# **Group-2**

# 1. Flight record retrieval

Grade settings: Maximum grade: 100

Based on: JAVA CC JDBC - MetaData V1 - ORACLE (w/o Proj Struc)

Run: Yes Evaluate: Yes

Automatic grade: Yes Maximum execution time: 32 s

## Retrieve Flights Based on Source and Destination

Zaro Flight System wants to automate the process in their organization. The flight details are available in the database, the customer should have the facility to view flights which are from a particular source to destination.

You being their software consultant have been approached by them to develop an application which can be used for managing their business. You need to implement a java program to view all the flight based on source and destination.

**Component Specification: Flight (Model Class)** 

Type(Class	Attribute	Methods	Responsibilitie
)	S		S
0		Include getters and setter method for all the attributes.	
	_	Include a five argument constructor in the given order — flightId, source, destination, noOfSeats and flightFar	
	String destinatio n	e.	
	int noOfSeats		
	double flightFare		

**Note:** The class and methods should be declared as public and all the attributes should be declared as private.

Requirement 1: Retrieve all the flights with the given source and destination

The customer should have the facility to view flights which are from a particular source to destination. Hence the system should fetch all the flight details for the given source and destination from the database. Those flight details should be added to a ArrayList and return the same.

Component Specification: FlightManagementSystem

Compon	Type(Class)	Attribu	Methods	Responsibilit
ent		tes		ies
Name				
Retrieve	FlightManagement		public ArrayList <flight></flight>	This method
all the	System		viewFlightBySourceDestination(String	should accept
flights			source,String destination)	a Source and
with the				a destination
given				as parameter
source				and retrieve
and				all the flights
destinati				with the given
on				source and
				destination
				from the
				database.
				Return these
				details as
				ArrayList <fli< td=""></fli<>
				ght>.

**Note:** The class and methods should be declared as public and all the attributes should be declared as private.

The **flight** table is already created at the backend. The structure of flight table is:

Column Name	Datatype
flightId	integer
source	varchar2(30)
destination	varchar2(30)
noofseats	integer
flightfare	double

Sample records available in flight table are:

Flightid	Source	Destination	Noofseats	Flightfare
18221	Malaysia	Singapore	50	5000
18222	Dubai	Kochi	25	50000
18223	Malaysia	Singapore	150	6000
18224	Malaysia	Singapore	100	7000

To connect to the database you are provided with **database.properties** file and **DB.java** file. (**Do not change any values in database.properties file**)

Create a class called **Main** with the main method and get the inputs like **source** and **destination** from the user.

**D**isplay the details of flight such as flightId, noofseats and flightfare for all the flights returned as ArrayList<Flight> from the

 $method \ \textbf{viewFlightBySourceDestination} \ in \ \textbf{FlightManagementSystem} \ class.$ 

If no flight is available in the list, the output should be "No flights available for the given source and destination".

#### Note:

In the Sample Input / Output provided, the highlighted text in bold corresponds to the input given by the user and the remaining text represents the output.

Ensure to follow object oriented specifications provided in the question description. Ensure to provide the names for classes, attributes and methods as specified in the question description.

Adhere to the code template, if provided.

## Sample Input / Output 1:

Enter the source

## Malaysia

Enter the destination

## **Singapore**

Flightid Noofseats Flightfare

18221 50 5000.0

18223 150 6000.0

18224 100 7000.0

## Sample Input / Output 2:

Enter the source

### Malaysia

Enter the destination

#### Dubai

No flights available for the given source and destination

# Automatic evaluation[+]

## Flight.java

1 2 *public class* Flight {

```
3
  4
           private int flightld;
  5
           private String source;
  6
           private String destination;
  7
           private int noOfSeats;
  8
           private double flightFare;
  9
           public int getFlightId() {
  10
                       return flightld;
  11
           public void setFlightId(int flightId) {
  12
                       this.flightld = flightld;
  13
  14
  15
           public String getSource() {
  16
                       return source;
  17
  18
           public void setSource(String source) {
  19
                       this.source = source;
  20
  21
           public String getDestination() {
  22
                       return destination;
  23
           public void setDestination(String destination) {
  24
  25
                       this.destination = destination;
  26
           public int getNoOfSeats() {
  27
  28
                       return noOfSeats;
 29
           public void setNoOfSeats(int noOfSeats) {
  30
  31
                       this.noOfSeats = noOfSeats;
  32
  33
           public double getFlightFare() {
  34
                       return flightFare;
  35
           public void setFlightFare(double flightFare) {
  36
  37
                       this.flightFare = flightFare;
  38
  39
           public Flight(int flightld, String source, String destination,
  40
                                   int noOfSeats, double flightFare) {
                        super();
  41
 42
                       this.flightld = flightld;
  43
                       this.source = source;
  44
                       this.destination = destination;
  45
                       this.noOfSeats = noOfSeats;
  46
                       this.flightFare = flightFare;
  47
  48
  49
  50
  51 }
FlightManagementSystem.java
  1 import java.util.ArrayList;
  2 import java.sql.*;
  3
  5 public class FlightManagementSystem {
  7
       public ArrayList<Flight> viewFlightBySourceDestination(String source, String destination){
  8
         ArrayList<Flight> flightList = new ArrayList<Flight>();
  9
  10
            Connection con = DB.getConnection();
 11
  12
            String query="SELECT * FROM flight WHERE source= "" + source + "' AND destination= "" +
destination + "";
  13
  14
            Statement st=con.createStatement();
```

```
15
 16
            ResultSet rst= st.executeQuery(query);
 17
 18
            while(rst.next()){
 19
               int flightId= rst.getInt(1);
 20
               String src=rst.getString(2);
               String dst=rst.getString(3);
 21
 22
               int noofseats=rst.getInt(4);
 23
               double flightfare=rst.getDouble(5);
 24
 25
               flightList.add(new Flight(flightId, src, dst, noofseats, flightfare));
 26
         }catch(ClassNotFoundException | SQLException e){
 27
 28
            e.printStackTrace();
 29
 30
          return flightList;
 31
 32
 33 }
Main.java
  1 import java.util.Scanner;
  2 import java.util.ArrayList;
  4 public class Main{
      public static void main(String[] args){
  6
         Scanner sc=new Scanner(System.in);
         System.out.println("Enter the source");
  8
         String source=sc.next();
         System.out.println("Enter the destination");
  9
         String destination=sc.next();
 10
 11
         FlightManagementSystem fms= new FlightManagementSystem();
 12
         ArrayList<Flight> flightList=fms.viewFlightBySourceDestination(source,destination);
 13
 14
          if(flightList.isEmpty()){
 15
            System.out.println("No flights available for the given source and destination");
 16
            return:
 17
 18
          System.out.println("Flightid Noofseats Flightfare");
 19
          for(Flight flight : flightList){
 20
            System.out.println(flight.getFlightId()+" "+flight.getNoOfSeats()+" "+flight.getFlightFare());
 21
 22
 23
 24 }
DB.java
  1 import java.io.FileInputStream;
  2 import java.io.IOException;
  3 import java.sql.Connection;
  4 import java.sql.DriverManager;
  5 import java.sql.SQLException;
  6 import java.util.Properties;
  8 public class DB {
  9
 10
           private static Connection con = null;
 11
           private static Properties props = new Properties();
 12
 13
 14
       //ENSURE YOU DON'T CHANGE THE BELOW CODE WHEN YOU SUBMIT
           public static Connection getConnection() throws ClassNotFoundException, SQLException {
 15
 16
             try{
 17
 18
                                  FileInputStream fis = null;
 19
                                  fis = new FileInputStream("database.properties");
                                  props.load(fis);
 20
```

```
21
 22
                             // load the Driver Class
 23
                             Class.forName(props.getProperty("DB_DRIVER_CLASS"));
 24
 25
                             // create the connection now
 26
          con =
DriverManager.getConnection(props.getProperty("DB_URL"),props.getProperty("DB_USERNAME"),props.getPr
operty("DB_PASSWORD"));
 27
 28
           catch(IOException e){
 29
             e.printStackTrace();
 30
 31
                   return con;
 32
         }
 33 }
 34
database.properties
  1 #IF NEEDED, YOU CAN MODIFY THIS PROPERTY FILE
  2 #ENSURE YOU ARE NOT CHANGING THE NAME OF THE PROPERTY
  3 #YOU CAN CHANGE THE VALUE OF THE PROPERTY
  4 #LOAD THE DETAILS OF DRIVER CLASS, URL, USERNAME AND PASSWORD IN DB.java using this
properties file only.
  5 #Do not hard code the values in DB.java.
  7 DB_DRIVER_CLASS=oracle.jdbc.driver.OracleDriver
  8 DB_URL=jdbc:oracle:thin:@127.0.0.1:1521:XE
  9 DB_USERNAME=${sys:db_username}
 10 DB_PASSWORD=${sys:db_password}
```

