Elite Construction(---RETIRED---)

Grade settings: Maximum grade: 100
Disable external file upload, paste and drop external content: Yes
Based on: Elite Construction(---RETIRED---)
Run: Yes **Evaluate**: Yes
Automatic grade: Yes

Elite construction is one of the famous Building construction companies in the city. They wanted to calculate the amount to be paid by their customers based on the construction type. The Manager has approached you to create software that would calculate the amount to be paid by the customers based on the construction type.

Component Specification: ProjectInfo

Type (Class)	Attributes	Methods
ProjectInfo	String projectId String constructionType int totalSquareFeet Date dateOfRegistration Date dateOfCompletion	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 Project and create an object for ProjectInfo class.

Type (Class)	Methods	Responsibilities
UserInterface	public static ProjectInfo **extractDetails** (String projectDetails)	This method accepts **projectDetails** separated by the colon as an argument and extracts the properties of the **ProjectInfo** from the argument. Set these values to the **ProjectInfo** object and return this object. ***Condition:*** *Use date format (dd/MM/yyyy)*

Functional Requirement 2: Calculate the amount to be paid by the customer based on the constructionType.

Type (Class)	Methods	Responsibilities
ProjectInfo	public double **calculateAmountToBePaid**()	This method is used to calculate the amount to be paid by the customer. If the constructionType is **WoodFrame**, the cost per square feet is **1200**. If the constructionType is **LightGaugeSteel**, the cost per square feet is **850**. If the constructionType is **SteelFrame,** the cost per square feet is **900**. If the constructionType is **ConcreteFrame**, the cost per square feet is **750**. If the constructionType is **PreEngineered**, the cost per square feet is **1300**. ***Condition****:* • ***constructionType*** *is case-insensitive.* • *If the* ***constructionType*** *is invalid, the method should return -1.* • *If the* ***totalSquareFeet*** *is less than or equal to zero, the method should return -1.*

Formula to calculate the amount to be paid:

Amount to be paid = totalSquareFeet * cost per square feet (based on the constructionType)

For Example

If the constructionType = SteelFrame and totalSquareFeet = 500

(for SteelFrame, costPerSquareFeet is 900, hence)

Amount to be paid = 900 * 500 = 450000.0

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 Project Details

PRO872:ConcreteFrame:450:16/07/2021:04/06/2022

Project Id : PRO872

Construction Type : ConcreteFrame

Total Square Feet : 450

Date Of Registration : 16/07/2021

Date Of Completion : 04/06/2022

Amount to be paid by the Customer : 337500.0

Sample Input / Output 2:

