

MODULE - 3

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.

Instance_variable Data type

package_id String

source_place String

destination_place String

no_of_days int

package_cost double

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 (3000×15) , 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:

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PS C:\Users\karnish.n\Desktop\Project\simpleapp.java> cd "c:\Users\karnish.n\Desktop\Project\simpleapp.java\" ; if ($?) { javac MainApp.java } ; if ($?) { java MainApp }

*** Tour Package Menu ***
1. Add Package
2. Display All Packages
3. Search Package by ID
4. Exit
Enter your choice: 1
Enter Package ID (7 characters): PGK1234
Enter Source Place: mumbai
Enter Destination Place: chennai
Enter Number of Days: 12
Enter Basic Fare: 300
Package added successfully!

*** Tour Package Menu ***
1. Add Package
2. Display All Packages
3. Search Package by ID
4. Exit
Enter your choice: 2
Package [ID=PGK1234, Source=mumbai, Destination=chennai, Days=12, Cost=Rs.3749.76]

*** Tour Package Menu ***
1. Add Package
2. Display All Packages
3. Search Package by ID
4. Exit
Enter your choice: 3
Enter Package ID to search: 123444
Package not found.
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