Railway management system

According to latest instructions, packages are added against each design pattern. And all the .java files and .txt files are in the project, so there is no need to add any thing to run the program.

I used the text files to store the data, so initially I just stored the one or two records only in each file.

Unit tests are implemented in main program.

Challenges:

* The major challenge was to implement all 4-design patterns simultaneously in a single project
* And we also need to make sure that we do not have to be so advanced that professor need to install additional software or packages to run the program, so we need to make it simple so that it can be run easily

Since I chose to implement only those design patterns which we have used already in our assignments, and that’s why I have the concepts of design patterns, and I keep the things simple and implement the required elements in a good way.

Difficulty that I faced was how to retrieve the values from one design pattern and how can we use those values to other design patterns. So, I learned that we can return the values to main function and then we can pass those values to other design patterns and in this way it can work. It took time but I got succeeded.

Here below I created a kind of user manual by pasting the screenshots of the out put for each module. It will help to understand the program that which operations or modules it is performing.

When we run this program, a menu appears which has 6 options:

Text, letter

Description automatically generated

When we select option “1”, we have two more options to select:

Text, letter

Description automatically generated

When we enter 1, it retrieves data from txt file and show us the Train records:

Graphical user interface, text, application

Description automatically generated

After displaying data, it shows the main menu again and when we enter “1”, two more options to select and when we enter “2”, it asks for train details which includes Train Name, Train Number, Train Route, Train Type and Details of Train Coaches, these details will be written in txt file:

Text

Description automatically generated

After inserting train records, main menu appears and we have to select from 6 options. When we enter “2” again we have two options to select:

Text, letter

Description automatically generated

When we enter “1”, it retrieves the data from the txt file and displays the coach details:

A picture containing graphical user interface

Description automatically generated

After displaying the details of coaches again main menu appears and when we enter “2” again then we have again two options to select, when we enter “2” it allows us to insert coach details which includes coach number and details of attachment of coaches and these details will be written in the txt file:

Text

Description automatically generated

Again main menu appears with 6 options, when we enter “3” it shows two more options, when we enter “1” Train schedule is displayed:

Text

Description automatically generated

Main menu appears again with 6 options and when we enter “3” again two more options appears and when we enter “2” to insert train schedule it asks for Train name, Departure Time and Arrival Time, and this data will be written in txt file:

Text, letter

Description automatically generated

Main menu appears again with 6 options when we enter “4” two more options appears, when we enter “1” it displays passenger details which includes passenger name, Identity number, Address and Cell number:

Text

Description automatically generated

Main menu appears again with same 6 options when we enter “4” two more options appears and when we enter “2” it asks to enter passenger details which includes Passenger name, Identity number, Address and Cell number and write this data into txt file:

Text

Description automatically generated

From main menu when we select option “5” it displays us the which Class is available for passengers:

Text

Description automatically generated

Again, main menu appears with 6 options and when we select option “6”, the program will be stopped:

