Cab Invoice Generator

Category: Java L1 / Training Project

Project Overview

Create a console based JAVA application for generating the invoice for the trip.

Design Specification

Packages

Package Name	Description
com.wipro.bean	This packages holds bean class
com.wipro.service	This package contain the Main Class
com.wipro.validations	This package contain classes and methods which will do validations
com.wipro.userexceptions	This package contain classes for handling exceptions

Detailed Description

Package: com.wipro.bean

Class	Description
CabBean	**Variables:** private String bookingID; private int userID; private String username; private String cabType; private String kmsUsed; private float totalAmount; private int receiptNo; **Methods:** Generate getters and setters for all the variables. **(In eclipse, Right-click -> Source -> Generate Getters and Setters)**

Package: com.wipro.validations

Class	Description
TripValidator	Methods: public static String printBillAmount(CabBean cabbean) This method should take Cab bean object and it should do the following validations. a) Check whether the bookingID is starting with AD followed by 5-digit number or not. The pattern should be AD$$$$$ ($ represents numbers). If there

	is any deviation, this method should return the message **"Invalid Booking ID".** b) Check whether the userID is valid or not. User ID should be a positive number ranges from [1001 to 1500] (inclusive). If the userID is invalid, this method should return the message **"Invalid User ID".** c) Check whether the cabType is "Tata Indica / Tata Indigo / BMU / Logan". As we are offering only the above models, validate the cabType. If the cabType is something else, return **"Invalid Cab Type"** d) Check whether Km used is a positive number/not. If it is negative, handle it using **NegativeKilometerException.** If all the above inputs are valid, then call the **amountGenerator()** method to generate the amount. Obtain the result from the **amountGenerator()** method and return the same in the format Total Amount : $$$, Receipt ID : ### where $$$ is the amount generated for the trip and ### is the receipt number. Before returning, set the values to the setters. **public static int[] amountGenerator(int kmsUsed, String cabType)** The method should perform 2 operations – 1. Generation of the Receipt Number. 2. Generation of the Bill Amount. **Generation of the Receipt Number:** Receipt Number should be a random 5 digit number. (Generate randomly). After generation, store it in the 0th index of integer array. **Generation of the Bill Amount:** If cabType is Tata Indica, charge 12 Rs per KM. If cabType is Tata Indigo, charge 10 Rs per KM. If cabType is BMU, charge 45 Rs per KM. If cabType is Logan, charge 31 Rs per KM. Compute bill based on above metrics and store the totalBill in the 1st index of integer array. After generation of the receipt number and bill amount, store them at 0th and 1st index, return the integer array.

Package: com.wipro.service

Class	Description
MainClass	Copy and paste the code – package com.wipro.service; import com.wipro.bean.CabBean; import com.wipro.validations.TripValidator;

	public class MainClass
	{
	public static void main(String[] args)
	{
	CabBean cabbean = new CabBean();
	cabbean.setBookingID("AD12345");
	cabbean.setCabType("BMW");
	cabbean.setKmsUsed("120");
	cabbean.setUserID(1003);
	cabbean.setUsername("Hariprasath");
	String result =
	TripValidator.*printBillAmount*(cabbean);
	System.*out*.println(result);
	}
	}

Package: com.wipro.userexceptions

Class	Description
NegativeKilometerException	User Defined Exception class This class should override toString method and need to return the message “Invalid KM”.

Important Instructions:

1. Do not change the variable / method / class / package names.
2. Follow design constraints and coding standards.
3. Give proper comment lines.
4. Do proper code indentation.

** End Of Document **