

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.

Code: <https://codeshare.io/8plkbv>

```
46 // getters and setters for the price property
47 public double getPrice() {
48     return price;
49 }
50 public void setPrice(double price) {
51     this.price = price;
52 }
53 public static void main(String[] args) {
54     // Create a new Car object
55     car myCar = new car("Maruti", "Ciaz", 2022, "White", 1300000.0);
56     // Set the color of the car
57     myCar.setColor("Blue");
58     // Print out the make, model, year, color, and price of the car
59     System.out.println("Make: " + myCar.getMake());
60     System.out.println("Model: " + myCar.getModel());
61     System.out.println("Year: " + myCar.getYear());
62     System.out.println("Color: " + myCar.getColor());
63     System.out.println("Price: rs " + myCar.getPrice());
64 }
65 }
66
```

Problems Javadoc Declaration Console ×

<terminated> car [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Mar 1, 2023, 6:22:05 AM – 6:22:08 AM) [pid: 3916]

Make: Maruti
Model: Ciaz
Year: 2022
Color: Blue
Price: rs 1300000.0

- 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.

Code: <https://codeshare.io/mpbXAj>

```
41     this.gender = gender;
42     }
43     public void setGrade(int grade) {
44         this.grade = grade;
45     }
46     public void setGPA(double GPA) {
47         this.GPA = GPA;
48     }
49     // Main function for testing
50     public static void main(String[] args) {
51         Student student1 = new Student("modi", 19, 'M', 11, 4.1);
52         System.out.println(student1.getName());
53         System.out.println(student1.getAge());
54         System.out.println(student1.getGender());
55         System.out.println(student1.getGrade());
56         System.out.println(student1.getGPA());
57         student1.setGPA(2.9); // set GPA to 2.9
58         System.out.println(student1.getGPA());
59     }
60 }
61
```

Problems Javadoc Declaration Console ×

<terminated> Student [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Mar 1, 2023, 6:27:56 AM – 6:27:58 AM) [pid: 4732]

modi
19
M
11
4.1
2.9

- 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.

Code: <https://codeshare.io/0gve6l>

```
1 package as7;
2
3 public class circle {
4     private double radius;
5     private double diameter;
6     private double area;
7     // Constructor
8     public circle(double radius) {
9         this.setRadius(radius);
10        this.diameter = radius * 2;
11        this.area = Math.PI * radius * radius;
12    }
13    // Method to calculate diameter
14    public double calculateDiameter() {
15        return diameter;
16    }
17    // Method to calculate area
18    public double calculateArea() {
19        return area;
20    }
21    // Main function for testing
```

