**Capstone Bus Reservation System**

**Introduction**

The capstone bus reservation system is a console-based application that allows customers to book bus tickets and view bus schedules. The system also enables bus operators to manage their bus information and travel schedules. The system is developed using C language.

**Features and Functionalities**

The system has the following features and functionalities:

* Add Bus: The system allows the bus operator to add a new bus to the system by entering the bus ID number, Bus name, origin, destination and total seats set to 40. The system will store the bus information in the command database and display a confirmation message.
* Delete Bus: The system allows the bus operator to delete an existing bus from the system by entering the bus ID number. The system will search for the bus number in the command database and delete the bus information if found. The system will display a confirmation or error message accordingly.
* View All Buses: The system allows the user to view the list of all the buses and their details. The system will retrieve the bus information from the command database and display it in a tabular format.
* Book Ticket: The system allows the customer to book a ticket for a bus of their choice by entering the bus ID number, passenger name, and seat number. The system will search for the bus ID number in the command database and check the seat availability. If the seat is available, the system will assign a seat number to the passenger and decrease the available seats by one. The system will store the passenger information in the command database and display the ticket information.
* Print Ticket: The system allows the customer to print their ticket by entering the bus ID number and seat number. The system will search for the passenger information in the command database and display the ticket information.
* Cancel Ticket: The system allows the customer to cancel their ticket by entering the bus ID number and seat number. The system will search for the passenger information in the command database and delete it if found or error message accordingly.
* View All Bookings: The system allows the user to view the list of all the bookings
* Exit: The system allows the user to exit the system by entering a choice (0).

**Conclusion and Recommendations**

* The source code of the system is written in C language and can be compiled and executed using any C compiler, such as CodeBlocks, Dev-C++, GCC or VS code . The source code consists of several functions and variables that implement the logic and data structures of the system. The source code is well-commented and formatted to make it easy to understand and modify.