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PROJECT APPLICATION FOR A TRAVEL AGENCY

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1. Specification defining the problem

1.1. Description of the theme:

The Vacation Booking System is designed to allow people to book vacations to different stations. The program provides a menu-based interface for users to view available stations, add new stations, display available seats, and book a station for a desired period.

1.2. Description of requirements:

The project aims to develop a Vacation Booking System that meets the following requirements:

Provide a user-friendly interface with a menu for easy navigation.

Allow users to view a list of available stations with details such as name, period of stay, price, and seats available.

Allow users to add new stations to the system by entering the required information.

Provide the option to display available seats sorted by price or seats available.

Allow users to book a station by providing their name, desired period of stay, and number of seats.

Store the booking details in a file for future reference.

1.3. Functional specification:

The functional requirements of the program are as follows:

1. Input data:

User's choice from the menu.

User input for adding a new station (name, start date, end date, price, seats available).

User input for booking a station (name, desired period of stay, number of seats).

2. Output data:

List of stations with details (name, period of stay, price, seats available).

Sorted list of available seats by price or seats available.

Booking confirmation message.

3. Functional diagram:

The program follows a menu-based approach. Users can select options from the menu to perform specific tasks. The main menu options include:

Display stations

Add a new station

Display available seats

Book a station

Help

Exit

1.4. User Interface:

The user interface will consist of a simple menu system that allows users to navigate through the different options and perform the desired actions. Each menu option will be clearly labeled, and the program will provide prompts for user input when necessary.

2. Project Development

2.1. General objectives:

The general objectives of the project are to develop a Vacation Booking System that provides an easy and efficient way for users to view available

stations, add new stations, display available seats, and book a station for a desired period.

2.2. Description of data processed by the program:

The program will process data related to stations, including their names, start dates, end dates, prices, and the number of seats available. The data will be stored in objects of the Station class.

2.3. Description of program modules:

The program consists of several modules, including:

Station class: Represents a station with attributes such as name, start date, end date, price, and seats available. It provides methods to access and update these attributes and display station details.

Customer class: Represents a customer with attributes such as name, station name, and the number of seats booked. It provides a method to save the booking details to a file.

Functions for reading and writing station data to/from a file.

Functions for displaying stations, adding a new station, displaying available seats, and booking a station.

3. Conclusions:

The Vacation Booking System provides a convenient way for users to book vacations to different stations. It allows users to view available stations, add new stations, display available seats, and book a station for a desired period. The program effectively manages station data and provides a user-friendly interface for smooth interaction.

The project demonstrates the implementation of a menu-driven system, file handling, and object-oriented programming concepts. It can be further enhanced by incorporating additional features such as user authentication, advanced sorting options, and improved error handling.

4. **References:**

No specific references were used for this project as it is a standalone implementation. However, general programming and C++ language references were consulted during the development process.