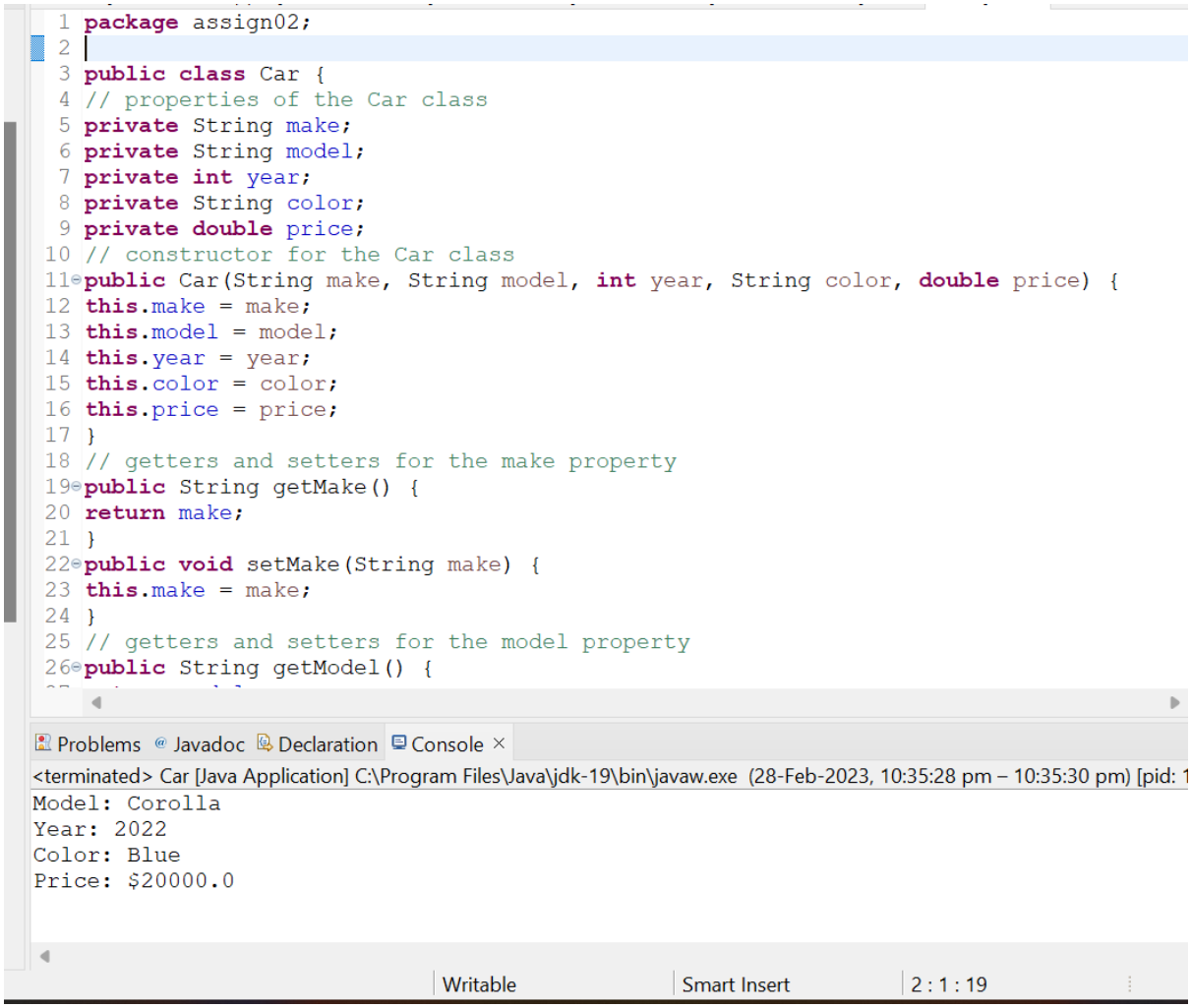
Assignment 2

1. Create a class called "Car" that has the following properties: make, model, year, color, and price. Include a constructor and getter and setter methods for each property.



```
1  package assign02;
2
3  public class Car {
4  // properties of the Car class
5  private String make;
6  private String model;
7  private int year;
8  private String color;
9  private double price;
10 // constructor for the Car class
11 public Car(String make, String model, int year, String color, double price) {
12 this.make = make;
13 this.model = model;
14 this.year = year;
15 this.color = color;
16 this.price = price;
17 }
18 // getters and setters for the make property
19 public String getMake() {
20 return make;
21 }
22 public void setMake(String make) {
23 this.make = make;
24 }
25 // getters and setters for the model property
26 public String getModel() {
```