## Grade

Reviewed on Monday, 7 February 2022, 6:33 PM by Automatic grade Grade 100 / 100 Assessment report Assessment Completed Successfully [+]Grading and Feedback

# 2. Get Text and Display Welcome Message

Grade settings: Maximum grade: 100

Run: Yes Evaluate: Yes

Automatic grade: Yes Maximum execution time: 16 s

Amir owns "Bouncing Babies" an exclusive online store for baby toys.

He desires to display a welcome message whenever a customer visits his online store and makes a purchase.

Help him do this by incorporating the customer name using the Lambda expression.

Requirement 1: Display Welcome message

Amir wants to display a welcome message for his customers. The method displayText is used to display the name of the customer who made an online purchase from his store.

### Component Specification: DisplayText Interface - This is a Functional Interface.

Type(Interface)	Methods	Responsibilities
DisplayText	public void displayText(String text)	The purpose of this method is to display the welcome message by including the text provided as an argument by using Lambda expression.
DisplayText	public default String getInput()	This method should get a String (name of the customer) as input from the user and return the same. This method should be a default method.

#### Annotate the interface with the appropriate annotation

**Component Specification: Main class** 

Component Name	Type(Class)	Methods	Responsibilities
Display welcome message	Main	public static DisplayText welcomeMessage()	This method should return a DisplayText object. To do this, implement the lambda expression to print the text received as a parameter in the displayText method as "Welcome <text>".</text>

## In the Main class write the main method and perform the given steps:

- Invoke the static method welcomeMessage(). It returns a DisplayText object.
- Capture the DisplayText object in a reference variable.
- Using that reference, invoke the default method getInput.
- It will return a String. Capture that String in a variable.
- Using the reference of DisplayText, invoke the displayText method by passing the String as a parameter.
- The output should be as shown in the sample data mentioned below.

#### Note:

In the Sample Input / Output provided, the highlighted text in bold corresponds to the input given by the user and the rest of the text represents the output.

Ensure to follow the object oriented specifications provided in the question.

Ensure to provide the name for classes, interfaces and methods as specified in the question.

Adhere to the code template, if provided.

#### Sample Input 1:

Watson

## Sample Output 1:

Welcome Watson

## Automatic evaluation[+]

```
DisplayText.java
```

```
1 import java.util.*;
  2 @FunctionalInterface
  3 public interface DisplayText
  5 public void displayText(String text);
     public default String getInput()
  7
  8
        Scanner read = new Scanner(System.in);
  9
       String str = read.next();
 10
       return str;
 11
        //return null;
 12 }
 13}
Main.java
  1 public class Main
  2 {
  3
      public static DisplayText welcomeMessage()
  5
  6
         DisplayText dis = (str)->{
            System.out.println("Welcome "+str);
  8
  9
        };
  10
         return dis;
 11
       public static void main(String args[])
 12
 13
        DisplayText dis=welcomeMessage();
 14
 15
        String text = dis.getInput();
        dis.displayText(text);
 16
 17
 18
      }
 19}
```

## Grade

Reviewed on Wednesday, 1 December 2021, 10:14 PM by Automatic grade

**Grade** 100 / 100

**Assessment report** 

[+] Grading and Feedback

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## 3. Generate Password

Grade settings: Maximum grade: 100

Run: Yes Evaluate: Yes Automatic grade: Yes Important Instructions:

- Please read the document thoroughly before you code.
- Import the given skeleton code into your Eclipse.(if provided)
- Do not change the Skeleton code or the package structure, method names, variable names, return types, exception clauses, access specifiers etc.
- You can create any number of private methods inside the given class.
- · You can test your code from main() method of the program

The system administrator of an organization wants to set password for all the computers for security purpose. To generate a strong password, he wants to combine the username of each user of the system with the reverse of their respective usernames. Help them by using Lambda expressions that caters to their requirement.

## Requirement 1: PasswordInfo

The Administrator wants to generate password for each system by making use of the passwordGeneration method based on the username which is passed as a string.

**Component Specification:** Password Info Interface – This is a Functional Interface.

Type(Interface)	Methods	Responsibilities
PasswordInfo	public String	This method is used to
	passwordGeneration(String	generate the password
	username)	based on the username and
		hence returns the generated
		password

**Component Specification: Computer Class** 

Type(Class)	Methods	Responsibilities
	public static	This method should return
	PasswordInfo	a PasswordInfo object. To
	passwordPropagation()	do this, implement the
		lambda expression to get
Computer		the password.
	public static void	This method is used to
	displayUserDetails(String	print the Password Info
	systemNo,String	such as the systemNo,
	username,PasswordInfo	password along with the
	passwordInfoObj)	message, "Your password
		is generated
		successfully!!!" based

on the systemNo,
username,
passwordInfoObj which is
passed as an argument.

In the Computer class write the main method and perform the given steps:

- Get the systemNo and username from the user.
- Invoke the static method passwordPropagation(). It returns a passwordInfo object with the definition of the passwordGeneration method.
- Capture the PasswordInfo object in a reference variable.
- Invoke the displayUserDetails method by passing systemNo, username and passwordInfoObj as parameters.
- Inside the userDetails method, you should invoke the passwordGeneration method using the passwordInfo object and the output should be displayed as shown in the sample input/output.
- The output should be as shown in the sample data mentioned below.

#### Note:

- In the Sample Input / Output provided, the highlighted text in bold corresponds to the input given by the user and the rest of the text represents the output.
- Ensure to use the lambda expression.
- Ensure to follow the object oriented specifications provided in the question.
- Ensure to provide the name for classes, interfaces and methods as specified in the question.
- Adhere to the code template, if provided.

