DASC5300 – FOUNDATION OF COMPUTING

Programming Assignment 3

RAILWAY RESERVATION SYSTEM

Team Members:

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HONOR CODE:

I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, atradition that values hard work and honest effort in the pursuit of academic excellence.

I promise that I will submit only work that I personally create or that I contribute togroup collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.

Team members Signatures:

Bhargava sai Cherukuri   Giridhar Maturi

       Teammate 1   **Teammate 2**

TASK:

To Create a simple and friendly GUI interface that would be able to perform the following tasks using either of JAVA programming using JDBC, or C/C++/C# programming with ODBC/Oracle or Python programming or PHP/MySQL or other programming languages to develop a GUI interface. The user will have to type or select the query's input parameters and post the question to your program. The program needs to return all result's rows.

We have used Python programming language(Tkinter) for GUI development and sqlite for backend programming.

GUI:

We have created an GUI named as "**RailwayTicket Enquiry**", which includes 6 tasks which executes 6 queries.

GUI Interface:

All six queries will appear on the screen as six features, and by clicking on any of them, we are able to verify it.
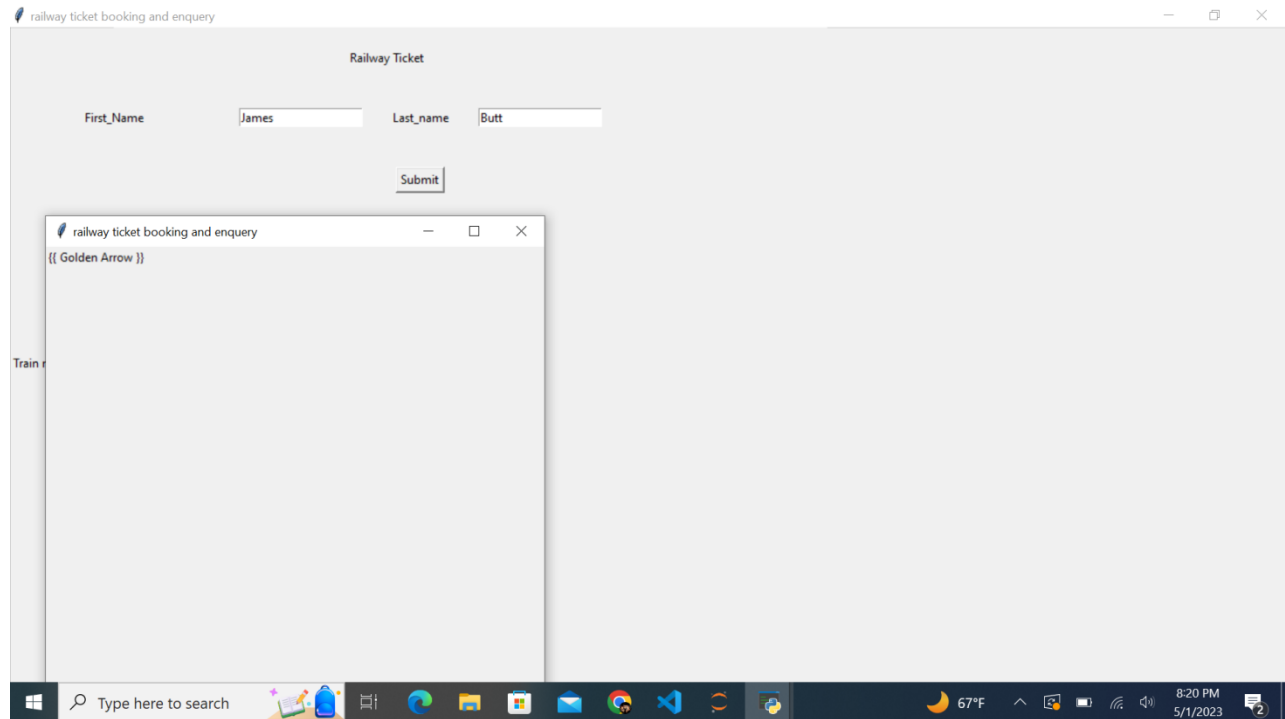

1) Train List by name:

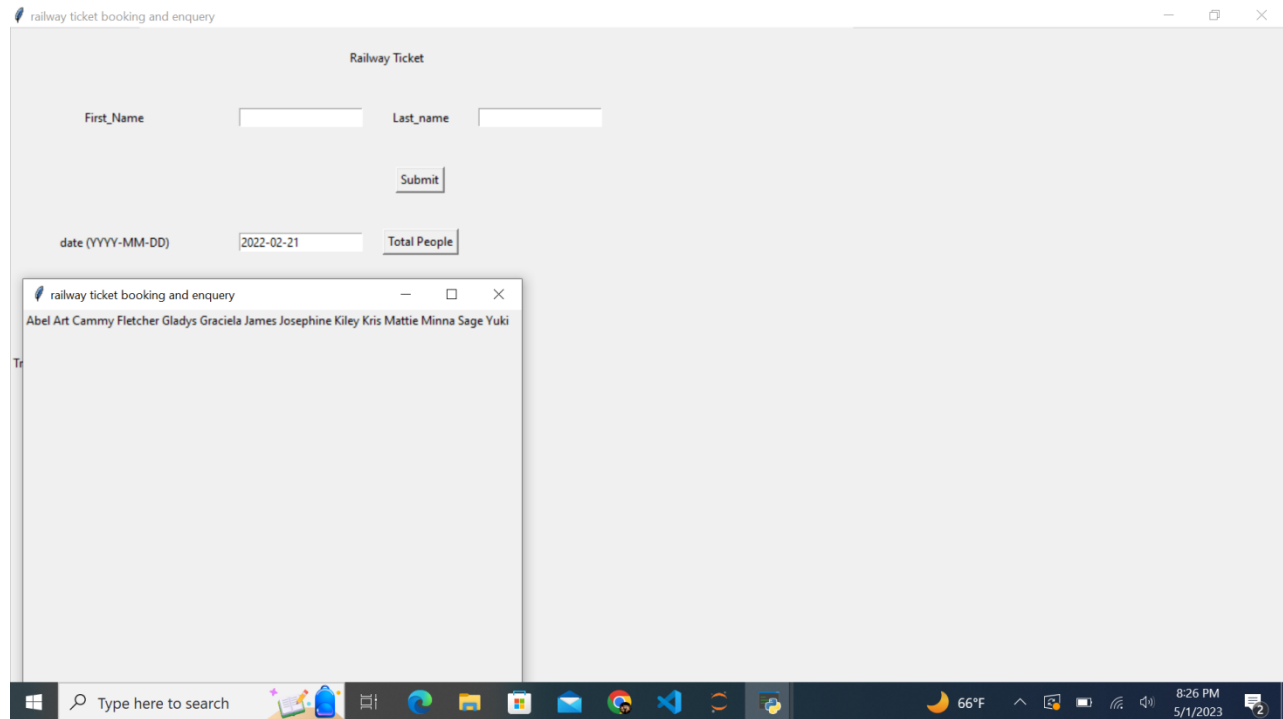User input the passenger's last name and first name and retrieve all trains they are booked on.

'''select t.Train_Name from Passenger p, booked b, Train t where p.first_name = ? AND p.last_name = ? AND b.Passanger_ssn = p.SSN AND b.Train_Number = t.Train_Number;''',(username.get(),un.get()))

2)Get passenger list by Date:

"User input the Date and list of passengers travelling on entered date with confirmed tickets displays on UI"