Enter Project Details

PRO176:Malls:780:07/06/2021:09/05/2022

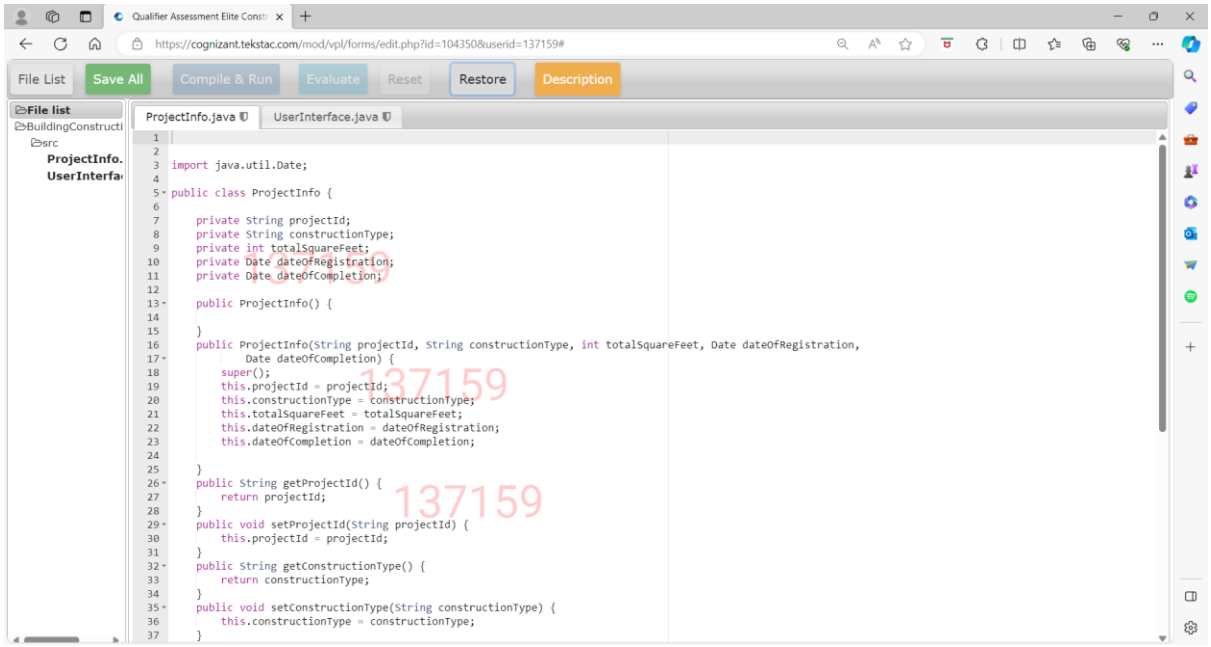
Invalid Project Details

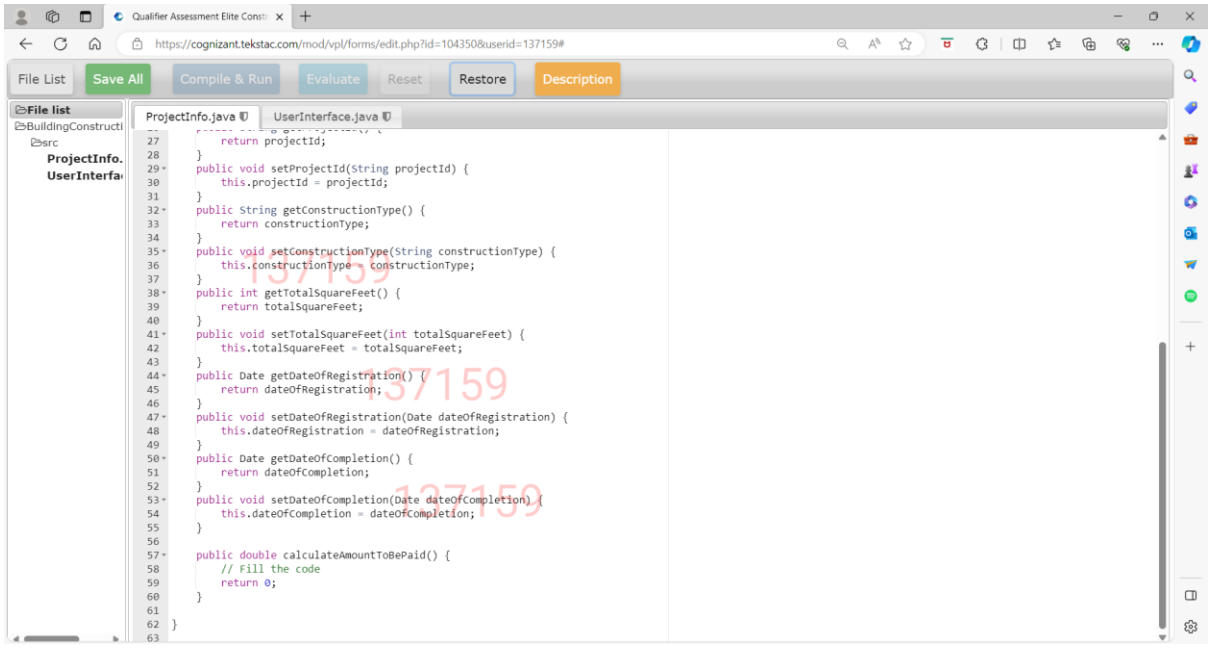
Sample Input / Output 3:

Enter Project Details

PRO237:PreEngineered:-7:08/03/2022:09/12/2022

Invalid Project Details

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BuildingConstructI
src
ProjectInfo.
UserInterfa
ProjectInfo.java
UserInterface.java
return projectId;
}
public void setProjectId(String projectId) {
this.projectId = projectId;
}
public String getConstructionType() {
return constructionType;
}
public void setConstructionType(String constructionType) {
this.constructionType = constructionType;
}
public int getTotalSquareFeet() {
return totalSquareFeet;
}
public void setTotalSquareFeet(int totalSquareFeet) {
this.totalSquareFeet = totalSquareFeet;
}
public Date getDateOfRegistration() {
return dateOfRegistration;
}
public void setDateOfRegistration(Date dateOfRegistration) {
this.dateOfRegistration = dateOfRegistration;
}
public Date getDateOfCompletion() {
return dateOfCompletion;
}
public void setDateOfCompletion(Date dateOfCompletion) {
this.dateOfCompletion = dateOfCompletion;
}
public double calculateAmountToBePaid() {
// Fill the code
return 0;
}
}
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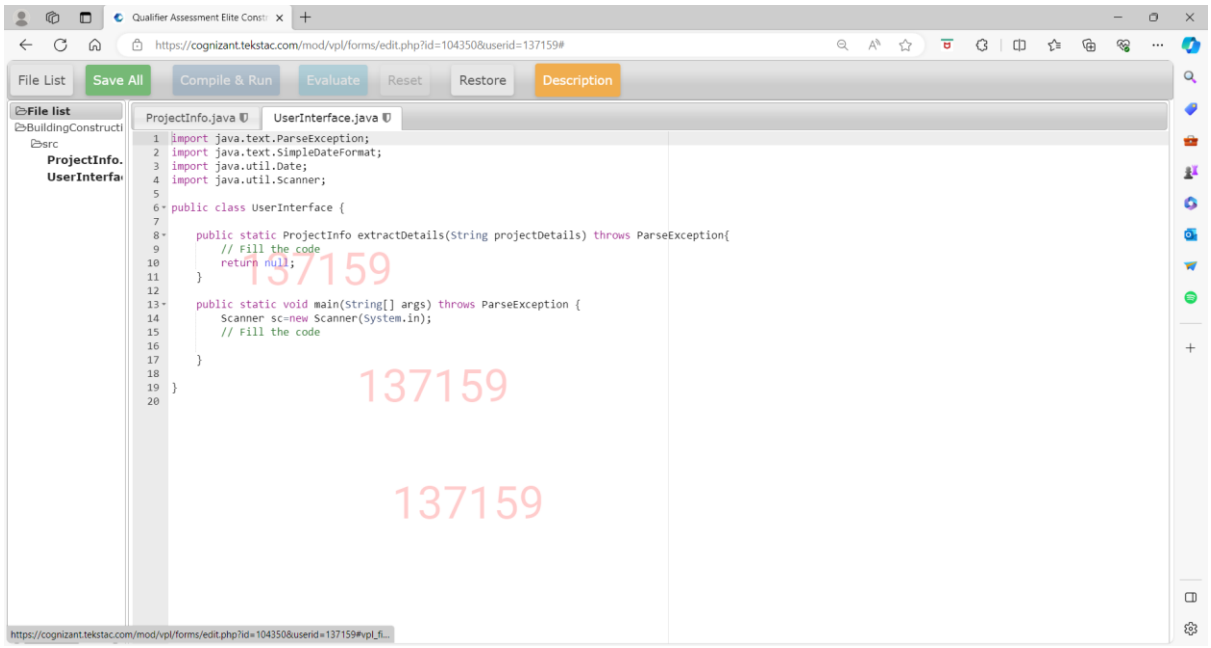
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Save All
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Reset
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Description
File list
BuildingConstructI
src
ProjectInfo.
UserInterfa
ProjectInfo.java
UserInterface.java
import java.text.ParseException;
import java.text.SimpleDateFormat;
import java.util.Date;
import java.util.Scanner;
public class UserInterface {
public static ProjectInfo extractDetails(String projectDetails) throws ParseException{
// Fill the code
return null;
}
public static void main(String[] args) throws ParseException {
Scanner sc=new Scanner(System.in);
// Fill the code
}
}
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