#### Sample Input 1:

Enter system no

Tek/1234

Enter username

**Manoj Kumar** 

Sample Output 1:

Password Info

System no: Tek/1234

Password: Manoj KumarramuK jonaM

Your password is generated successfully!!!

# 4. Watican Museum Manipulation

Grade settings: Maximum grade: 100

Run: Yes Evaluate: Yes

Automatic grade: Yes Maximum execution time: 60 s Maximum memory used: 64

MiB Maximum execution file size: 320 KiB

**Important Instructions:** 

· Please read the document thoroughly before you code.

- Import the given skeleton code into your Eclipse.(if provided)
- Do not change the Skeleton code or the package structure, method names, variable names, return types, exception clauses, access specifiers etc.
- · You can create any number of private methods inside the given class.
- · You can test your code from the main() method of the program.

Watican Museum is one of the famous museums, they have collections of houses paintings, and sculptures from artists. The Museum management stores their visitor's details in a text file. Now, they need an application to analyze and manipulate the visitor details based on the visitor visit date and the visitor address.

You are provided with a text file – VisitorDetails.txt, which contains all the visitor details like the visitor Id, visitor name, mobile number, date of visiting and address. Your application should satisfy the following requirements.

- 1. View visitor details within two given dates.
- 2. View visitor details which are above a particular mentioned visitor address.

You are provided with a code template which includes the following:

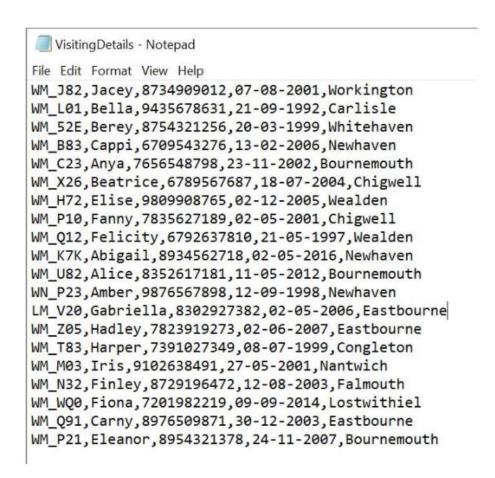
- Visitor class which includes the attributes visitorId, visitorName, mobileNumber, dateOfVisiting and address with all the getters and setters.
- VisitorUtility class which includes the following method declarations.
  - public List<Visitor> generateVisitor(String filePath)
  - public boolean isValidVisitorId(String visitorId)
  - public List<Visitor> viewVisitorDetailsByDateOfVisiting(Stream<Visitor> visitorStream, String fromDate, String toDate)
  - public Stream
     visitor> viewVisitorDetailsByAddress (Stream
     visitorStream, double address)
- InvalidVisitorIdException class which inherits the Exception class.
- Main class with a main method which creates the required user interface for the application.
- VisitorDetails.txt which contains all the visitor details like visitor id, visitor name, mobile number, date of visiting and address.

#### Note:

- The Visitor class and the Main class will be provided with all the necessary codes. Please do not edit or delete any line of the code in these two classes.
- Fill your code in the InvalidVisitorIdException class to create a constructor as described in the functional requirements below.
- Fill your code in the respective methods of VisitorUtility class to fulfil all the functional requirements.

 In the VisitorDetails.txt file, each visitor detail has information separated by a comma, and it is given as one customer detail per line.

### Sample data in VisitorDetails.txt file



## **Functional Requirements:**

Fill your code in the respective class and method declarations based on the required functionalities as given below.

Class	Attributes/ Methods	Rules/ Responsibility
VisitorUtility	public List < Visitor> generateVisitor(String filePath)	Read the text file and convert each line in the text file as String and store it in a List. Each String from the List should be converted into a visitor object and each visitor object should be stored in a List. Return the List of visitors.  Note:  Before converting the separated string into a visitor object, the identified visitorId should be validated using the

		isValidVisitorId method.
VisitorUtility	public boolean isValidVisitorId (String visitorId)	Should check whether the provided visitorId is valid or not.  If valid, this method should return true.  If invalid, this method should handle an InvalidVisitorIdException with a message " <visitorid> is Invalid Visitor Id".  Validation Rules:  Length of the visitorId should be exactly 6.  The visitorId should start with "WM_" and the next letter should be an alphabet (A-Z) in upper case and the last two letters should be positive integers(0-9).  Example.  WM_A23</visitorid>
InvalidVisitorIdException	Create a constructor with a single String argument and pass it to the parent class constructor.	This class Should inherit the Exception class. The constructor should pass the String message which is thrown to it by calling the parent class constructor.

# Requirement 1: View visitor details between the dates of visiting

Class	Attributes/ Methods	Rules/ Responsibility
VisitorUtility	viewVisitorDetailsByDateOfVisiting(Stream <visitor>visitorStream, String fromDate, String toDate)</visitor>	From the provided Stream of Visitor, separate the visitor details which has the date of visiting between fromDate and toDate (both inclusive). Return the

	separated visitor details as a list.

## Requirement 2: View visitor details which are above a particular mentioned address

Class	Attributes/ Methods	Rules/ Responsibility
•	viewVisitorDetailsByAddress(Stream <visitor> visitorStream, String address)</visitor>	From the given Stream of Visitor, separate the visitor details based on address, which has a particular mentioned address as provided. Return the separated Stream of visitor.

#### Note:

- 1. All inputs/ outputs for processing the functional requirements should be case sensitive.
- 2. Adhere to the Sample Inputs/ Outputs
- 3. In the Sample Inputs/ Outputs provided, the highlighted text in bold corresponds to the input given by the user and the rest of the text represents the output.
- 4. All the Date values used in this application must be in "dd-MM-yyyy" format.
- 5. Adhere to the code template.
- 6. Fill all your required codes in the respective blocks. Do not edit or delete the codes provided in the code template.
- 7. The Sample Inputs/ Outputs given below are generated based on the Sample data given in the VisitorDetails.txt file.
- 8. Please do not hard code the output.

## Sample Input/ Output 1:

WM\_52E is Invalid Visitor Id

WM\_K7K is Invalid Visitor Id

WN\_P23 is Invalid Visitor Id

LM\_V20 is Invalid Visitor Id

WM\_WQ0 is Invalid Visitor Id

- 1. ViewVisitorDetailsByDateOfVisiting
- 2. ViewVisitorDetailsByAddress

Enter your choice

1

Enter the starting date

### 19-05-2004

Enter the ending date

#### 07-04-2012

WM\_B83 Cappi 6709543276 13-02-2006 Newhaven

WM\_X26 Beatrice 6789567687 18-07-2004 Chigwell

WM\_H72 Elise 9809908765 02-12-2005 Wealden

WM\_Z05 Hadley 7823919273 02-06-2007 Eastbourne

WM\_P21 Eleanor 8954321378 24-11-2007 Bournemouth

## **Sample Input/ Output 2:**

WM\_52E is Invalid Visitor Id

WM\_K7K is Invalid Visitor Id

WN\_P23 is Invalid Visitor Id

LM\_V20 is Invalid Visitor Id

WM\_WQ0 is Invalid Visitor Id

- 1. viewVisitorDetailsByDateOfVisiting
- 2. viewVisitorDetailsByAddress

Enter your choice

2

Enter the address

#### **Eastbourne**

WM\_Z05 Hadley 7823919273 02-06-2007 Eastbourne

WM\_Q91 Carny 8976509871 30-12-2003 Eastbourne

# 5. Hospital Management\_Streams

Grade settings: Maximum grade: 100

Run: Yes Evaluate: Yes Automatic grade: Yes

**Laxmi Hospital** is a world-class health care institution providing patient treatment with specialized medical and nursing staff and medical equipment. It typically provides an emergency department to treat urgent health problems ranging from fire and accident victims to sudden illness. The hospital maintains a register to maintain the records of the patients who enter the emergency department. The receptionist at the helpdesk would like to filter the patients based on a criterion. Develop a java application for the same using Streams.