'''SELECT distinct(p.first_name) FROM Passenger p ,booked b,Train_Status s, train t where p.SSN = b.Passanger_ssn and t.Train_Name = s.TrainName and s.TrainDate= ? AND b.Staus = 'Booked';''',(date,))
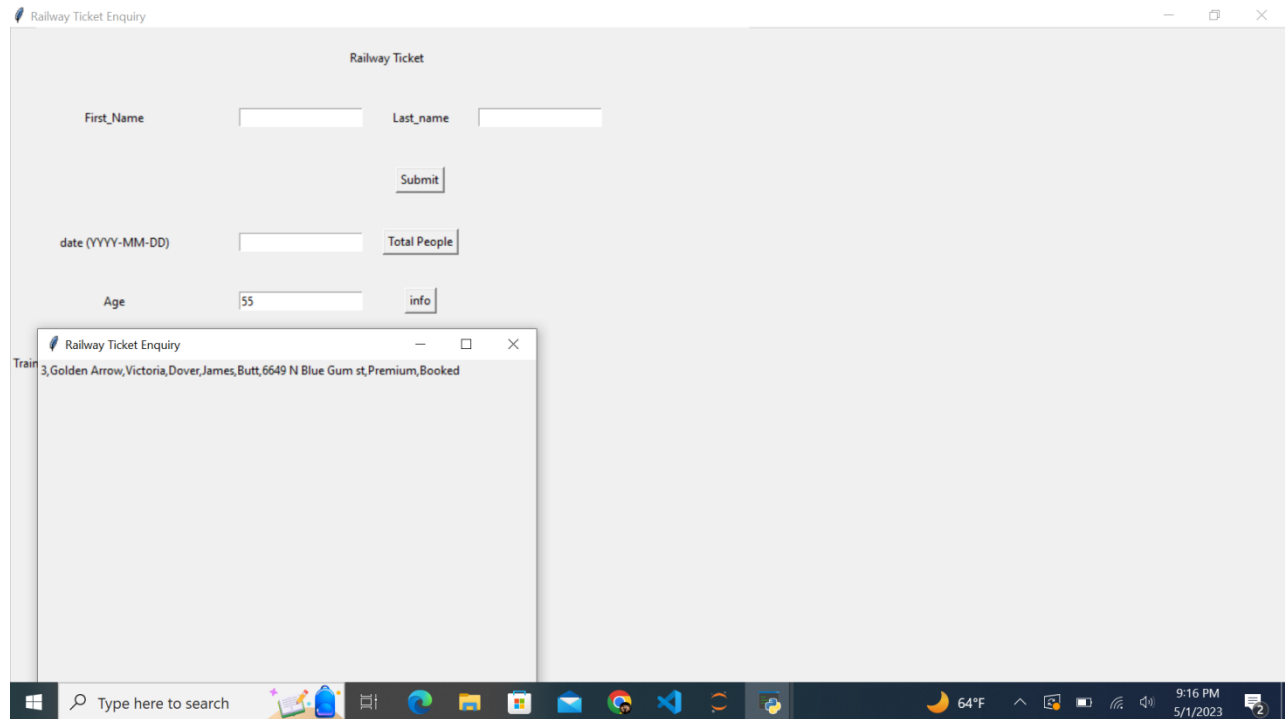
3)Get Train and passenger details by age:

"User input the Date and list of passengers travelling on entered day with confirmed tickets displays on UI."

```
"""SELECT Train.Train_Number, Train.Train_Name,
Train.Source_Station, Train.Destination_Station, Passenger.first_name,
Passenger.last_name, Passenger.address, booked.Ticket_Type,
booked.Staus FROM booked jOIN Passenger ON booked.Passanger_ssn =
Passenger.SSN JOIN Train ON booked.Train_Number =
Train.Train_Number WHERE strftime('%Y', "now") -
CAST(substr(Passenger.bdate,7,4) as INTEGER) BETWEEN 50 AND 60
ORDER BY Train.Train_Number""", (age,))
```

4) List Train Passenger count:

"List all the train name along with count of passengers it is carrying.

