Report for the MAIN project

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**Topic:** Travel System

**About the Project**

I have developed a robust travel booking system in Java, encompassing classes for accommodations and transportation modes named Booking and Travel respectively, with the Plan class serving as the superclass for both.

**Aim**

The aim of this project is to develop a user-friendly travel management system that provides hassle-free access to booking travel tickets and accommodations. This system aims to simplify the process for customers by offering easy navigation and clear pricing options.

**Flow chart.**

**A diagram of a travel plan

Description automatically generated**

**Project Explanation**

The project commenced with the creation of two main classes, namely, **Travel** for handling travel ticket bookings and **booking** for managing accommodation bookings. Additionally, a superclass named **Plan** was established, extending to both **Travel** and **Booking** classes.

**In my Main class:** Within the **Main** class, two methods were implemented to instantiate objects from the **Travel** and **Booking** classes, named **Ticket** and **Accommodation**, respectively. Utilizing a **for** loop, arrays were passed for managing two objects each.

**Main Features:**

**Input Travel details:** Users can input details such as mode of transport, age, departure city, destination, and travel date. Based on this information, the system calculates and displays the ticket price.

**Search for Destination:** Users can search for specific destinations within the system. The system employs linear search functionality to find matching destinations.

**Accommodation Booking:** Users can book accommodations by specifying the type of accommodation, number of persons, and duration of stay. The system then calculates and displays the accommodation prices.

**Write to File:** Users have the option to write content to a file, facilitating record-keeping and documentation.

**Read File Content:** Users can read and display the content stored in the file, providing easy access to previously recorded information.

**Exit:** Users can choose to exit the system, terminating the program.

Parameters were passed within methods, employing JOptionPane for user input. A switch-case statement was utilized to provide users with a selection range from 1 to 6, including options such as inputting travel details, searching, booking accommodations, writing to a file, reading the file, and exiting the program. Within the **travel booking** method, **if** statements were used to determine ticket prices based on destination and traveller’s age. Similarly, the **accommodation Booking** method utilized a **switch** statement to determine accommodation prices based on duration, type, and number of occupants.

**Problems faced during the work.** Challenges encountered during the project included difficulties in implementing switch-case statements for various selections and sorting output based on ages. Particularly, issues arose while printing the sorting results initially, which were resolved with the assistance of Ms. Padma and SLA Mr. King. The problem was mitigated by printing the sorting for bubble sort in the main method.

**Things to improve.** Future improvements for the project involve implementing a graphical user interface (GUI) to enhance user interaction. Additionally, efforts will be directed towards refining switch-case statements for improved selection handling. Continued work on GUI integration is planned to advance the project further.

**Conclusion:** This is a basic GUI interface which shows the Java programming for travelling system. And I would like to add more facilities which can complete my entire travelling and booking software. Improvement is the key which is indefinite to your studies, and I am still working on it. Here, I am submitting my entire main project.