## Requirements:

- 1. Read the patient records from the file.
- 2. Retrieve the patient details for the specified date interval.
- 3. Retrieve the patient details which are from a particular area (address).

**Component Specification: Patient (POJO Class)** 

Type	Attributes	Methods
(Class)		
Patient	String patientId	Getters and Setters are given in the code skeleton.
	String patientName	
	String contactNumber	
	String dateOfVisit	
	String patientAddress	

**Component Specification: PatientUtility** 

Type	Methods	Responsibilities
(Class)		

PatientUtilit y		Read the file using File I/O or Java Streams and return the validated list of patient records. It should filter the valid patient records based on the valid patient Id using the method is ValidPatientId ().  Note: Make sure that the user-defined exception is handled in this method
PatientUtilit y	public boolean isValidPatientId (String patientId)	itself. Validation Guidelines for Valid Patient ID:
		<ul> <li>The length of the Patient Id should be exactly 6.</li> <li>The Patient Id should start with "WM_" and the next letter should be an alphabet (A-Z) in upper case and the last two letters should be positive integers(0-9). Example. WM_A10.</li> </ul>
		Check whether the patient Id is valid or not. If invalid, this method should handle an InvalidPatientIdException with a message " <patientid> is an Invalid Patient Id".</patientid>
PatientUtilit y	public List <patient> retrievePatientRecords_ByDateOfVisit(Stream<patien t=""> patientStream, String fromDate, String toDate)</patien></patient>	From the provided

PatientUtilit	public Stream <patient></patient>	From the given stream of	
y	retrievePatientRecords_ByAddress(Stream <patient></patient>	patient, filter the patient	
	patientStream, String address)	details based on the user	
		input address, and return	
		the separated Stream of	
		patients.	

## Component Specification: InvalidPatientIdException (User defined Exception)

Type (Class)	Methods	Responsibilities
InvalidPatientIdException	public	This constructor
	InvalidPatientIdException(String	should set the
	message)	message to the
		superclass.

**Note:** The class and methods should be declared as public and all the attributes should be declared as private.

You are provided with a text file –PatientRegister.txt, which contains all the patient details like the patient Id, patient name, contact number, date of visit, and patient address. You can add any number of records in the text file to test your code.

#### Note:

- In the Sample Input / Output provided, the highlighted text in bold corresponds to the input given by the user, and the rest of the text represents the output.
- Ensure to follow the object-oriented specifications provided in the question description.
- Ensure to provide the names for classes, attributes, and methods as specified in the question description.
- Adhere to the code template, if provided.

#### Sample Input/Output 1:

Invalid Patient Id are:

WM\_52E is an Invalid Patient Id

WM\_K7K is an Invalid Patient Id

WN\_P23 is an Invalid Patient Id

LM\_V20 is an Invalid Patient Id

WM WQ0 is an Invalid Patient Id

Retrieve Patient Details

- 1. By Date of Visit
- 2. By Address

Enter your choice:
1
Enter the start date
02-03-2003
Enter the end date
02-12-2005
WM_X26 Beatrice 6789567687 18-07-2004 Texas
WM_H72 Elise 9809908765 02-12-2005 Washington
WM_N32 Finley 8729196472 12-08-2003 Pennsylvania
WM_Q91 Carny 8976509871 30-12-2003 Virginia
Sample Input/Output 2:
Invalid Patient Id are:
WM_52E is an Invalid Patient Id
WM_K7K is an Invalid Patient Id
WN_P23 is an Invalid Patient Id
LM_V20 is an Invalid Patient Id
WM_WQ0 is an Invalid Patient Id
Retrieve Patient Details
1. By Date of Visit
2. By Address
Enter your choice:
2
Enter the address
Carolina
WM_C23 Anya 7656548798 23-11-2002 Carolina
WM_T83 Harper 7391027349 08-07-1999 Carolina
WM_P21 Eleanor 8954321378 24-11-2007 Carolina

# Sample Input/Output 3: Invalid Patient Id are: WM\_52E is an Invalid Patient Id WM\_K7K is an Invalid Patient Id WN\_P23 is an Invalid Patient Id LM\_V20 is an Invalid Patient Id WM\_WQ0 is an Invalid Patient Id Retrieve Patient Details 1. By Date of Visit 2. By Address Enter your choice: 1 Enter the start date 03-02-2020 Enter the end date 02-02-2021 No patient records available during this interval Sample Input/Output 4: Invalid Patient Id are: WM\_52E is an Invalid Patient Id WM\_K7K is an Invalid Patient Id WN\_P23 is an Invalid Patient Id LM\_V20 is an Invalid Patient Id

1. By Date of Visit

Retrieve Patient Details

WM\_WQ0 is an Invalid Patient Id

2. By Address

Enter your choice:

3

**Invalid Option** 

## Automatic evaluation[+]

```
HospitalManagement/PatientRegister.txt

1 WM_J82,Jacey,8734909012,07-08-2001,Colorado
2 WM_L01,Bella,9435678631,21-09-1992,Connecticut
3 WM_52E,Berey,8754321256,20-03-1999,Indiana
4 WM_B83,Cappi,6709543276,13-02-2006,Pennsylvania
5 WM_C23,Anya,7656548798,23-11-2002,Carolina
6 WM_X26,Beatrice,6789567687,18-07-2004,Texas
7 WM_H72,Elise,9809908765,02-12-2005,Washington
```