'''SELECT Train.Train_Name, COUNT(booked.Train_Number) as count FROM Train LEFT JOIN booked ON booked.Train_Number=Train.Train_Number WHERE Staus='Booked' GROUP BY Train.Train_Name''')
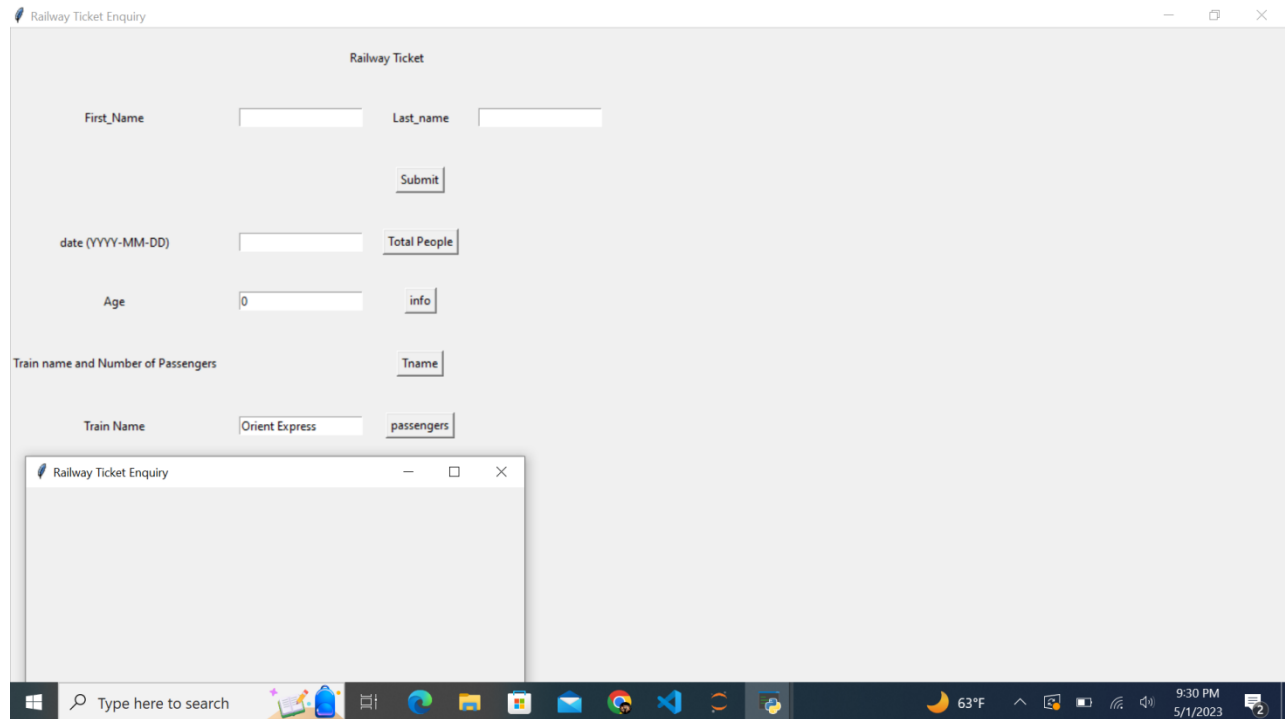
5) Confirmed passenger list by Train name:

"Enter a train name and retrieve all the passengers with confirmed status travelling in that train.

'''SELECT p.first_name, p.last_name, b.Ticket_Type FROM Train t, booked b, Passenger p WHERE t.Train_Name = ? AND t.Train_Number = b.Train_Number AND b.Passanger_ssn = p.SSN AND b.Staus = "Booked";''',(ik,))

6) __Cancel Ticket:__

"User Cancel a ticket (delete a record) and show that passenger in waitinglist get ticket confirmed. "

'''DELETE FROM Booked WHERE Passanger_ssn = '{passenger_ssn}' AND Train_Number = '{train_number}' AND Ticket_Type = '{ticket_type}'''

'''UPDATE Booked SET Status = 'Booked' WHERE Train_Number = '{train_number}' AND Ticket_Type = 'General' AND Status = 'WaitL' AND Passanger_ssn IN (SELECT Passanger_ssn FROM Booked WHERE Train_Number = '{train_number}' AND Ticket_Type = 'General' AND Status = 'WaitL' ORDER BY Train_Number LIMIT 1)'''

Railway Ticket

First_Name   Last_name

Submit

date (YYYY-MM-DD)   Total People

Age   0   info

Train name and Number of Passengers   Tname

Train Name   passengers

SSN   310908858   cancel

Railway Ticket Enquiry

deleted updated

Contributions:

Bhargava sai Cherukuri:
I have worked on labels in GUI and database and executed first three queries which are Train List by name , Get passenger list by Date, Get Train and passenger details by age.

Giridhar Maturi:
I have worked on remaining three SQL queries which are List Train Passenger count, Confirmed passenger list by Train name,Cancel Ticket.
Trial and error method for sql errors challenge.