden Chariot	12

- 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.

Query 5

Train Name:

First Name	Last Name
------------	-----------

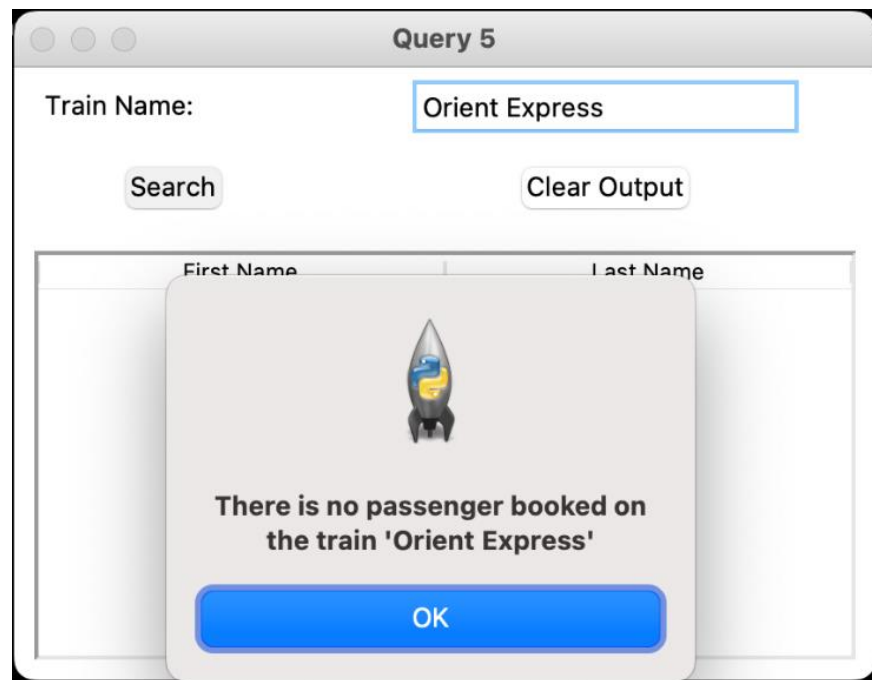
- a. Click on Query 5 button to query 5 window. Enter the train name. Then Click on the Search button to execute and the results will be displayed in the blank space.

Query 5

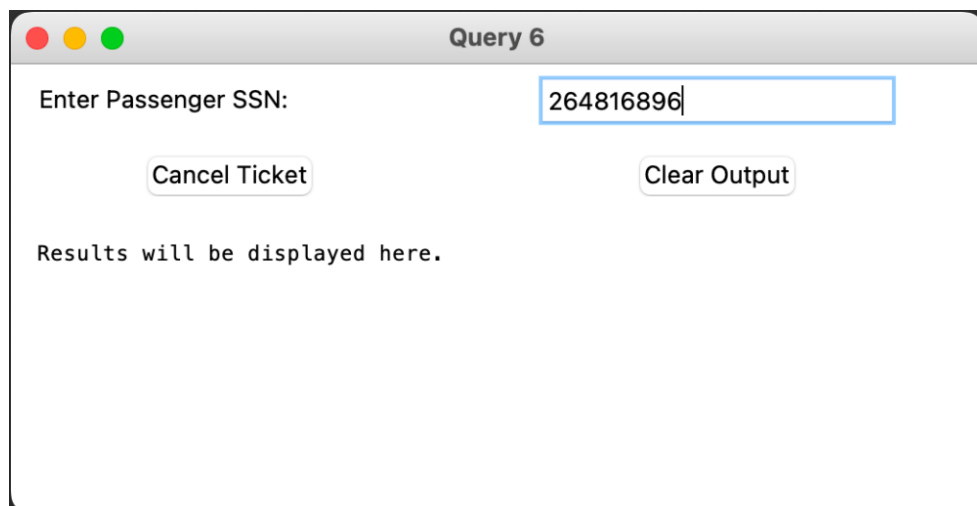
Train Name:

First Name	Last Name
Art	Venere
Gladys	Rim
Yuki	Whobrey
Fletcher	Flosi
Sage	Wieser
Kris	Marrier
Minna	Amigon
Abel	Maclead
Kiley	Caldarera
Graciela	Ruta

- 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.



Database Structure Browse Data Edit Pragas Execute SQL				
Table: Booked				
	PassengerSSN	TrainNumber	TicketType	Status
	Filter	Filter	Filter	Filter
1	264816896		3 Premium	Booked
2	240471168		2 General	Booked
3	285200976		4 Premium	Booked
4	285200976		2 Premium	Booked
5	317434088		2 Premium	Booked
6	310908858		2 General	Booked
7	322273872		2 General	Booked
8	256558303		3 Premium	WaitL
9	302548590		2 General	WaitL
10	284965676		3 Premium	WaitL
11	277292710		3 General	WaitL
12	331160133		3 General	WaitL
13	331293204		3 General	WaitL
14	290123298		3 General	WaitL
15	286411536		4 Premium	Booked
16	294860856		4 Premium	Booked
17	317434088		4 Premium	Booked
18	310908858		4 Premium	Booked
19	322273872		4 Premium	Booked
20	256558303		4 Premium	Booked
21	302548590		4 Premium	Booked
22	284965676		4 General	Booked
23	277292710		4 General	Booked
24	331160133		4 General	Booked

- 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.

Query 6

Enter Passenger SSN:

264816896

Cancel Ticket

Clear Output

Passenger 264816896 ticket cancelled. Passenger 256558303 changed ticket status to booked

Table: **Booked**

	PassengerSSN	TrainNumber	TicketType	Status
	Filter	Filter	Filter	Filter
1	240471168	2	General	Booked
2	285200976	4	Premium	Booked
3	285200976	2	Premium	Booked
4	317434088	2	Premium	Booked
5	310908858	2	General	Booked
6	322273872	2	General	Booked
7	256558303	3	Premium	Booked
8	302548590	2	General	WaitL
9	284965676	3	Premium	WaitL
10	277292710	3	General	WaitL
11	331160133	3	General	WaitL
12	331293204	3	General	WaitL
13	290123298	3	General	WaitL
14	286411536	4	Premium	Booked
15	294860856	4	Premium	Booked
16	317434088	4	Premium	Booked
17	310908858	4	Premium	Booked
18	322273872	4	Premium	Booked
19	256558303	4	Premium	Booked
20	302548590	4	Premium	Booked
21	284965676	4	General	Booked
22	277292710	4	General	Booked
23	331160133	4	General	Booked
24	331293204	4	General	Booked

1 - 24 of 24 Go to: 1

- The output can be cleared manually by Clicking on the Clear output button.
- 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}”

Query 6

Enter Passenger SSN:

No passenger has a ticket booked with SSN=302548590

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.]