8 WM\_P10,Fanny,7835627189,02-05-2001,Virginia
9 WM\_Q12,Felicity,6792637810,21-05-1997,Colorado

10 WM\_K7K,Abigail,8934562718,02-05-2016,Indiana 11 WM\_U82,Alice,8352617181,11-05-2012,Indiana

12 WN\_P23,Amber,9876567898,12-09-1998,Pennsylvania 13 LM\_V20,Gabriella,8302927382,02-05-2006,Connecticut

14 WM\_Z05,Hadley,7823919273,02-06-2007,Connecticut 15 WM\_T83,Harper,7391027349,08-07-1999,Carolina

16 WM\_M03,Iris,9102638491,27-05-2001,Texas

17 WM\_N32,Finley,8729196472,12-08-2003,Pennsylvania

18 WM\_WQ0,Fiona,7201982219,09-09-2014,Washington 19 WM Q91,Carny,8976509871,30-12-2003,Virginia

20 WM\_P21,Eleanor,8954321378,24-11-2007,Carolina

#### HospitalManagement/src/InvalidPatientIdException.java

## HospitalManagement/src/Main.java

```
1 public class Main {
3
        public static void main(String[] args){
4
5
                                       // CODE SKELETON - VALIDATION STARTS
                                       // DO NOT CHANGE THIS CODE
8
                                        new SkeletonValidator():
9
                                       // CODE SKELETON - VALIDATION ENDS
10
                                       // FILL THE CODE HERE
11
12
13
14
```

```
15
           }
 16
 17
HospitalManagement/src/Patient.java
  1 //DO NOT ADD/EDIT THE CODE
  2 public class Patient {
  3
  4
           private String patientld;
  5
           private String patientName;
  6
           private String contactNumber;
           private String dateOfVisit;
  7
  8
           private String patientAddress;
  9
  10
           //Setters and Getters
  11
           public String getPatientId() {
  12
                      return patientld;
  13
  14
           public void setPatientId(String patientId) {
  15
  16
                       this.patientId = patientId;
  17
           public String getPatientName() {
  18
                      return patientName;
  19
  20
  21
           public void setPatientName(String patientName) {
  22
                       this.patientName = patientName;
  23
           public String getContactNumber() {
  24
  25
                      return contactNumber;
  26
           public void setContactNumber(String contactNumber) {
  27
                       this.contactNumber = contactNumber;
  28
  29
           public String getDateOfVisit() {
  30
  31
                       return dateOfVisit;
  32
  33
           public void setDateOfVisit(String dateOfVisit) {
                       this.dateOfVisit = dateOfVisit;
  34
  35
  36
           public String getPatientAddress() {
                      return patientAddress;
  37
  38
  39
           public void setPatientAddress(String patientAddress) {
  40
                       this.patientAddress = patientAddress;
  41
  42
  43
 44
 45
 46 }
HospitalManagement/src/PatientUtility.java
  1 import java.util.List;
  2 import java.util.stream.Stream;
  3 import java.util.ArrayList;
  4 import java.io.File;
  5 import java.io.FileNotFoundException;
  6 import java.util.Scanner;
  7 import java.util.regex.*;
  8 import java.util.stream.Collectors;
  9 import java.text.ParseException;
  10 import java.text.SimpleDateFormat;
  11 import java.util.Date;
  12
  13
```

```
14 public class PatientUtility {
  15
  16
           public List <Patient> fetchPatient(String filePath) {
  17
  18
  19
                       //FILL THE CODE HERE
                       List <Patient> patients = new ArrayList<>();
  20
  21
  22
                         File register = new File(filePath);
                         Scanner reader=new Scanner(register);
  23
  24
                         while(reader.hasNextLine()){
  25
                         Patient p = new Patient();
  26
                         String[] infos=reader.nextLine().split(",");
  27
                         try{
                            if(isValidPatientId(infos[0])){
  28
  29
                              p.setPatientId(infos[0]);
                              p.setPatientName(infos[1]);
  30
                              p.setContactNumber(infos[2]);
  31
  32
                              p.setDateOfVisit(infos[3]);
                              p.setPatientAddress(infos[4]);
  33
  34
                              patients.add(p);
  35
  36
  37
                         catch(InvalidPatientIdException e1){
  38
                            System.out.println(e1.getMessage());
  39
  40
  41
                       reader.close();
  42
  43
                       catch(FileNotFoundException e){}
  44
                       return patients;
  45
  46
                       //return null;
  47
           }
  48
  49
  50
           public boolean is Valid Patient Id (String patient Id) throws Invalid Patient Id Exception
  51
  52
  53
                       //FILL THE CODE HERE
                       Pattern p =Pattern.compile("WM_[A-Z][0-9]{2}$");
  54
  55
                       Matcher m=p.matcher(patientId);
                       boolean ne =m.matches();
  56
  57
                       if(!ne){
                         throw new InvalidPatientIdException(patientId+"is an Invalid Patient Id.");
  58
  59
  60
  61
                       //return inValid;
  62
                       return ne;
  63
           }
  64
 65
 66
           public List<Patient> retrievePatientRecords_ByDateOfVisit(Stream<Patient> patientStream, String
fromDate, String toDate)
 67
  68
                       //FILL THE CODE HERE
  69
                       SimpleDateFormat simpleDateFormat=new SimpleDateFormat("dd-MM-yyyy");
  70
                       return patientStream
                       .filter((p)->{
  71
  72
                         try{
                            Date start=simpleDateFormat.parse(fromDate);
  73
                            Date end= simpleDateFormat.parse(toDate);
  74
                            Date current =simpleDateFormat.parse(p.getDateOfVisit());
  75
  76
                            return start.compareTo(current)*current.compareTo(end)>=0;
  77
  78
                         catch(ParseException e){}
  79
                         return false;
```

```
80
                      }).collect(Collectors.toList());
           //
 81
                      return null;
  82
           }
 83
  84
  85
           public Stream<Patient> retrievePatientRecords ByAddress(Stream<Patient> patientStream, String
 86
address)
  87
           {
 88
 89
                      //FILL THE CODE HERE
  90
                      return patientStream.filter(p->address.equals(p.getPatientAddress()));
 91
                      //return null;
 92
 93
  94
  95
           }
  96
  97 }
 98
HospitalManagement/src/SkeletonValidator.java
  1 import java.lang.reflect.Method;
  2 import java.util.List;
  3 import java.util.logging.Level;
  4 import java.util.logging.Logger;
  5 import java.util.stream.Stream;
  7 /**
  8 * @author TJ
  10 * This class is used to verify if the Code Skeleton is intact and not modified by participants thereby ensuring
smooth auto evaluation
 11 *
 12 */
 13 public class SkeletonValidator {
 14
 15
           public SkeletonValidator() {
 16
  17
  18
                      validateClassName("Patient");
                      validateClassName("PatientUtility");
  19
                      validateClassName("InvalidPatientIdException");
 20
 21
                      validateMethodSignature(
  22
           "fetchPatient:java.util.List,isValidPatientId:boolean,retrievePatientRecords_ByDateOfVisit:java.util.List
,retrievePatientRecords_ByAddress:java.util.stream.Stream",
  23
                                             "PatientUtility");
 24
 25
  26
  27
           private static final Logger LOG = Logger.getLogger("SkeletonValidator");
  28
  29
           protected final boolean validateClassName(String className) {
  30
                      boolean iscorrect = false;
  31
  32
                      try {
  33
                                  Class.forName(className);
  34
                                  iscorrect = true;
  35
                                  LOG.info("Class Name " + className + " is correct");
  36
 37
                      } catch (ClassNotFoundException e) {
                                  LOG.log(Level.SEVERE, "You have changed either the " + "class
name/package. Use the correct package '
                                                        + "and class name as provided in the skeleton");
 39
 40
  41
                      } catch (Exception e) {
```

```
42
                                  LOG.log(Level.SEVERE,
 43
                                                         "There is an error in validating the " + "Class Name.
Please manually verify that the "
                                                                                + "Class name is same as
skeleton before uploading");
  45
 46
                       return iscorrect;
 47
  48
           }
  49
  50
           protected final void validateMethodSignature(String methodWithExcptn, String className) {
  51
                       Class cls = null;
  52
                       try {
  53
                                  String[] actualmethods = methodWithExcptn.split(",");
  54
  55
                                  boolean errorFlag = false;
  56
                                  String[] methodSignature;
  57
                                  String methodName = null;
  58
                                  String returnType = null;
  59
  60
                                  for (String singleMethod: actualmethods) {
  61
                                              boolean foundMethod = false;
                                             methodSignature = singleMethod.split(":");
  62
  63
  64
                                             methodName = methodSignature[0]:
                                             returnType = methodSignature[1];
  65
                                             cls = Class.forName(className);
 66
                                             Method[] methods = cls.getMethods();
  67
 68
                                             for (Method findMethod : methods) {
                                                         if (methodName.equals(findMethod.getName())) {
 69
  70
                                                                    foundMethod = true;
  71
(!(findMethod.getReturnType().getName().equals(returnType))) {
 72
                                                                                errorFlag = true;
 73
                                                                                LOG.log(Level.SEVERE, "You
have changed the " + "return type in "" + methodName
                                                                                                       +
method. Please stick to the " + "skeleton provided");
 75
 76
                                                                    } else {
 77
                                                                                LOG.info("Method signature of "
+ methodName + " is valid");
                                                                    }
 78
  79
 80
                                                        }
 81
                                             if (!foundMethod) {
  82
 83
                                                         errorFlag = true;
                                                         LOG.log(Level.SEVERE, " Unable to find the given
 84
public method " + methodName
                                                                                + ". Do not change the " + "given
public method name. " + "Verify it with the skeleton");
 86
  87
 88
                                  if (!errorFlag) {
 89
  90
                                             LOG.info("Method signature is valid");
  91
  92
                      } catch (Exception e) {
  93
 94
                                  LOG.log(Level.SEVERE,
 95
                                                         " There is an error in validating the " + "method
structure. Please manually verify that the "
                                                                                + "Method signature is same as
the skeleton before uploading");
 97
 98
           }
```

