

University of Texas at Arlington

Assignment 4 Railway Reservation

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DASC 5300: Foundations of Computing

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December 3 2023

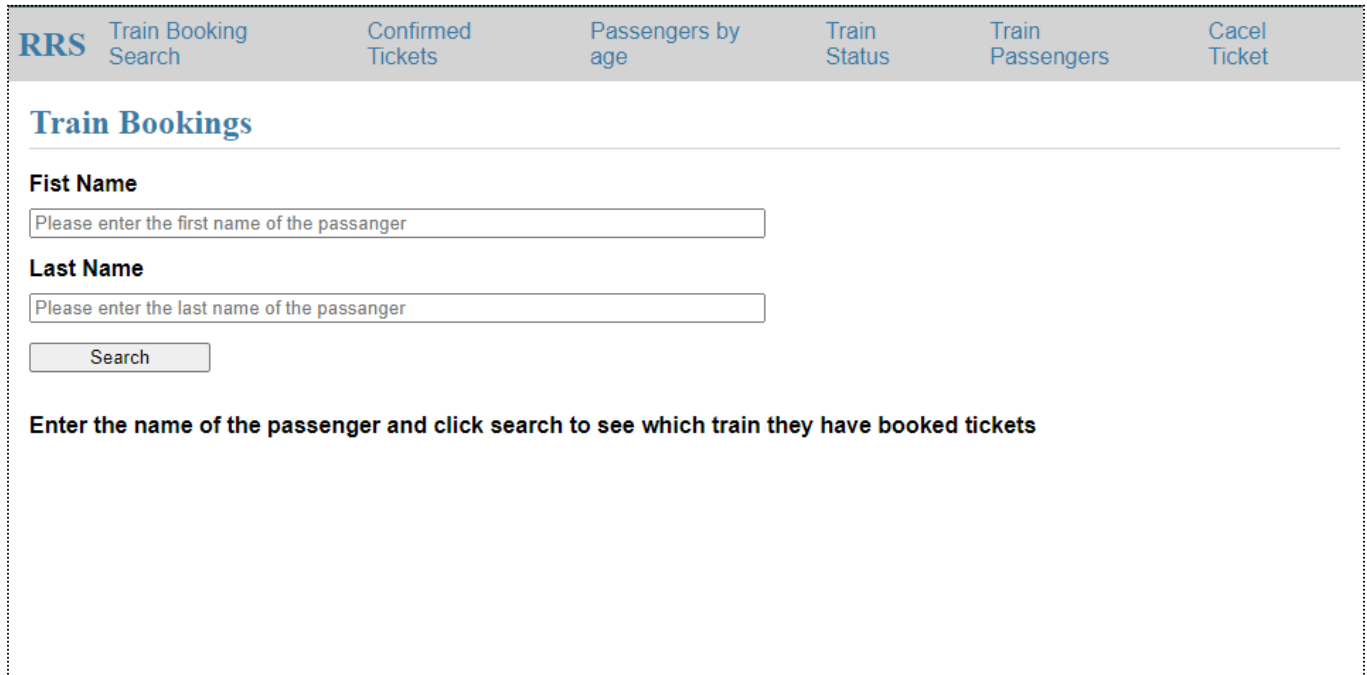
## **HONOR CODE**

I pledge, in my honor, to uphold UT Arlington's tradition of academic integrity, a tradition 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 to group 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

## TASKS

**Task 1:** User input the passenger's last name and first name and retrieve all trains they are booked on.



The screenshot shows a web application interface for RRS (Railway Reservation System). At the top, there is a navigation bar with the following options: "RRS", "Train Booking Search", "Confirmed Tickets", "Passengers by age", "Train Status", "Train Passengers", and "Cancel Ticket". Below the navigation bar, the main heading is "Train Bookings". Under this heading, there are two input fields: "First Name" and "Last Name". The "First Name" field has a placeholder text "Please enter the first name of the passenger". The "Last Name" field has a placeholder text "Please enter the last name of the passenger". Below these fields is a "Search" button. At the bottom of the form, there is a text instruction: "Enter the name of the passenger and click search to see which train they have booked tickets".

*Figure 1: Train Bookings*

**Instructions:** Select the “Train Booking Search” option from the RRS action options at the top of the screen. Then, the user is required to input the first name and last name of the passenger they wish to retrieve booking information for. Upon entering this information and initiating the search, the system will display the specific details related to the passenger, including their name (first and last) along with the corresponding booked train information. For instance, if the user enters the First Name as "Gladys" and the Last Name as "Rim," the system will present the booking details associated with this passenger.

**RRS** Train Booking Search Confirmed Tickets Passengers by age Train Status Train Passengers Cancel Ticket

### Train Bookings

**First Name**

**Last Name**

Trains booked by **Gladys Rim** are:  
 Train Name: Golden Chariot

Figure 1.1: Train Bookings

**Task 2:** User input the Date and list of passengers traveling on entered day with confirmed tickets displayed on UI.

**RRS** Train Booking Search Confirmed Tickets Passengers by age Train Status Train Passengers Cancel Ticket

### Confirmed Passengers List

**Date**

Click here to activate the date selection dropdown

February 2022 ↑ ↓

Su	Mo	Tu	We	Th	Fr	Sa
30	31	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	1	2	3	4	5
6	7	8	9	10	11	12

Clear Today

023-11-26

Figure 2: Confirmed Passengers List

**Instructions:** Select the “Confirmed Tickets” option from the RRS action options at the top of the screen. Then, the user is required to click on the dropdown icon to select the date they want information for. Upon entering this information and

initiating the search, the system will display the specific details related to all the passengers traveling on the selected date, including their name (first and last) along with the corresponding booked train information. For instance, if the user enters the Date as "02/21/2022," the system will present the details associated with this date.

**RRS** Train Booking Search Confirmed Tickets Passengers by age Train Status Train Passengers Cancel Ticket

### Confirmed Passengers List

Date

02/21/2022

Search

**Passengers travelling on 2022-02-21 are:**

- Name: Josephine Darakjy
- Name: Art Venere
- Name: Art Venere
- Name: Fletcher Flosi
- Name: Sage Wieser
- Name: Kris Marrier
- Name: Gladys Rim
- Name: Yuki Whobrey
- Name: Fletcher Flosi
- Name: Sage Wieser
- Name: Kris Marrier
- Name: Minna Amigon
- Name: Abel Maclead
- Name: Kiley Calderera
- Name: Graciela Ruta
- Name: Cammy Albares
- Name: Mattie Poquette

Figure 2.1: Confirmed Passengers List

**Task 3:** User input the age of the passenger (50 to 60) and UI display the train information (Train Number, Train Name, Source and Destination) and passenger information (Name, Address, Category, ticket status) of passengers who are between the ages of 50 to 60.

RRS	Train Booking Search	Confirmed Tickets	Passengers by age	Train Status	Train Passengers	Cancel Ticket
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### Passengers By Age

Age Range

**From**

**To**

*Figure 3: Passengers by age*

**Instructions:** Select the “Passengers by age” option from the RSS action options at the top of the screen. Then, the user is required to input the “from” and the “to” age range they wish to retrieve train information for. Upon entering this information and initiating the search, the system will display the specific details related to the train, including train number, train name, source station, destination station, passenger name, passenger address, ticket category , ticket status, and passenger age for all passengers within the age range selected . For instance, if the user enters the From as "50" and the To as "60," the system will present the booking details associated with this range.

RRS	Train Booking Search	Confirmed Tickets	Passengers by age	Train Status	Train Passengers	Cacel Ticket
<b>Passengers By Age</b>						
Age Range						
<b>From</b>						
<input type="text" value="50"/>						
<b>To</b>						
<input type="text" value="60"/>						
<input type="button" value="Search"/>						
<b>Train Number:</b> 3   <b>Train Name:</b> Golden Arrow   <b>Source station:</b> Victoria   <b>Destination Station:</b> Dover   <b>Passenger Name:</b> James Butt   <b>Passenger address:</b> 6649 N Blue Gum St   <b>Ticket Categry:</b> Premium   <b>Ticket Status:</b> Booked <b>Passenger Age:</b> 55						

Figure 3.1: Passengers by age

**Task 4:** List all the train names along with the count of passengers it is carrying.

RRS	Train Booking Search	Confirmed Tickets	Passengers by age	Train Status	Train Passengers	Cacel Ticket
<b>Train Status</b>						
<b>2022-03-10</b>						
Train Name: Golden Arrow   Passenger Count: 7						
<b>2022-02-22</b>						
Train Name: Golden Arrow   Passenger Count: 5						
<b>2022-02-21</b>						
Train Name: Maharaja Express   Passenger Count: 7						
Train Name: Golden Chariot   Passenger Count: 11						
Train Name: Flying Scotsman   Passenger Count: 10						
<b>2022-02-20</b>						
Train Name: Flying Scotsman   Passenger Count: 7						
<b>2022-02-19</b>						
Train Name: Orient Express   Passenger Count: 0						

Figure 4: Train Status

**Instructions:** Select the “Train Status” option from the RSS action options at the top of the screen. Then, the user is presented with the history of all the dates, including the train name and passenger count (see figure 4).