Problems Javadoc Declaration Console

```
<terminated> Car [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (28-Feb-2023, 10:35:28 pm – 10:35:30 pm) [pid: 1
Model: Corolla
Year: 2022
Color: Blue
Price: $20000.0
```

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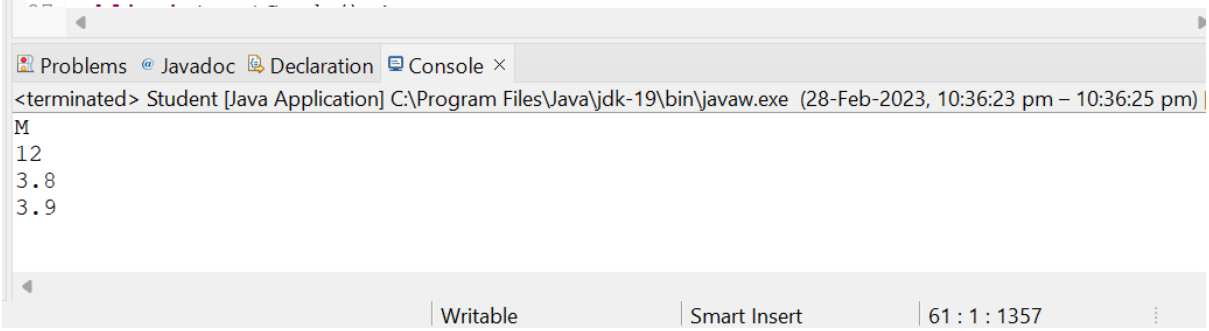
Codeshare link :

https://codeshare.io/DZEw6p

2. Create a class called "Student" that has the following properties: name, age, gender, grade, and GPA. Include a constructor and getter and setter methods for each property.

```java
package assign02;

public class Student {
private String name;
private int age;
private char gender;
private int grade;
private double GPA;
// Constructor
public Student(String name, int age, char gender, int grade, double GPA) {
this.name = name;
this.age = age;
this.gender = gender;
this.grade = grade;
this.GPA = GPA;
}
// Getters
public String getName() {
return name;
}
public int getAge() {
return age;
}
public char getGender() {
return gender;
}
```



Codeshare link :

https://codeshare.io/QnELzw

3. Create a class called "Circle" that has the following properties: radius, diameter, and area. Include a constructor and methods to calculate the diameter and area of the circle.

```java
package assign02;

public class circle {
private double radius;
private double diameter;
private double area;
// Constructor
public circle(double radius) {
this.setRadius(radius);
this.diameter = radius * 2;
this.area = Math.PI * radius * radius;
}
// Method to calculate diameter
public double calculateDiameter() {
return diameter;
}
// Method to calculate area
public double calculateArea() {
return area;
}
// Main function for testing
public static void main(String[] args) {
circle circle1 = new circle(5);
System.out.println(circle1.calculateDiameter()); // Output: 10.0
System.out.println(circle1.calculateArea()); // Output: 78.53981633974483
}
```

Problems Javadoc Declaration Console ×

```
<terminated> circle [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (28-Feb-2023, 10:39:03 pm – 10:39:03 pm) [p
10.0
78.53981633974483
```

Codeshare link :

https://codeshare.io/lonExj

4. Create a class called "Rectangle" that has the following properties: length, width, and area. Include a constructor and a method to calculate the area of the rectangle.

```java
package assign02;

public class Rectangle {
private double length;
private double width;
private double area;
// Constructor
public Rectangle(double length, double width) {
this.setLength(length);
this.setWidth(width);
this.area = length * width;
}
// Method to calculate area
public double calculateArea() {
return area;
}
// Main function for testing
public static void main(String[] args) {
Rectangle rectangle1 = new Rectangle(5, 10);
System.out.println(rectangle1.calculateArea()); // Output: 50.0
}
public double getLength() {
    return length;
}
public void setLength(double length) {
    this.length = length;
```

Problems Javadoc Declaration Console

```
<terminated> Rectangle [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe  (28-Feb-2023, 10:40:46 pm – 10:40:49 pm)
50.0
```