## Grade

Reviewed on Monday, 7 February 2022, 6:04 PM by Automatic grade Grade 100 / 100 Assessment report Assessment Completed Successfully [+]Grading and Feedback

# 6. Technology Fest

Grade settings: Maximum grade: 100

Run: Yes Evaluate: Yes Automatic grade: Yes

**Institute of Technology** is organizing an All-India Technology Fest for various engineering colleges across the country. The management would like to automate the registration so that it is easier and more systematic while conducting the fest. Create a java application for the same using Threads.

**Component Specification: Participant (POJO Class)** 

Type	Attributes	Methods
(Class)		
Participant	String name	Getters, Setters, and a five-argument constructor in the given order - name,
	String yearofstudy	yearofstudy, department, collegeName, eventName are included in the code
	String department	Skeleton.
	String collegeName	
	String eventName	
	double registrationFee	

## Requirements:

- To calculate the registration fee of the participant based on the event name.
- To calculate the number of participants registered for a particular event.

Sl No	Event Name	Registration Fee
1	Robocar	1000
2	PaperTalk	500
3	Quiz	300
4	Games	100

<sup>\*</sup>Note that Event name is case in- sensitive

## **Component Specification: EventManagement (Thread Class)**

Type (Class)	Attributes	Methods	Responsibilities
EventManagement	List <participant></participant>		Include getters and setter
_	TechList		methods for all the
			attributes.
	String		
	searchEvent		
	int counter		
EventManagement		public void	Calculate the registration
		calculateRegistrationFee(List	fee of the participant
		<participant> list)</participant>	based on the event name.
			If the event name doesn't
			exist, throw an
			InvalidEventException
			with an error message
			"Event Name is invalid".
EventManagement		public void run()	Calculate the number of
			participants registered for
			a particular event.
			Increment the counter
			attribute based on the
			search.

**Note:** The class and methods should be declared as public and all the attributes should be declared as private.

## **Component Specification: InvalidEventException**

Type (Class)	Methods	Responsibilities
InvalidEventException	public	To set the message string to
	InvalidEventException	the superclass.
	(String message)	_

## Create a class called Main with the main method and perform the tasks are given below:

- Get the inputs as provided in the sample input.
- Call the calculateRegistrationFee () method to calculate the registration fee of the participant based on the event name.
- Print the list of Participant objects with the registration fee.
- Get the event type to search to find the number of the participants registered for that particular event.
- Handle the user-defined exception in the main method.
- Display the output as shown in the sample input/output.

#### Note:

- In the Sample Input / Output provided, the highlighted text in bold corresponds to the input given by the user and the remaining text represent the output.
- Ensure to follow the object-oriented specifications provided in the question description.
- Ensure to provide the names for classes, attributes, and methods as specified in the question description.
- Adhere to the code template, if provided.

### Sample Input/Output 1:

Enter the number of entries

3

Enter the Participant Name/Yearofstudy/Department/CollegeName/EventName

rinu/4/EEE/mnm/robocar

fina/3/EEE/psg/papertalk

## rachel/4/civil/kcg/quiz

Print participant details

ParticipantName=rinu, Yearofstudy=4, Department=EEE, CollegeName=mnm, EventName=robocar, RegistrationFee=1000.0

ParticipantName=fina, Yearofstudy=3, Department=EEE, CollegeName=psg, EventName=papertalk, RegistrationFee=500.0

ParticipantName=rachel, Yearofstudy=4, Department=civil, CollegeName=kcg, EventName=quiz, RegistrationFee=300.0

Enter the event to search

### robocar

Number of participants for ROBOCAR event is 1

## **Sample Input/Output 2:**

Enter the number of entries

3

Enter the Participant Name/Yearofstudy/Department/CollegeName/EventName

#### rinu/4/EEE/mnm/robocar

#### fina/3/EEE/psg/papertalk

#### rachel/4/civil/kcg/quiz

Print participant details

ParticipantName=rinu, Yearofstudy=4, Department=EEE, CollegeName=mnm, EventName=robocar, RegistrationFee=1000.0

ParticipantName=fina, Yearofstudy=3, Department=EEE, CollegeName=psg, EventName=papertalk, RegistrationFee=500.0

ParticipantName=rachel, Yearofstudy=4, Department=civil, CollegeName=kcg, EventName=quiz, RegistrationFee=300.0

