

LPG Connection Details(---RETIRED---)

Grade settings: Maximum grade: 100

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

Run: Yes **Evaluate:** Yes

Automatic grade: Yes

The Tamil Nadu government desired to provide discounts to LPG consumers based on the type of connection. They seek assistance from a software developer with their process. You are the software developer, and you are developing a Java program in accordance with the specifications.

Component Specification: Consumer

Type (Class)	Attributes	Methods
Consumer	String consumerId String consumerName String aadharNumber String connectionType double price	Necessary getters, setters, and a five-argument constructor is provided as a part of the code skeleton.

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

Type (Class)	Methods	Responsibilities
UserInterface	public static Consumer extractDetails (String consumerDetails)	This method accepts consumerDetails separated by the colon as an argument and extracts the properties of the Consumer from the argument. Set these values to the Consumer object and return this object.

Functional Requirement 2: Calculate the amount to be paid by the consumer for the LPG Connection.

Type (Class)	Methods	Responsibilities
Consumer	public double calculateAmountToBePaid()	<p>This method is used to calculate the amount to be paid by the consumer.</p> <p>If the connectionType is Indane, the discount percentage is 7%.</p> <p>If the connectionType is Mayur, the discount percentage is 4%.</p> <p>If the connectionType is HP, the discount percentage is 6%.</p> <p>If the connectionType is Bharat, the discount percentage is 11%.</p> <p>If the connectionType is Super, the discount percentage is 13%.</p> <p>Condition:</p> <ul style="list-style-type: none"> • <i>connectionType</i> is case-insensitive. • If the <i>connectionType</i> doesn't match any of the above-mentioned connectionType, the method should return -1. • If the <i>price</i> is less than or equal to zero, the method should return -1.

Formula to calculate the amount to be paid:

Amount to be paid = price - (price* discount % (based on the connectionType) /100)

For Example:

If connectionType = HP and price =1200.

Amount to be paid = 1200 - (1200 * 6 / 100) = 1128.

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 Consumer Details

CON521:Jenny:2344-2878-1982:Super:1200

Consumer Id : CON521

Consumer Name : Jenny

Aadhar Number : 2344-2878-1982

Connection Type : Super

Price : 1200.0

Amount to be paid by the Consumer : 1044.00

Sample Input / Output 2:

Enter Consumer Details

CON1726:Amy:2762-1928-3922:Surya:1450

Invalid Consumer Details

Sample Input / Output 3:

Enter Consumer Details

CON1726:Amy:2762-1928-3922:Mayur:-800

Invalid Consumer Details

```
1 public class Consumer {
2
3     private String consumerId;
4     private String consumerName;
5     private String aadharNumber;
6     private String connectionType;
7     private double price;
8
9     public Consumer(String consumerId, String consumerName, String aadharNumber, String connectionType,
10                     double price) {
11         super();
12         this.consumerId = consumerId;
13         this.consumerName = consumerName;
14         this.aadharNumber = aadharNumber;
15         this.connectionType = connectionType;
16         this.price = price;
17     }
18
19     public String getConsumerId() {
20         return consumerId;
21     }
22
23     public void setConsumerId(String consumerId) {
24         this.consumerId = consumerId;
25     }
26
27     public String getConsumerName() {
28         return consumerName;
29     }
30
31     public void setConsumerName(String consumerName) {
32         this.consumerName = consumerName;
33     }
34
35     public String getAadharNumber() {
36         return aadharNumber;
37     }
38
39     public void setAadharNumber(String aadharNumber) {
40         this.aadharNumber = aadharNumber;
41     }
42 }
```

```
43     public String getConnectionType() {
44         return connectionType;
45     }
46
47     public void setConnectionType(String connectionType) {
48         this.connectionType = connectionType;
49     }
50
51     public double getPrice() {
52         return price;
53     }
54
55     public void setPrice(double price) {
56         this.price = price;
57     }
58
59     public double calculateAmountToBePaid() {
60         // Fill the code
61         return 0;
62     }
63 }
```

Qualifier Assessment LPG Connec x +

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File List Save All Compile & Run Evaluate Reset Restore Description

File list

- GasConnection
- src
 - Consumer.java
 - UserInterface.java

```
1 import java.util.Scanner;
2
3 public class UserInterface {
4
5     public static Consumer extractDetails(String consumerDetails){
6         // Fill the code
7         return null;
8     }
9
10    public static void main(String[] args) {
11        Scanner scanner = new Scanner(System.in);
12        // Fill the code
13    }
14
15 }
16
```

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