Documentation of Bus Booking system

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Using OOP's in C++

This task i have done it completely using Object Oriented programming in C++
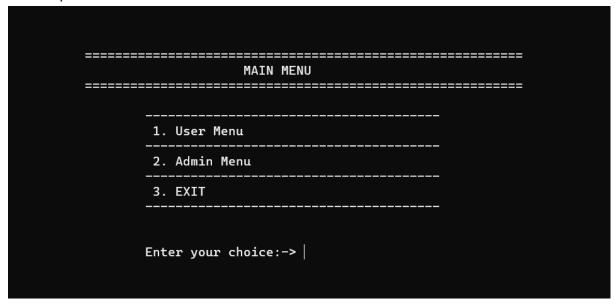
With
- main.cpp
- bus.cpp
- bus.h
- ticket.cpp
- ticket.h
- utils.h

->main.cpp contains the welcome message and then asks to choose between user and admin

Next step redirects to this

After choosing user menu we have
Several options like
- Book ticket

- View ticket
- Cancel ticket

```
========================================================
                      USER MENU
========================================================


        ------------------------------------
         1. Book Ticket
        ------------------------------------
         2. View Ticket
        ------------------------------------
         3. Cancel Ticket
        ------------------------------------
         4. BACK
        ------------------------------------

  Enter your choice:->
```

Here ticket has pnr number, bus number, customer name, souce, destination etc stored in
Admin has a username and password with it
If they pass the credentials he has options like
- Add bus
- View bus
- Book ticket
- Edit ticket
- view ticket
- Cancel ticket
- View bookings
- View bus details
- Edit bus
- Delete bus

```
                          ctrl+alt+1

              ====================================================
                              ADD BUS
              ====================================================


                 Enter Bus Number:-> 1

                 Enter Source:-> Hyderabad

                 Enter Destination:-> Nalgonda

                 Enter Source Time:-> 12:00

                 Enter Destination Time:-> 2:00

                 Enter Bus Fare:-> 170

                 Bus Added Successfully...!!!:->
Press any key to continue . . .
```

View buses

```
========================================================
                       BUSES
========================================================


         ----------------------------------
         Bus No:-> 1
         Source:-> Hyderabad
         Destination:-> Nalgonda
         Time:-> 12:00 - 3:00
         Total Seats:-> 32
         Seats Remaining:-> 32
         Bus Fare:-> 170.00
         ----------------------------------


         ----------------------------------
         Bus No:-> 2
         Source:-> Hyderabad
         Destination:-> Nalgonda
         Time:-> 10:00 - 13:00
         Total Seats:-> 32
         Seats Remaining:-> 32
         Bus Fare:-> 170.00
         ---------------------------------


         ----------------------------------
         Bus No:-> 3
         Source:-> Hyderabad
         Destination:-> Vizag
         Time:-> 1:00 - 13:00
         Total Seats:-> 32
         Seats Remaining:-> 32
         Bus Fare:-> 1200.00
         ---------------------------------


         ----------------------------------
         Bus No:-> 4
         Source:-> Hyderabad
         Destination:-> Vizag
         Time:-> 5:00 - 19:00
         Total Seats:-> 32
         Seats Remaining:-> 32
         Bus Fare:-> 1200.00
```

Booking a ticket for passenger
While booking a ticket after entering source and destination you get a list of buses available

```
========================================================
                   AVAILABLE BUSES
========================================================


           ------------------------------------
           Bus No:-> 1
           Source:-> Hyderabad
           Destination:-> Nalgonda
           Time:-> 12:00 - 3:00
           Total Seats:-> 32
           Seats Remaining:-> 32
           Bus Fare:-> 170.00
           ------------------------------------

           ------------------------------------
           Bus No:-> 2
           Source:-> Hyderabad
           Destination:-> Nalgonda
           Time:-> 10:00 - 13:00
           Total Seats:-> 32
           Seats Remaining:-> 32
           Bus Fare:-> 170.00
           ------------------------------------



     Enter Bus Number:->
```

count of seats remaining
Total seats
And fare etc information is given

Ticket after booking ticket is like this

```
============================================================
                   BOOKING DETAILS
============================================================


  ------------------------------------
  Name:-> Pranathi
  PNR No:-> PNR7683
  Bus No:-> 1
  Seat No.:-> 1
  Date:-> 7-1-2024
  From:-> Hyderabad
  To:-> Nalgonda
  Source Time:-> 12:00
  Destination Time:-> 3:00
  Bus Fare:-> 170.00
  ------------------------------------


  Ticket Booked Successfully...!!
```

You can cancel or edit ticket with pnr number
Seat number updates and a seat is allocated

View bus details with bus number

```
===========================================================
                        BUS INFO
===========================================================


            --------------------------------------
            Bus No:-> 2
            Source:-> Hyderabad
            Destination:-> Nalgonda
            Time:-> 10:00 - 13:00
            Total Seats:-> 32
            Seats Remaining:-> 32
            Bus Fare:-> 170.00
            --------------------------------------
```

View bookings has several options

```
===============================================================
                        VIEW BOOKINGS
===============================================================


            -------------------------------------------
             1. By PNR
            -------------------------------------------
             2. By Name
            -------------------------------------------
             3. By Bus
            -------------------------------------------
             4. By Source
            -------------------------------------------
             5. By Destination
            -------------------------------------------
             6. All Bookings
            -------------------------------------------
             7. BACK
            -------------------------------------------


            Enter your choice:-> |
```

All bookings can be found like this

```
============================================================
                       BOOKINGS
============================================================


------------------------------------------
 Name:-> Pranathi
 PNR No:-> PNR7683
 Bus No:-> 1
 Seat No.:-> 1
 Date:-> 7-1-2024
 From:-> Hyderabad
 To:-> Nalgonda
 Source Time:-> 12:00
 Destination Time:-> 3:00
 Bus Fare:-> 170.00
------------------------------------------


------------------------------------------
 Name:-> Rahul
 PNR No:-> PNR8558
 Bus No:-> 3
 Seat No.:-> 1
 Date:-> 7-1-2024
 From:-> Hyderabad
 To:-> Vizag
 Source Time:-> 1:00
 Destination Time:-> 13:00
 Bus Fare:-> 1200.00
------------------------------------------


------------------------------------------
 Name:-> Ram
 PNR No:-> PNR8621
 Bus No:-> 2
 Seat No.:-> 1
 Date:-> 7-1-2024
 From:-> Hyderabad
 To:-> Nalgonda
 Source Time:-> 10:00
 Destination Time:-> 13:00
 Bus Fare:-> 170.00
------------------------------------------


------------------------------------------
 Name:-> Raj
 PNR No:-> PNR8980
 Bus No:-> 5
 Seat No.:-> 1
 Date:-> 7-1-2024
 From:-> Mumbai
 To:-> Hyderabad
 Source Time:-> 12:00
 Destination Time:-> 21:00
 Bus Fare:-> 1500.00
------------------------------------------

|
```