Enter the event to search

#### games

No participant found

## Sample Input/Output 3:

Enter the number of entries

2

Enter the Participant Name/Yearofstudy/Department/CollegeName/EventName

## vishal/4/mech/vjc/flyingrobo

## vivek/3/mech/hdl/games

Event Name is invalid

# Automatic evaluation[+]

## TechnologyFest/src/EventManagement.java

```
1 import java.util.List;
3 public class EventManagement implements Runnable {
         private List<Participant> TechList;
         private String searchEvent;
6
         private int counter=0;
         public List<Participant>getTechList()
7
8
9
           return TechList;
10
11
12
         public void setTechList(List<Participant>techList)
13
14
           TechList=techList;
15
         public String getSearchEvent()
16
17
18
           return searchEvent;
```

```
19
        public void setSearchEvent(String searchEvent)
 20
  21
  22
           this.searchEvent=searchEvent;
  23
        public int getCounter()
  24
  25
 26
           return counter;
  27
  28
        public void setCounter(int counter)
  29
  30
           this.counter=counter;
  31
           //FILL THE CODE HERE
  32
  33
           public void calculateRegistrationFee(List<Participant> list) throws InvalidEventException
  34
  35
  36
              for(Participant p:list)
  37
  38
 39
                if(p.getEventName().equalsIgnoreCase("robocar"))
  40
                   p.setRegistrationFee(1000);
  41
  42
  43
                else if(p.getEventName().equalsIgnoreCase("papertalk")){
                   p.setRegistrationFee(500);
  44
 45
 46
 47
 48
                else if(p.getEventName().equalsIgnoreCase("quiz")){
                   p.setRegistrationFee(300);
  49
  50
  51
              else if(p.getEventName().equalsIgnoreCase("games")){
  52
                   p.setRegistrationFee(100);
  53
              else{
  54
  55
                throw new InvalidEventException("Event Name is Invalid");
  56
 57
 58
                       //FILL THE CODE HERE
                       setTechList(list);
  59
 60
 61
  62
           public void run()
  63
              String str="robocarpapertalkquizgames";
 64
              if(str.contains(this.getSearchEvent())){
  65
                for(Participant P:this.getTechList()){
                   \textit{if} (\textit{this}. \texttt{getSearchEvent}(). \texttt{equals}(\texttt{P.getEventName}())) \{
  67
 68
                     counter++;
  69
  70
  71
  72
              setCounter(counter);
  73
  74
                       //FILL THE CODE HERE
  75
  76
  77 }
TechnologyFest/src/InvalidEventException.java
  1 public class InvalidEventException extends Exception{
           //FILL THE CODE HERE
  3 public InvalidEventException(String str){
  4
       super(str);
```

```
6 }
  8 }
TechnologyFest/src/Main.java
  2 import java.util.Scanner;
  3 import java.util.*;
  4 public class Main {
           public static void main(String [] args)
  6
                      // CODE SKELETON - VALIDATION STARTS
  7
  8
             // DO NOT CHANGE THIS CODE
  9
  10
                      new SkeletonValidator();
  11
             // CODE SKELETON - VALIDATION ENDS
  12
  13
             Scanner sc=new Scanner(System.in);
  14
  15
              System.out.println("Enter the number of entries");
  16
              int n=sc.nextInt();
             System.out.println("Enter the Participant
  17
Name/Yearofstudy/Department/CollegeName/EventName");
             List<Participant> list=new ArrayList<Participant>();
  19
             String strlist[]=new String[n];
              for(int i=0;i<n;i++)
 20
  21
                         strlist[i]=sc.next();
  22
                         String a[]=strlist[i].split("/");
  23
                         Participant pt=new Participant(a[0],a[1],a[2],a[3],a[4]);
  24
  25
  26
  27
                      EventManagement em=new EventManagement();
  28
                        em.calculateRegistrationFee(list);
  29
  30
  31
                      catch(InvalidEventException e)
  32
                      {
  33
                         e.printStackTrace();
  34
  35
                      System.out.println("Print participant details");
  36
  37
                      for(Participant p:list)
  38
  39
             System.out.println(p);
  40
           System.out.println("Enter the event to search");
  41
           String srch=sc.nextLine();
  42
           em.setSearchEvent(srch);
 43
  44
           em.run();
  45
           int count=em.getCounter();
  46
           if(count<=0){</pre>
             System.out.println("No participant found");
  47
  48
  49
  50
           else{
             System.out.println("Number of participants for"+srch+"event is "+count);
  51
  52 }
  53
  54
 55
 56
  57
TechnologyFest/src/Participant.java
  1 public class Participant {
```

```
2
           private String name;
  3
           private String yearofstudy;
  4
           private String department;
  5
           private String collegeName;
  6
           private String eventName;
  7
           private double registrationFee;
  8
  9
           //5 argument Constructor
           public Participant(String name, String yearofstudy, String department, String collegeName, String
  10
eventName) {
  11
                      super();
  12
                      this.name = name;
  13
                      this.yearofstudy = yearofstudy;
                      this.department = department;
  14
                      this.collegeName = collegeName;
  15
  16
                      this.eventName = eventName;
  17
  18
  19
           public String getName() {
  20
                      return name;
  21
           public void setName(String name) {
  22
  23
                      this.name = name;
  24
           public String getYearofstudy() {
  25
                      return yearofstudy;
  26
  27
           public void setYearofstudy(String yearofstudy) {
  28
  29
                      this.yearofstudy = yearofstudy;
  30
  31
           public String getDepartment() {
  32
                      return department;
  33
           public void setDepartment(String department) {
  34
  35
                      this.department = department;
  36
  37
           public String getCollegeName() {
  38
                      return collegeName;
  39
           public void setCollegeName(String collegeName) {
  40
                      this.collegeName = collegeName;
  41
  42
           public String getEventName() {
  43
  44
                      return eventName;
  45
  46
           public void setEventName(String eventName) {
                      this.eventName = eventName;
  47
  48
           public double getRegistrationFee() {
  49
  50
                      return registrationFee;
  51
           public void setRegistrationFee(double registrationFee) {
  52
  53
                      this.registrationFee = registrationFee;
  54
 55
  56
           @Override
  57
           public String toString() {
                      return "Participant [name=" + name + ", yearofstudy=" + yearofstudy + ", department=" +
 58
department
                                             + ", collegeName=" + collegeName + ", eventName=" +
eventName + ", registrationFee=" + registrationFee
 60
 61
           }
 62
 63
 64
  65
```