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Codeshare link :

https://codeshare.io/VZEQ4Q

5. Create a class called "BankAccount" that has the following properties: account number, account balance, account holder name, and account type. Include a constructor and methods to deposit and withdrawmoney from the account.

```java
package assign02;
public class BankAccount {
private String accountNumber;
private double accountBalance;
private String accountHolderName;
private String accountType;
// Constructor
public BankAccount(String accountNumber, double accountBalance, String accountHold
this.setAccountNumber(accountNumber);
this.accountBalance = accountBalance;
this.setAccountHolderName(accountHolderName);
this.setAccountType(accountType);
}
// Method to deposit money
public void deposit(double amount) {
accountBalance += amount;
}
// Method to withdraw money
public void withdraw(double amount) {
if (accountBalance >= amount) {
accountBalance -= amount;
} else {
System.out.println("Insufficient funds!");
}
}
// Main function for testing
```

Problems Javadoc Declaration Console ×

```
<terminated> BankAccount [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (28-Feb-2023, 10:42:37 pm – 10:42:39 p
1500.0
Insufficient funds!
1000.0
```

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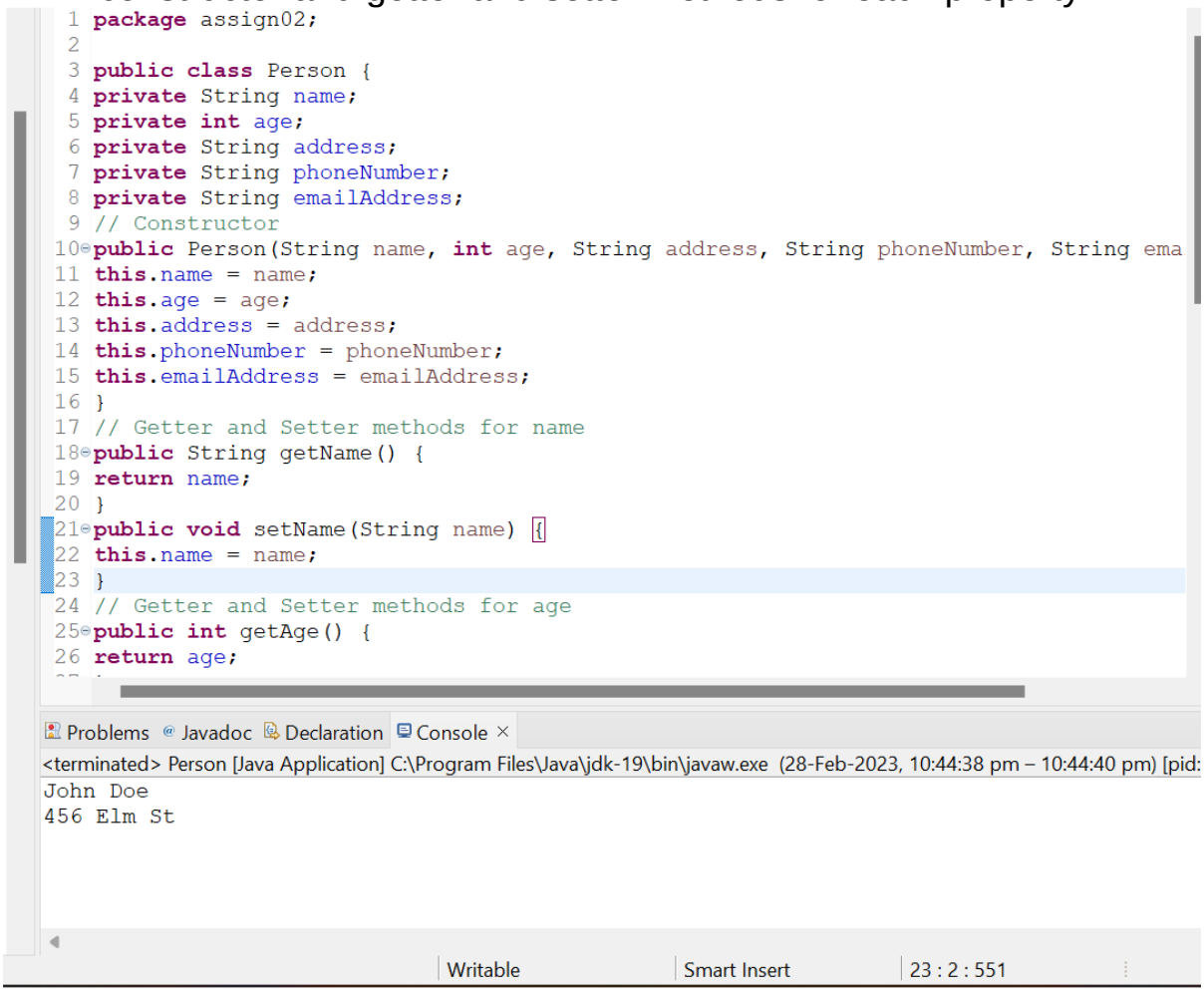
Codeshare link :

