

Merit Details(---RETIRED---)

Grade settings: Maximum grade: 100

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Based on: [Merit Details\(---RETIRED---\)](#)

Run: Yes **Evaluate:** Yes

Automatic grade: Yes

PSR is one of the most famous engineering colleges. The college has decided to provide concessions on fees to the students based on their cutoff marks.

The college management has approached you to create software that would calculate the final fees based on the cutoff marks.

Component Specification: Student

Type(Class)	Attributes	Methods
Student	String studentId String studentName String state double cutoff double fee	Necessary getters, setters, no argument and a five-argument constructor are provided as a part of the code skeleton.

Functional Requirement 1: Extract the details of the Student and create an object of the Student class.

Type(Class)	Methods	Responsibilities
UserInterface	public static Student extractDetails (String studentDetails)	This method accepts studentDetails separated by a colon as an argument and should extract the properties of the Student from the argument by parsing the studentDetails . Set these values to the Student object and return this object.

Functional Requirement 2: Calculate the fees to be paid by the students to the college.

Type(Class)	Methods	Responsibilities
Student	public double calculateTotalFee()	<p>This method is used to calculate the students' fees based on their cutoff.</p> <ul style="list-style-type: none"> If the cutoff is between 195 and 200 (Inclusive), the fee amount is 0. If the cutoff is between 190 and 194 (Inclusive), the fee is reduced by 80%. If the cutoff is between 181 and 189 (Inclusive), the fee is reduced by 60%. If the cutoff is between 50 and 180 (Inclusive), then there is no concession on the fee. <p>Condition:</p> <ul style="list-style-type: none"> If the cutoff does not belong to any of the above-mentioned ranges, then return -1. The state should be "Tamilnadu", otherwise return -1. state is case-insensitive.

Formula to calculate the Fee:

(If the state is Tamilnadu and the cutoff is 192 then, the fee is reduced by 80%.)

Total Fee to be paid by the student = fee - ((fee*80)/100)

Example

Enter Student Details

CS01:Steve:Tamilnadu:191:125000

Total Fee to be paid by the student = 125000 - ((125000*80)/100) = 25000.00
(RoundOff to two decimal place)

The main method in the UserInterface class is excluded from the evaluation. You are free to write your own code in the main method to invoke the business methods to check its correctness.

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 names for classes, attributes, and methods as specified in the question.
- Adhere to the code template, if provided.

Sample Input / Output 1:

Enter Student Details

CS01:Ishan:Tamilnadu:196:125000

Student Details

Student Id:CS01

Student Name:Ishan

State:Tamilnadu

Fee:125000.0

Total Fee to be paid by the student:0.00

Sample Input / Output 2:

Enter Student Details

IT01:Neha:tamilnadu:191:100000

Student Details

Student Id:IT01

Student Name:Neha

State:tamilnadu

Fee:100000.0

Total Fee to be paid by the student:20000.00

Sample Input / Output 3:

Enter Student Details

IT01:John:Kerala:196:100000

Invalid details

Explanation: As the **state** is not Tamilnadu, the input is considered as invalid.]

Sample Input / Output 4:

Enter Student Details

IT01:Peter:tamilnadu:46:100000

Invalid details

Explanation: As the **cutoff** is less than 50, the input is considered as invalid.]

The screenshot shows a web browser window with the URL <https://cognizant.tekstac.com/mod/vpl/forms/edit.php?id=110116&userid=137159#>. The browser has several tabs, including 'Qualifier Assessment Merit Details'. Below the browser window is a code editor with a file list on the left showing 'Student.java' and 'UserInterface.java'. The main editor area displays the code for 'Student.java'.

```
1 public class Student
2 {
3
4     private String studentId;
5     private String studentName;
6     private String state;
7     private double cutoff;
8     private double fee;
9
10    public String getStudentId()
11    {
12        return studentId;
13    }
14    public void setStudentId(String studentId)
15    {
16        this.studentId = studentId;
17    }
18    public String getStudentName()
19    {
20        return studentName;
21    }
22    public void setStudentName(String studentName)
23    {
24        this.studentName = studentName;
25    }
26    public String getState()
27    {
28        return state;
29    }
30    public void setState(String state)
31    {
32        this.state = state;
33    }
34    public double getCutoff() {
35        return cutoff;
36    }
37    public void setCutoff(double cutoff) {
```

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https://cognizant.tekstac.com/mod/vpl/forms/edit.php?id=110116&userid=137159#

File List | Save All | Compile & Run | Evaluate | Reset | Restore | Description

File list

- MeritDetails
 - src
 - Student.java
 - UserInterface.java

Student.java

```
32     this.state = state;
33 }
34 public double getCutoff() {
35     return cutoff;
36 }
37 public void setCutoff(double cutoff) {
38     this.cutoff = cutoff;
39 }
40 public double getFee() {
41     return fee;
42 }
43 public void setFee(double fee)
44 {
45     this.fee = fee;
46 }
47 public Student()
48 {
49 }
50 public Student(String studentId, String studentName, String state, double cutoff, double fee) {
51     super();
52     this.studentId = studentId;
53     this.studentName = studentName;
54     this.state = state;
55     this.cutoff = cutoff;
56     this.fee = fee;
57 }
58 }
59
60 public double calculateTotalFee()
61 {
62     //fill code here
63 }
64
65 return 1;
66 }
67
68 }
```

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UserInterface.java

```
1 import java.util.*;
2 public class UserInterface {
3
4     public static Student extractDetails (String studentDetails)
5     {
6         //fill code here
7
8     }
9     return null;
10 }
11
12 public static void main(String[] args)
13 {
14     // TODO Auto-generated method stub
15     Scanner sc=new Scanner(System.in);
16     //fill code here
17 }
18 }
19 }
20
21
22 }
```