**Task 5:** Enter a train name and retrieve all the passengers with confirmed status traveling in that train.

The screenshot shows the 'Train Passengers' page. At the top, there is a navigation bar with the following options: RRS, Train Booking Search, Confirmed Tickets, Passengers by age, Train Status, Train Passengers (highlighted), and Cancel Ticket. Below the navigation bar, the page title 'Train Passengers' is displayed. Under the title, there is a section 'Select Train' with a dropdown menu. The dropdown menu is open, showing a list of train names: Flying Scotsman, Golden Arrow, Golden Chariot, Maharaja Express, and Orient Express. A blue line points from the text 'Click here to activate the train selection dropdown' to the dropdown arrow. Below the dropdown menu, the text 'Confirmed ticket on Flying Scotsman train are:' is displayed, followed by a list of passenger names: Name: Josephine Darakjy, Name: Art Venere, Name: Fletcher Flosi, Name: Sage Wieser, and Name: Kris Marrier.

Figure 5: Train Passengers

**Instructions:** Select the “Train Passengers” option from the RSS action options at the top of the screen. Then, the user is required to click on the dropdown icon to select the name of the train they want information for. Upon entering this information and initiating the search, the system will display the specific details related to all the passengers with confirmed tickets traveling on the selected train, including their name (first and last). For instance, if the user selects the train as "Golden Chariot," the system will present the details associated with this train.



RRS	Train Booking Search	Confirmed Tickets	Passengers by age	Train Status	Train Passengers	Cancel Ticket
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### Train Passengers

**Select Train**

Golden Chariot

Search

**Passenger with confirmed ticket on Golden Chariot train are:**

**Name:** Art Venere  
**Name:** Gladys Rim  
**Name:** Yuki Whobrey  
**Name:** Fletcher Flosi  
**Name:** Sage Wieser  
**Name:** Kris Marrier  
**Name:** Minna Amigon  
**Name:** Abel Maclead  
**Name:** Kiley Calderera  
**Name:** Graciela Ruta  
**Name:** Cammy Albares  
**Name:** Mattie Poquette

Figure 5.1: Train Passengers

**Task 6:** User Cancel a ticket (delete a record) and show that the passenger in the waiting list gets a confirmed ticket.

RRS	Train Booking Search	Confirmed Tickets	Passengers by age	Train Status	Train Passengers	Cancel Ticket
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### Cancel Ticket

**Passenger SSN**

Please enter the SSN of the passanger

**Select Train**

Orient Express

Premium

Cancel Ticket

Reset Database

Click here to activate the train selection dropdown

Click here to activate the ticket type dropdown

Figure 6: Cancel Ticket

**Instructions:** Select the “Cancel Ticket” option from the RSS action options at the top of the screen. Then, the user is required to enter the social security number of the passenger, click on the dropdown to select the name of the train, and the dropdown to select the type of ticket they wish to cancel. Upon entering this information and initiating the cancel ticket function, the system will display the specific details related to the cancellation, including the name (first and last), ticket status, as well as the name (first and last) of the passenger whose status changed from waitlist to confirmed. For instance, if the user enters Passenger SSN “264816896,” selects the train as "Orient Express," the ticket type as “premium,” and clicks “cancel ticket” button, the system will present the details associated with their cancellation and the passenger whose ticket got confirmed .

RRS	Train Booking Search	Confirmed Tickets	Passengers by age	Train Status	Train Passengers	Cancel Ticket
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### Cancel Ticket

**Passenger SSN**

**Select Train**

James Butt's Ticket for Orient Express is cancelled  
Minna Amigon's Ticket status has changed from waitlist to confirmed for Orient Express

## TEAM CONTRIBUTIONS

Andrea Lopera (1001542800) was primarily responsible for creating the schema and insert queries, alongside task-specific query development. She also dedicated efforts towards the report file's completion.

Dileep Chowdary Ealapolu (1002169540) took charge of developing the GUI using Flask, transforming queries into dynamic ones, and ensuring comprehensive coverage in the Readme file.

Their combined efforts resulted in significant contributions. They collaborated on establishing SQL connections, executing data injections into tables, and enhancing security by working on injection issues. Additionally, they jointly tackled debugging tasks, resolving identified issues efficiently while enhancing the overall user interface (UI) for improved performance and functionality.