**BUS RESERVATION SYSTEM**

1. **Project Purpose:**

As the name suggests Bus Reservation System is software that handles the entire booking data of the bus. It is fully based on the concept of reserving bus tickets for various destinations. Previously the task of handling the tickets at a time was very difficult, so there was a need for software that can handle all bus reservation systems.

Therefore, the Bus Reservation System was designed. It’ll reduce the stress and workload of the employee. Now it hardly takes 10-15 minutes to book a ticket wherever the passenger is.

1. **Functional Specification:**

In this bus reservation system, you can store the bus details and user details, we can view the bus details according to the destination or using pnr number or using the name of the bus.

Only admin can add buses and do the reservation. User can login to the portal and he can book a ticket, view ticket and will be able to check the availability of seats particular bus, whether seats are reserved or not. Users are able to see the status of available buses.

**Roles:**

1. Admin is the person who will take care of all entries regarding bus.
2. User is the person who will book ticket and checks for the availability of seats in a bus.
3. **Technical Specification:**
4. Main Menu:
5. Admin
6. Login
7. User
8. Login
9. Create New Login
10. Exit
11. Admin:
12. Add Bus
13. View Bus details
14. Edit Bus
15. Delete Bus
16. View Bookings Menus
17. Back.
18. User:
19. Book Ticket
20. View Bookings
21. Edit Ticket
22. Cancel Ticket
23. Back
24. **Operating Environment:**

Operating environment for BRS are:

* Operating System: Linux
* Platform: Ubuntu/C++

1. Software Requirements:

* Admin needs to login if he wants to add/edit/delete buses.
* User needs to login if he wants to book a ticket/ to check the availability of seats.
* If user is not an existing one then he needs to create an account to avail the options of ticket booking.
* List out the buses available from which location to which location.

1. Unit Testing:
2. User:

* SR1-UT1: While defining the structure mention a valid elements.
* SR2-UT2: The port no. in the user side and client side should be same.
* SR3-UT3: If getbusbyname() function failed should return an error of can’t get address.
* SR4-UT4: Send and receive request. Use the read() and write() file descriptor to send and receive the data from user/admin.

1. Admin:

* SR1-UT1: Provide valid username and password.
* SR2-UT2: Create a valid ticket for booking.
* SR3-UT3: If read() or write() function fails then the client won’t be able to add/delete the bus details.

1. **Flow Diagram:**
2. **Conclusion:**

In bus reservation system project we mainly have two actors admin and user.

Admin will manage all the details regarding the bus and user. The user will be able to book ticket and he/she can view the availability of seats. Here we’ll use file handling so that the date of previous user won’t get lost/deleted. Make use of inheritance wherever it is required.