



Assignment: Bus Ticket Booking System

CMPD244/293 Programming 2

Diploma in Computer Science

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Introduction of Project

Inputs:

- Bus Trips Data: The program reads bus trip data from a file named "bus_trips.txt." Each line in the file represents a bus trip and includes information such as destination, departure time, ticket price, and available seats.

Outputs:

- Display Available Trips: The program displays a list of available bus trips, including their details like destination, departure time, ticket price, and available seats.
- Book a Ticket: Users can input details to book a ticket, including the passenger name, number of tickets, and the ID of the selected trip.
- Show Receipt: After booking a ticket, the program generates a receipt with details such as passenger name, destination, departure time, total tickets, total price, and prompts the user to pay and redeem the ticket at Putrajaya Sentral.
- Exit: Users can choose to exit the program.

Special Constraints/Conditions:

- File Handling: The program relies on file operations to read bus trip data from "bus_trips.txt" and save receipts to "receipt.txt."
- Seat Availability: The program checks for seat availability before allowing the user to book a ticket.
- Ticket Number Validation: The program validates that the entered ticket number is within a valid range.
- Duplicate Booking Check: The program checks for duplicate bookings on the same trip and seat.

Formulas/Equations:

- Total Amount Calculation: The total amount spent on booked tickets is calculated by multiplying the ticket price by the number of tickets booked.

Sample Output

1. Welcome Message

```
Welcome to Ticket Bus Online
1.Display Available Buses
2.Book a Ticket
3.Show Receipt
4.Exit
Enter your choice:-> 
```

2. Display Available Buses (Option 1):

```
Available Bus Trips From Putrajaya Sentral:
-----
ID      Destination      DepartureTime      Price      AvailableSeats
1       LarkinSentral      08:00AM           RM50.00      20
2       KLIASentral        10:30AM           RM15.00      10
3       KLIA2Sentral       10:30AM           RM12.00      10
4       TaipingSentral     01:00PM           RM48.00      20
5       KajangMRT          04:00PM           RM10.00      15
-----
```

3. Book a Ticket (Option 2):

```
Enter the ID of the trip you want to book: 1
Enter passenger name: siti
Enter Number of Ticket: 4

Ticket Booking Successful!
```

4. Show Receipt (Option 3):

```
*****
----- Receipt -----
Passenger Name: siti
Destination: LarkinSentral
Departure Time: 08:00AM
Total Ticket: 4
Total Price: RM200.00
Please Pay and Redeem your ticket at Putrajaya Sentral !
Receipt saved to 'receipt.txt'
*****
```

5. Exit (Option 4):

```
Welcome to Ticket Bus Online
1.Display Available Buses
2.Book a Ticket
3.Show Receipt
4.Exit
Enter your choice:-> 4

...Program finished with exit code 0
Press ENTER to exit console.
```

6. Receipt Displayed on receipt.txt

```
----- Receipt -----
Passenger Name: siti
Destination: LarkinSentral
Departure Time: 08:00AM
Total Ticket: 4
Total Price: RM200.00
```