BUS TICKETING

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March 16, 2025

Introduction

- Bus Ticketing System a console based software programmed using C-program.

- Has client and admin panel for respective tasks.

- Stores bus and passenger data using files.

- Each function performs different operations in the program.

Admin Features

- Add new buses with route and details.

- Remove buses by their unique bus number.

- View passengers assigned to specific bus routes.

Client Features

- View list of all available bus options.
- Book a ticket by reserving a seat number.
- Cancel a reserved seat from specific buses.

Program Flow

- Starts with login() to determine admin or client menu.
- Admin accesses features like adding, removing buses.
- Client interacts to book or cancel ticket seamlessly.
- Seat count updated using update_seat_count function.
- File operations handle data saving and retrieval efficiently.
- Program exits with the exit_program() function cleanly.

Data Storage

- bus.txt: Main file for buses and seats data storage.
- bus_<number>.txt: Passenger file for specific bus details.
- Temporary files ensure safe deletion and replacement.
- File I/O operations ensure dynamic data modifications.
- Structured formats used for easy file parsing operations.
- Handles edge cases like missing or corrupted files gracefully.

Uses

- Simplifies bus management for administrators with automation.
- Provides seamless experience for clients booking tickets.
- Ensures accurate seat tracking for real-time availability.
- Scalable system adaptable to multiple buses or routes.
- Persistent storage for secure and long-term data handling.
- Can serve as a foundation for larger transport systems.

Conclusion

- Modular, efficient, and user-friendly C program design.
- Handles all aspects of bus management systematically.
- Robust file system ensures accuracy and data persistence.
- Easy navigation with logical menu-based interface design.
- Offers reliable automation for real-world application use.
- Well-structured and extensible for adding new functionalities.