The Phone Zone

Grade settings: Maximum grade: 100
Disable external file upload, paste and drop external content: Yes
Based on: The Phone Zone
Run: Yes **Evaluate**: Yes
Automatic grade: Yes

"**The Phone Zone**" is a popular mobile showroom in the city. They announced a massive New Year's Eve sale on 5G mobiles from five different mobile brands. Among them are **Oppo, Vivo, Samsung, OnePlus, and Realme**. They wanted to calculate the mobile price by deducting the discount percentage based on the phone brand. The manager of "**The Phone Zone**" seeks software developer assistance with their process. As a software developer, you create a Java program based on the requirements.

Component Specification: MobileInfo

Type (Class)	Attributes	Methods
MobileInfo	String mobileName String imeiNumber String mobileBrand double mobilePrice	Necessary getters, setters, and a four-argument constructor are provided as a part of the code skeleton.

Functional Requirement 1: Extract the details of the mobile and create an object of MobileInfo.

Type (Class)	Methods	Responsibilities
UserInterface	public static MobileInfo **extractDetails**(String mobileDetails)	This method accepts **mobileDetails** separated by colon as an argument and should extract the properties of the **MobileInfo** from the argument by parsing the **mobileDetails**. Set these

		values to the **MobileInfo** object and return this object .

Functional Requirement 2: Calculate the mobile price to be paid by the customer.

Type (Class)	Methods	Responsibilities
MobileInfo	public double **calculateMobilePriceToBePaid**()	This method is used to calculate the mobile price after deducting the discount%. The IMEI number should contain exactly **15 digits** . If the mobileBrand is "**Samsung**", the discount is 2% of the price. If the mobileBrand is "**Realme**", the discount is 6% of the price. If the mobileBrand is "**OnePlus**", the discount is 4% of the price. If the mobileBrand is "**Oppo**", the discount is 5% of the price. If the mobileBrand is "**Vivo**", the discount is 3% of the price. ***Condition:*** • ***mobileBrand*** *is case-sensitive.* • *If the* ***mobileBrand*** *does not match any of the above types, return -1.* • *If the* ***mobilePrice*** *is less than or equal zero, return -1.*

		• *If the **imeiNumber** is less than or greater than 15 digits, return -1.*

Formula to calculate the mobile price to be paid:
Mobile price to be paid= mobilePrice -((mobilePrice *discount%)/100))

Eg: Let the mobileCost be 50000 , mobileBrand be Samsung. Discount for Samsung mobile is 2%,

Mobile price to be paid=50000-((50000*2)/100) =50000-2000=48000.0

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 the Mobile details

Reno7-5G:187654321114567:Oppo:35000

Mobile Details

Mobile Name: Reno7-5G

Mobile IMEI Number: 187654321114567

Mobile Brand: Oppo

Mobile Price: 35000.0

Amount to be paid: 33250.0

Sample Input/Output 2:

Enter the Mobile details

Moto M56:675434567825678:Motorola:28000

Invalid Mobile details

Sample Input/Output 3:

Enter the Mobile details

Real me 9 Pro:675434567823:Realme:29000

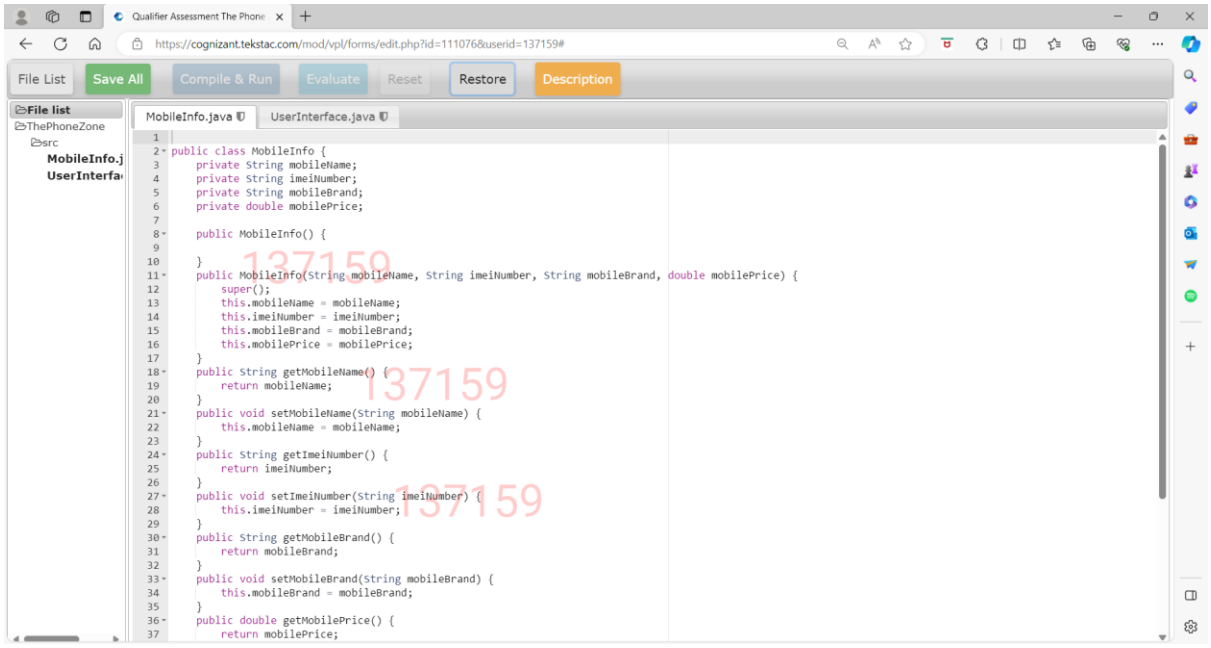
Invalid Mobile details

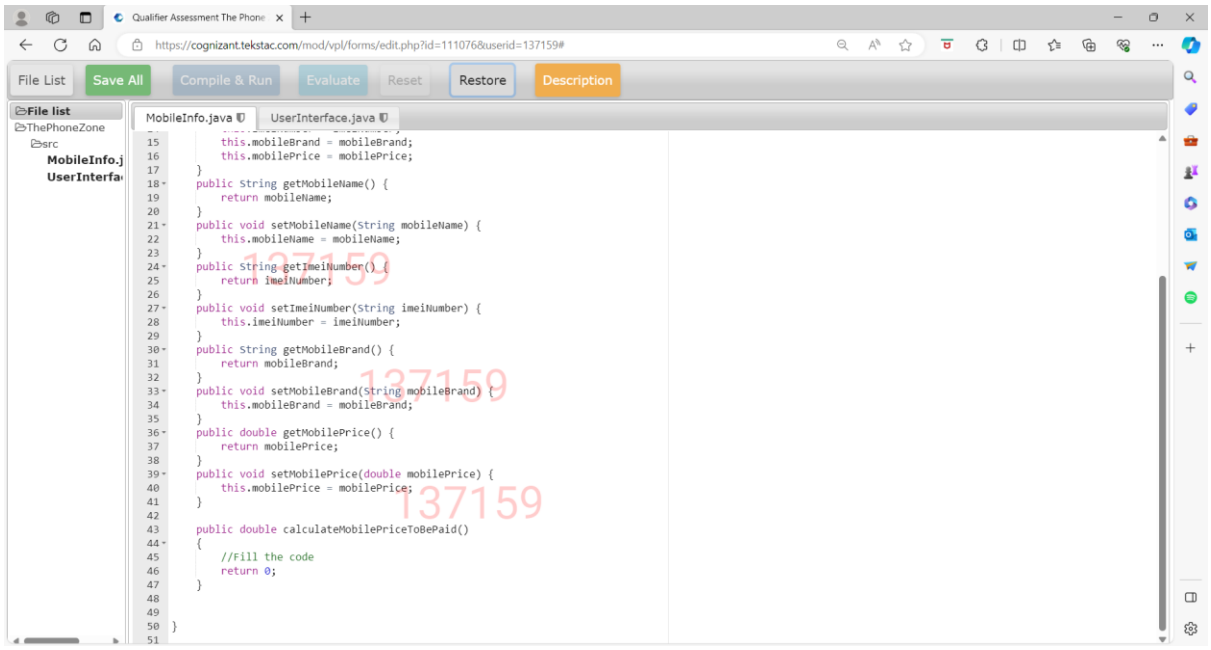
Sample Input/Output 4:

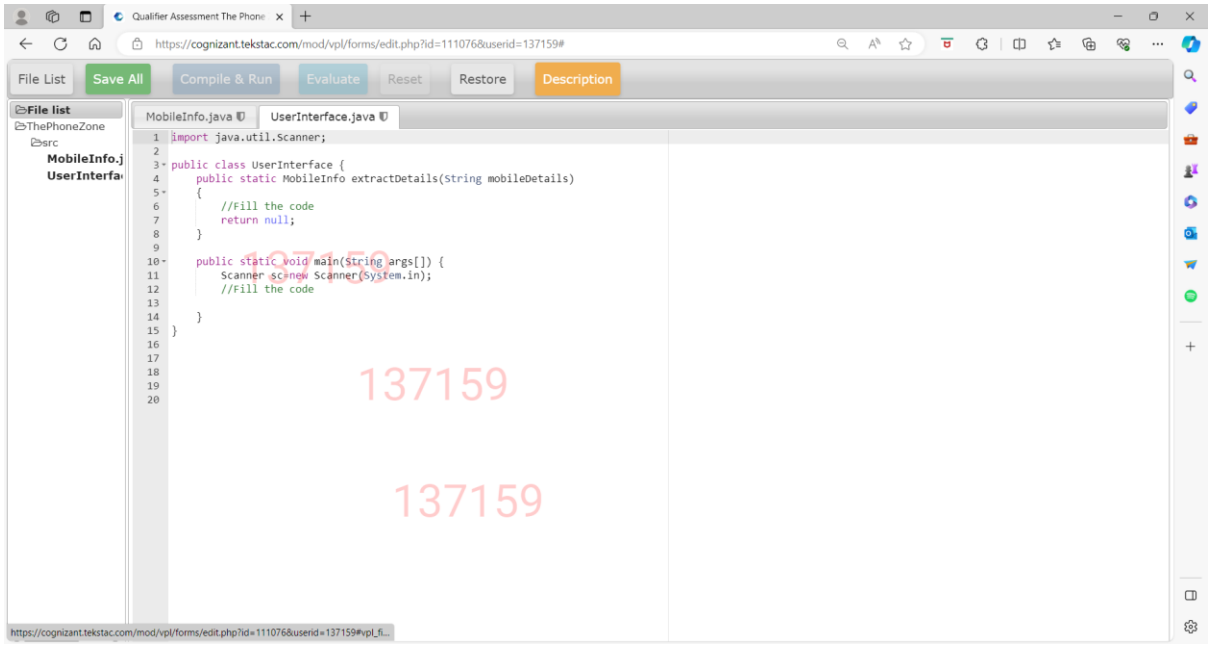
Enter the Mobile details

OnePlus Nord 5:675434567823890:OnePlus:-9

Invalid Mobile details


Qualifier Assessment The Phone
https://cognizant.tekstac.com/mod/vpl/forms/edit.php?id=111076&userid=137159#
File List
Save All
Compile & Run
Evaluate
Reset
Restore
Description
File list
ThePhoneZone
src
MobileInfo.j
UserInterfa
MobileInfo.java
UserInterface.java
public class MobileInfo {
private String mobileName;
private String imeiNumber;
private String mobileBrand;
private double mobilePrice;
public MobileInfo() {
}
public MobileInfo(String mobileName, String imeiNumber, String mobileBrand, double mobilePrice) {
super();
this.mobileName = mobileName;
this.imeiNumber = imeiNumber;
this.mobileBrand = mobileBrand;
this.mobilePrice = mobilePrice;
}
public String getMobileName() {
return mobileName;
}
public void setMobileName(String mobileName) {
this.mobileName = mobileName;
}
public String getImeiNumber() {
return imeiNumber;
}
public void setImeiNumber(String imeiNumber) {
this.imeiNumber = imeiNumber;
}
public String getMobileBrand() {
return mobileBrand;
}
public void setMobileBrand(String mobileBrand) {
this.mobileBrand = mobileBrand;
}
public double getMobilePrice() {
return mobilePrice;


Qualifier Assessment The Phone
https://cognizant.tekstac.com/mod/vpl/forms/edit.php?id=111076&userid=137159#
File List
Save All
Compile & Run
Evaluate
Reset
Restore
Description
File list
ThePhoneZone
src
MobileInfo.j
UserInterfa
MobileInfo.java
UserInterface.java
this.mobileBrand = mobileBrand;
this.mobilePrice = mobilePrice;
}
public String getMobileName() {
return mobileName;
}
public void setMobileName(String mobileName) {
this.mobileName = mobileName;
}
public String getImeiNumber() {
return imeiNumber;
}
public void setImeiNumber(String imeiNumber) {
this.imeiNumber = imeiNumber;
}
public String getMobileBrand() {
return mobileBrand;
}
public void setMobileBrand(String mobileBrand) {
this.mobileBrand = mobileBrand;
}
public double getMobilePrice() {
return mobilePrice;
}
public void setMobilePrice(double mobilePrice) {
this.mobilePrice = mobilePrice;
}
public double calculateMobilePriceToBePaid()
{
//Fill the code
return 0;
}
}


Qualifier Assessment The Phone
https://cognizant.tekstac.com/mod/vpl/forms/edit.php?id=111076&userid=137159#
File List
Save All
Compile & Run
Evaluate
Reset
Restore
Description
File list
ThePhoneZone
src
MobileInfo.j
UserInterfa
MobileInfo.java
UserInterface.java
import java.util.Scanner;
public class UserInterface {
public static MobileInfo extractDetails(String mobileDetails)
{
//Fill the code
return null;
}
public static void main(String args[]) {
Scanner sc=new Scanner(System.in);
//Fill the code
}
}
137159
137159
137159
https://cognizant.tekstac.com/mod/vpl/forms/edit.php?id=111076&userid=137159#vpl_fi...