

NAME: PAVITHRA R

DATE: 25/07/2025

### WEEK 3 MINI PROJECT

#### **Holiday Package**

The tour package details like package Id, source place, destination place, basic fare and number of days for each package should be stored in a table. Calculate the package cost based on the basic fare and the number of days for each package.

<b>Instance_variable</b>	<b>Data type</b>
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package_id	String
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source_place	String
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destination_place	String
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no_of_days	int
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package_cost	double
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Create a model class to represent this with attributes, getters and setters.

Calculate the package cost for each package, based on the conditions given below,

noOfDays	discount %
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<=5	0% (No discount)
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>5 and <=8	3%
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>8 and <=10	5%
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>10	7%
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Package Cost = ((Basic fare x number of days)-discount) + GST

The package cost should be calculated based on the basic fare and the number of days. The discount should be calculated depending on the number of days as given in the above table and deducted from the calculated package cost. Finally, a GST of 12% of the calculated package cost got after the discount, should be added to get the final package cost.

For example: If a package has a basic fare as Rs.3000 and the number of days as 15, then the package cost will be  $(3000 \times 15)$ , which is Rs. 45000.00. Since the number of days is 15, the discount percentage will be 7%. So, the discount will be  $(45000.0 \times (7/100))$  which is Rs. 3150.00. Now, 12% of GST needs to be added. So the GST will be  $((45000.0 - 3150.0) \times (12/100))$  which is Rs. 5022.00.

Therefore, the total cost for this package will be  $((3000 \times 15) - 3150.0) + 5022.0$  which is Rs. 46872.00.

Develop as a menu-driven application. This application should show options

1. Add Package details
2. Display all package details
3. Search for a package with package id
4. Calculate package cost based on package id

Use layered architecture (Client (Main class), Service Layer, Dao Layer)

Classes to be created:

**Model class - Package** –attributes (packageid, source, destination, no\_of\_days and package cost)

**PackageDao interface** – declare the methods for adding package details, displaying all packages, calculating package cost and searching a package from the collection.

**PackageDaoImpl class – implement the method declared in PackageDao interface**

**PackageService interface – declare the methods – addPackage, findPackageById ,fetchAllPackages , calculatePackageCost**

**PackageServiceImpl class –implement the methods of PackageService and call the methods of PackageDao class.**

**Main class – Create object of service class and call the methods by getting choice from the user.**

### **Validation:**

The packageId should be validated before calculating the package cost; only if the packageId is valid, the Package object should be added to the list. The packageId should be in the following format.

The packageId should contain exactly 7characters.

If the packageId is valid, then calculate the package cost, else throw a user defined Exception “InvalidPackageIdException” with a message "Invalid Package Id".

### **OUTPUT:**

```
----- Holiday Package Management -----
1. Add Package Details
2. Display All Package Details
3. Search Package by ID
4. Calculate Package Cost by ID
5. Exit
Enter your choice: 1
Enter Package ID: TUHI123
Enter Source Place: ooty
Enter Destination Place: manali
Enter Number of Days: 10
Enter Basic Fare: 25000
Package added successfully!
```

```
----- Holiday Package Management -----
1. Add Package Details
2. Display All Package Details
3. Search Package by ID
4. Calculate Package Cost by ID
5. Exit
Enter your choice: 2
Package [packageId=THI123, sourcePlace=ooty, destinationPlace=manali, noOfDays=10, basicFare=25000.0, packageCost=0.0]
```

```
----- Holiday Package Management -----
1. Add Package Details
2. Display All Package Details
3. Search Package by ID
4. Calculate Package Cost by ID
5. Exit
Enter your choice: 3
Enter Package ID to search: THI123
Package [packageId=THI123, sourcePlace=ooty, destinationPlace=manali, noOfDays=10, basicFare=25000.0, packageCost=0.0]
```

```
----- Holiday Package Management -----
1. Add Package Details
2. Display All Package Details
3. Search Package by ID
4. Calculate Package Cost by ID
5. Exit
Enter your choice: 4
Enter Package ID to calculate cost: THI123
Cost calculated successfully.
Package [packageId=THI123, sourcePlace=ooty, destinationPlace=manali, noOfDays=10, basicFare=25000.0, packageCost=266000.0
]
```

```
----- Holiday Package Management -----
1. Add Package Details
2. Display All Package Details
3. Search Package by ID
4. Calculate Package Cost by ID
5. Exit
Enter your choice: 5
Exiting the application.

C:\Users\pavithra.r\Desktop\Java mini project>
```