Problems Javadoc Declaration Console ×

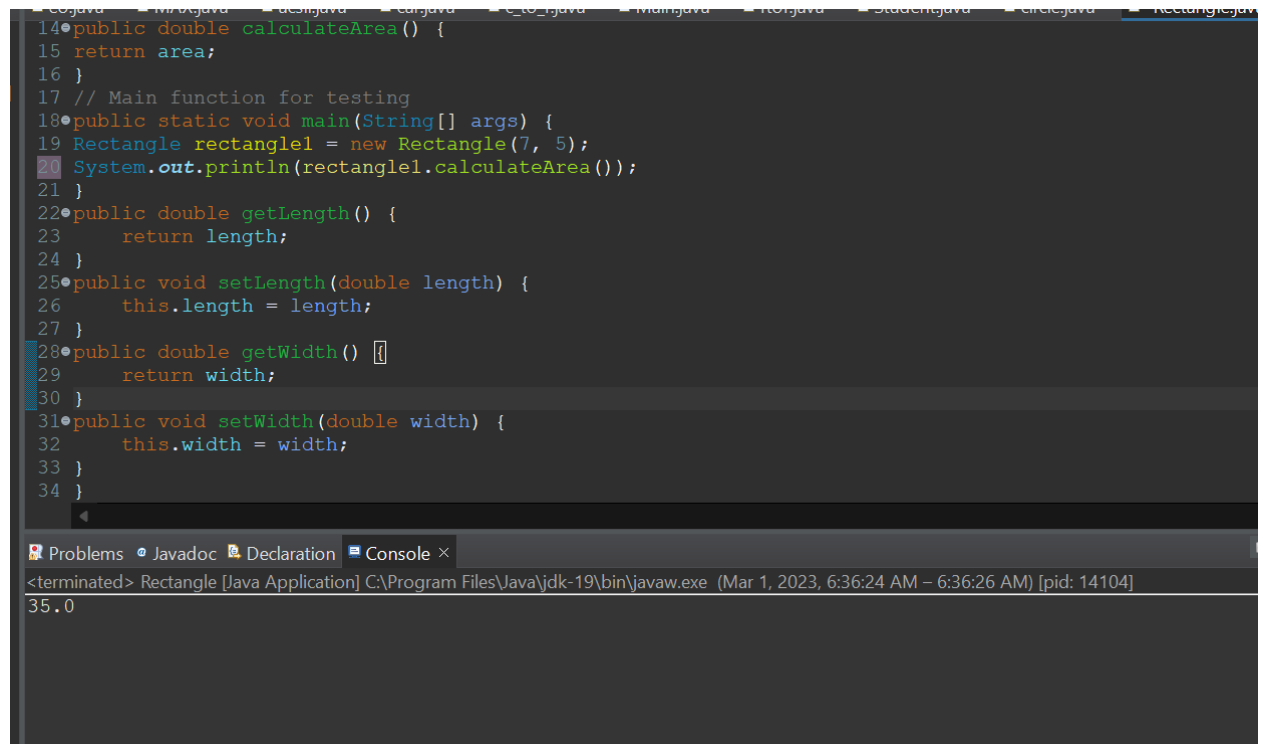
<terminated> circle [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Mar 1, 2023, 6:32:07 AM – 6:32:11 AM) [pid: 8016]

14.0

153.93804002589985

- 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.

Code: <https://codeshare.io/gL9vrR>



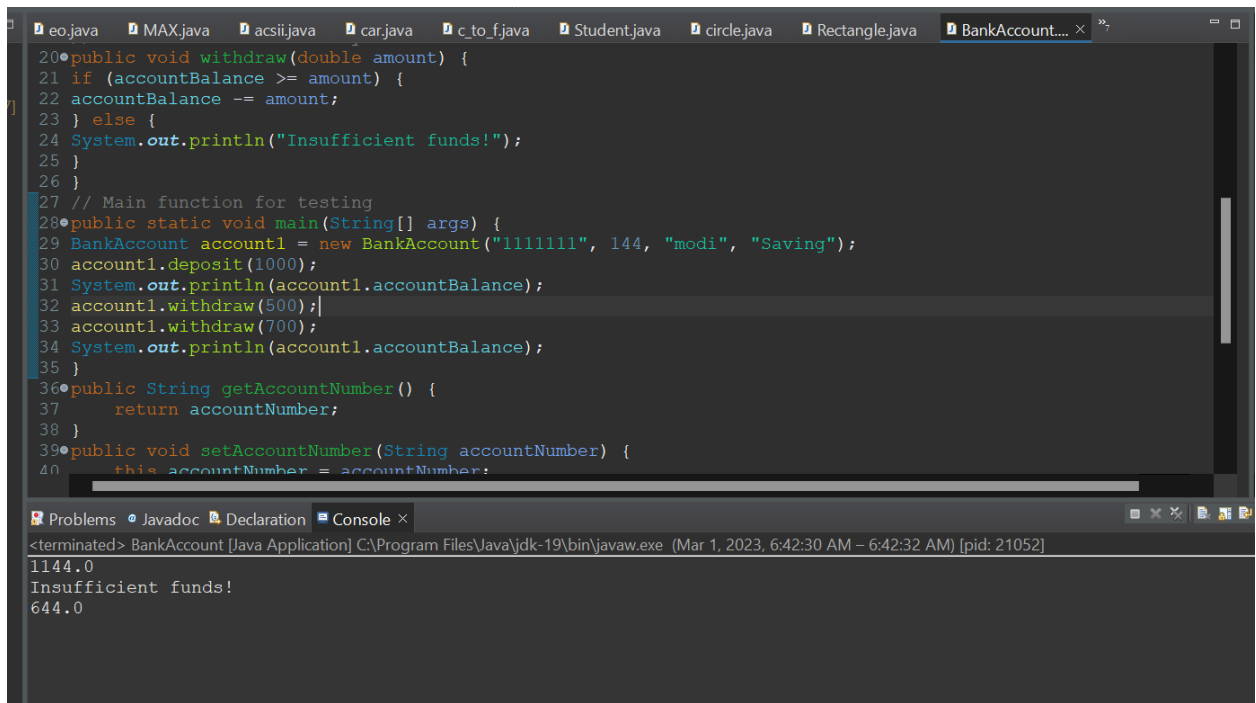
```
14 public double calculateArea() {
15     return area;
16 }
17 // Main function for testing
18 public static void main(String[] args) {
19     Rectangle rectangle1 = new Rectangle(7, 5);
20     System.out.println(rectangle1.calculateArea());
21 }
22 public double getLength() {
23     return length;
24 }
25 public void setLength(double length) {
26     this.length = length;
27 }
28 public double getWidth() {
29     return width;
30 }
31 public void setWidth(double width) {
32     this.width = width;
33 }
34 }
```