https://codeshare.io/pqkEx4

6. Create a class called "Person" that has the following properties: name, age, address, phone number, and email address. Include a constructor and getter and setter methods for each property.



```
1 package assign02;
2
3 public class Person {
4 private String name;
5 private int age;
6 private String address;
7 private String phoneNumber;
8 private String emailAddress;
9 // Constructor
10 public Person(String name, int age, String address, String phoneNumber, String ema
11 this.name = name;
12 this.age = age;
13 this.address = address;
14 this.phoneNumber = phoneNumber;
15 this.emailAddress = emailAddress;
16 }
17 // Getter and Setter methods for name
18 public String getName() {
19 return name;
20 }
21 public void setName(String name) {
22 this.name = name;
23 }
24 // Getter and Setter methods for age
25 public int getAge() {
26 return age;
```

```
Problems  Javadoc  Declaration  Console ×
<terminated> Person [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe  (28-Feb-2023, 10:44:38 pm – 10:44:40 pm) [pid:
John Doe
456 Elm St
```

```
Writable | Smart Insert | 23 : 2 : 551
```

Codeshare link :

https://codeshare.io/wnvE8P

7. Create a class called "Animal" that has the following properties: name, species, age, and weight. Include a constructor and getter and setter methods for each property.

```java
package assign02;
public class Animal {
private String name;
private String species;
private int age;
private double weight;
// Constructor
public Animal(String name, String species, int age, double weight) {
this.name = name;
this.species = species;
this.age = age;
this.weight = weight;
}
// Getter and Setter methods for name
public String getName() {
return name;
}
public void setName(String name) {
this.name = name;
}
// Getter and Setter methods for species
public String getSpecies() {
return species;
}
public void setSpecies(String species) {
this.species = species;
```

Problems Javadoc Declaration Console

```
<terminated> Animal [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (28-Feb-2023, 10:49:31 pm – 10:49:36 pm) [p
Fluffy
11.0
```

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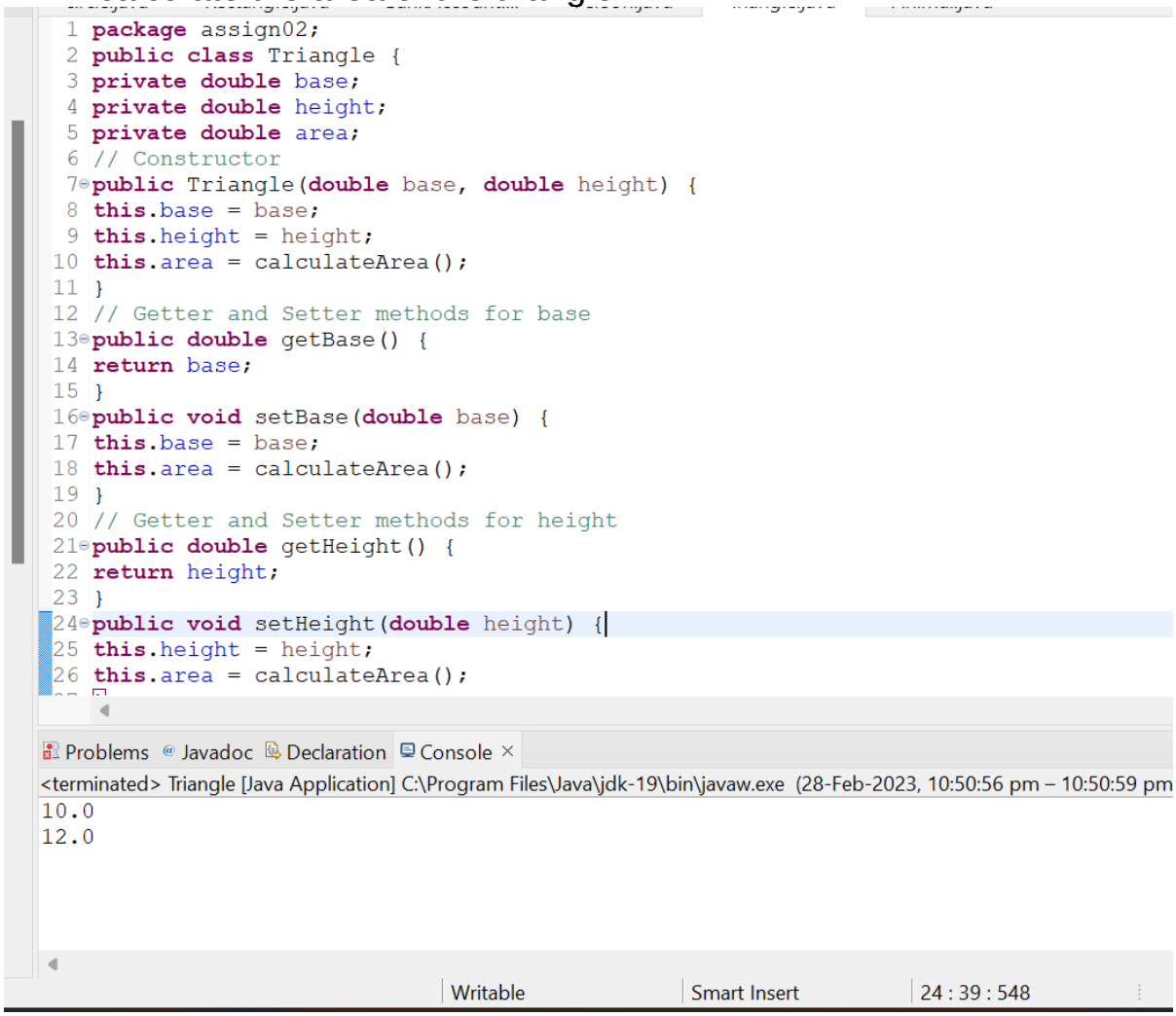
Codeshare link :