66 }

```
TechnologyFest/src/SkeletonValidator.java
```

```
2 import java.lang.reflect.Method;
  3 import java.util.List;
  4 import java.util.logging.Level;
  5 import java.util.logging.Logger;
  6 import java.util.stream.Stream;
  8 /**
  9 * @author TJ
 10 *
 11 * This class is used to verify if the Code Skeleton is intact and not modified by participants thereby ensuring
smooth auto evaluation
 12 *
 13 */
 14 public class SkeletonValidator {
 15
           public SkeletonValidator() {
 16
 17
 18
                      //classes
 19
                      validateClassName("Main");
                      validateClassName("EventManagement");
 20
 21
                      validateClassName("Participant");
 22
                      validateClassName("InvalidEventException");
 23
                      //functional methods
 24
                      validateMethodSignature(
                                              "calculateRegistrationFee:void", "EventManagement");
 25
 26
                      validateMethodSignature(
 27
                                              "run:void", "EventManagement");
 28
 29
                      //setters and getters of HallHandler
 30
                      validateMethodSignature(
                                              'getTechList:List","EventManagement");
 31
 32
                      validateMethodSignature(
 33
                                              "setTechList:void","EventManagement");
 34
 35
                      validateMethodSignature(
 36
                                              "getCounter:int","EventManagement");
 37
                      validateMethodSignature(
 38
                                              "setCounter:void", "EventManagement");
 39
 40
                      validateMethodSignature(
                                              "getSearchEvent:String","EventManagement");
 41
 42
                      validateMethodSignature(
 43
                                              "setSearchEvent:void","EventManagement");
 44
 45
                      //setters and getters of Hall
 46
                      validateMethodSignature(
 47
                                              'getName:String","Participant");
 48
                      validateMethodSignature(
 49
                                              'setName:void","Participant");
 50
 51
                      validateMethodSignature(
                                              "getYearofstudy:String","Participant");
 52
 53
                      validateMethodSignature(
 54
                                              "setYearofstudy:void","Participant");
 55
 56
                      validateMethodSignature(
 57
                                              "getDepartment:String","Participant");
 58
                      validateMethodSignature(
 59
                                              "setDepartment:void","Participant");
 60
 61
                      validateMethodSignature(
 62
                                              "getCollegeName:String","Participant");
```

```
63
                      validateMethodSignature(
  64
                                             "setCollegeName:void","Participant");
  65
  66
                      validateMethodSignature(
  67
                                             "getEventName:String","Participant");
  68
                      validateMethodSignature(
                                             "setEventName:void","Participant");
  69
  70
  71
                      validateMethodSignature(
  72
                                             "getRegistrationFee:double","Participant");
                      validateMethodSignature(
  73
  74
                                             "setRegistrationFee:void", "Participant");
  75
  76
           }
  77
  78
           private static final Logger LOG = Logger.getLogger("SkeletonValidator");
  79
  80
           protected final boolean validateClassName(String className) {
  81
                      boolean iscorrect = false;
  82
  83
                      try {
                                  Class.forName(className);
  84
  85
                                 iscorrect = true;
  86
                                 LOG.info("Class Name " + className + " is correct");
  87
                      } catch (ClassNotFoundException e) {
 88
 89
                                 LOG.log(Level.SEVERE, "You have changed either the " + "class
name/package. Use the correct package "
                                                        + "and class name as provided in the skeleton");
  91
 92
                      } catch (Exception e) {
 93
                                 LOG.log(Level.SEVERE,
                                                        "There is an error in validating the " + "Class Name.
 94
Please manually verify that the "
                                                                               + "Class name is same as
skeleton before uploading");
 96
  97
                      return iscorrect;
 98
 99
           }
 100
 101
           protected final void validateMethodSignature(String methodWithExcptn, String className) {
 102
                      Class cls = null:
 103
                      try {
 104
 105
                                 String[] actualmethods = methodWithExcptn.split(",");
                                 boolean errorFlag = false;
 106
 107
                                  String[] methodSignature;
                                  String methodName = null;
 108
 109
                                  String returnType = null;
 110
 111
                                  for (String singleMethod: actualmethods) {
 112
                                             boolean foundMethod = false;
                                             methodSignature = singleMethod.split(":");
 113
 114
 115
                                             methodName = methodSignature[0];
                                             returnType = methodSignature[1];
 116
 117
                                             cls = Class.forName(className);
 118
                                             Method[] methods = cls.getMethods();
 119
                                             for (Method findMethod: methods) {
 120
                                                        if (methodName.equals(findMethod.getName())) {
                                                                   foundMethod = true;
 121
(!(findMethod.getReturnType().getName().contains(returnType))) {
 123
                                                                               errorFlag = true;
 124
                                                                               LOG.log(Level.SEVERE, "You
have changed the " + "return type in " + methodName
```

```
125
method. Please stick to the " + "skeleton provided");
 127
                                                                   } else {
                                                                               LOG.info("Method signature of "
 128
+ methodName + " is valid");
 129
                                                                   }
 130
 131
                                                        }
 132
                                             if (!foundMethod) {
 133
 134
                                                        errorFlag = true;
                                                        LOG.log(Level.SEVERE, " Unable to find the given
 135
public method " + methodName
                                                                               + ". Do not change the " + "given
 136
public method name. " + "Verify it with the skeleton");
 137
 138
 139
 140
                                 if (!errorFlag) {
 141
                                             LOG.info("Method signature is valid");
 142
 143
 144
                      } catch (Exception e) {
 145
                                 LOG.log(Level.SEVERE,
                                                        "There is an error in validating the " + "method
 146
structure. Please manually verify that the "
                                                                               + "Method signature is same as
the skeleton before uploading");
 148
 149
 150
 151 }
Grade
```

Reviewed on Monday, 7 February 2022, 6:34 PM by Automatic grade

**Assessment report** 

**Grade** 74 / 100

```
Fail 1 -- test4CheckTheOutput::
$Expected output:"[Print participant details
ParticipantName=Weni
Yearofstudy=3
Department=civil
CollegeName=vjc
EventName=robocar
\textit{RegistrationFee=1000.0}
ParticipantName=gina
Yearofstudy=2
Department=mech
 CollegeName=vjc
 EventName=quiz
RegistrationFee=300.0
ParticipantName=jos
 Yearofstudy=4
Department=ece
CollegeName=vjec
EventName=games
RegistrationFee=100.0
ParticipantName=fida
 Yearofstudy=1
Department=eee
```

```
CollegeName=vjec
EventName=papertalk
RegistrationFee=500.0
Enter the event to search
Number of participants for PAPERTALK event is 1]" Actual output:"[Enter the number of
entries
 Enter the Participant Name/Yearofstudy/Department/CollegeName/EventName
Print participant details
Participant [name=Weni
yearofstudy=3
department=civil
collegeName=vjc
 eventName=robocar
registrationFee=1000.0]
Participant [name=gina
yearofstudy=2
department=mech
collegeName=vjc
eventName=quiz
registrationFee=300.0]
Participant [name=jos
yearofstudy=4
 department=ece
 collegeName=vjec
 eventName=games
registrationFee=100.0]
Participant [name=fida
yearofstudy=1
 department=eee
collegeName=vjec
eventName=papertalk
registrationFee=500.01
Enter the event to search
No participant found]"$
Check your code with the input :Weni/3/civil/vjc/robocar
qina/2/mech/vjc/quiz
jos/4/ece/vjec/games
fida/1/eee/vjec/papertalk
```

#### Fail 2 -- test6CheckTheOutputfor\_NCount:: \$Expected output:"[Print participant details ParticipantName=philip Yearofstudy=4 Department=eee CollegeName=mvc EventName=robocar RegistrationFee=1000.0 ParticipantName=susan Yearofstudy=4 Department=eee CollegeName=mvc EventName=robocar RegistrationFee=1000.0 ParticipantName=vivek Yearofstudy=3 Department=civil CollegeName=mvc EventName=quiz RegistrationFee=300.0 ParticipantName=vishal Yearofstudy=3 Department=civil

CollegeName=mvc

```
EventName=papertalk
RegistrationFee=500.0
 Enter the event to search
Number of participants for ROBOCAR event is 2]" Actual output:"[Enter the number of
entries
Enter the Participant Name/Yearofstudy/Department/CollegeName/EventName
Print participant details
Participant [name=philip
yearofstudy=4
department=eee
collegeName=mvc
eventName=robocar
registrationFee=1000.0]
Participant [name=susan
yearofstudy=4
department=eee
collegeName=mvc
eventName=robocar
registrationFee=1000.0]
Participant [name=vivek
yearofstudy=3
 department=civil
 collegeName=mvc
eventName=quiz
registrationFee=300.0]
Participant [name=vishal
yearofstudy=3
department=civil
collegeName=mvc
eventName=papertalk
registrationFee=500.0]
Enter the event to search
No participant found]"$
Check your code with the input :philip/4/eee/mvc/robocar
susan/4/eee/mvc/robocar
vivek/3/civil/mvc/quiz
vishal/3/civil/mvc/papertalk
```

Obtained Pass Percentage. Still few testcases failed . Kindly revisit the Solution [+] Grading and Feedback

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