https://codeshare.io/nzoMO3

8. Create a class called "Triangle" that has the following properties: base, height, and area. Include a constructor and a method to calculate the area of the triangle.



```java
package assign02;
public class Triangle {
private double base;
private double height;
private double area;
// Constructor
public Triangle(double base, double height) {
this.base = base;
this.height = height;
this.area = calculateArea();
}
// Getter and Setter methods for base
public double getBase() {
return base;
}
public void setBase(double base) {
this.base = base;
this.area = calculateArea();
}
// Getter and Setter methods for height
public double getHeight() {
return height;
}
public void setHeight(double height) {
this.height = height;
this.area = calculateArea();
```

Problems Javadoc Declaration Console

<terminated> Triangle [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (28-Feb-2023, 10:50:56 pm – 10:50:59 pm

```
10.0
12.0
```

Writable Smart Insert 24 : 39 : 548

Codeshare link :

https://codeshare.io/r9lEwE

9. Create a class called "Employee" that has the following properties: name, employee ID, department, job title, and salary. Include a constructor and getter and setter methods for each property.

```java
package assign02;

public class Employee {
private String name;
private int employeeID;
private String department;
private String jobTitle;
private double salary;
// Constructor
public Employee(String name, int employeeID, String department, String jobTitle, d
this.name = name;
this.employeeID = employeeID;
this.department = department;
this.jobTitle = jobTitle;
this.salary = salary;
}
// Getter and Setter methods for name
public String getName() {
return name;
}
public void setName(String name) {
this.name = name;
}
// Getter and Setter methods for employeeID
public int getEmployeeID() {
return employeeID;
```

Problems Javadoc Declaration Console

```
<terminated> Employee [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (28-Feb-2023, 10:52:29 pm – 10:52:32 pm)
John Smith
50000.0
55000.0
```

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Codeshare link :

https://codeshare.io/1Y89Kz

10. Create a class called "Address" that has the following properties: street, city, state, zip code, and country. Include a constructor and getter and setter methods for each property.

```java
package assign02;
public class Address {
private String street;
private String city;
private String state;
private String zipCode;
private String country;
// Constructor
public Address(String street, String city, String state, String zipCode, String co
this.street = street;
this.city = city;
this.state = state;
this.zipCode = zipCode;
this.country = country;
}
// Getter and Setter methods for street
public String getStreet() {
return street;
}
public void setStreet(String street) {
this.street = street;
}
// Getter and Setter methods for city
public String getCity() {
return city;
}
```

Problems Javadoc Declaration Console

```
<terminated> Address [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (28-Feb-2023, 10:57:51 pm – 10:57:53 pm) [pi
Anytown
12345
67890
```

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Codeshare link :

https://codeshare.io/BA7Qlm