Problems Javadoc Declaration Console ×

<terminated> Rectangle [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Mar 1, 2023, 6:36:24 AM – 6:36:26 AM) [pid: 14104]
35.0

- 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 withdraw money from the account.

Code: <https://codeshare.io/YLE3vN>



The screenshot shows an IDE with a tab for `BankAccount.java`. The code defines a `BankAccount` class with attributes `accountNumber`, `accountBalance`, `accountHolderName`, and `accountType`. It includes a constructor and methods for `deposit` and `withdraw`. A `main` method tests the class by creating an account, depositing 1000, and then attempting to withdraw 500 and 700. The console output shows the initial balance of 1144.0, a message "Insufficient funds!" after the 700 withdrawal attempt, and a final balance of 644.0.

```
20 public void withdraw(double amount) {
21     if (accountBalance >= amount) {
22         accountBalance -= amount;
23     } else {
24         System.out.println("Insufficient funds!");
25     }
26 }
27 // Main function for testing
28 public static void main(String[] args) {
29     BankAccount account1 = new BankAccount("1111111", 144, "modi", "Saving");
30     account1.deposit(1000);
31     System.out.println(account1.accountBalance);
32     account1.withdraw(500);
33     account1.withdraw(700);
34     System.out.println(account1.accountBalance);
35 }
36 public String getAccountNumber() {
37     return accountNumber;
38 }
39 public void setAccountNumber(String accountNumber) {
40     this.accountNumber = accountNumber;
41 }
```

Problems | Javadoc | Declaration | Console ×

<terminated> BankAccount [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Mar 1, 2023, 6:42:30 AM – 6:42:32 AM) [pid: 21052]

1144.0
Insufficient funds!
644.0

- 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.

Code: <https://codeshare.io/wnv8w9>

```
42 }
43 public void setPhoneNumber(String phoneNumber) {
44     this.phoneNumber = phoneNumber;
45 }
46 // Getter and Setter methods for emailAddress
47 public String getEmailAddress() {
48     return emailAddress;
49 }
50 public void setEmailAddress(String emailAddress) {
51     this.emailAddress = emailAddress;
52 }
53 // Main function for testing
54 public static void main(String[] args) {
55     Person person1 = new Person("Modi", 50, "Bangalore", "4884884884", "modi@gmail.com");
56     System.out.println(person1.getName());
57     person1.setAddress("Mysore");
58     System.out.println(person1.getAddress());
59     System.out.println(person1.getPhoneNumber());
60 }
61 }
62
```

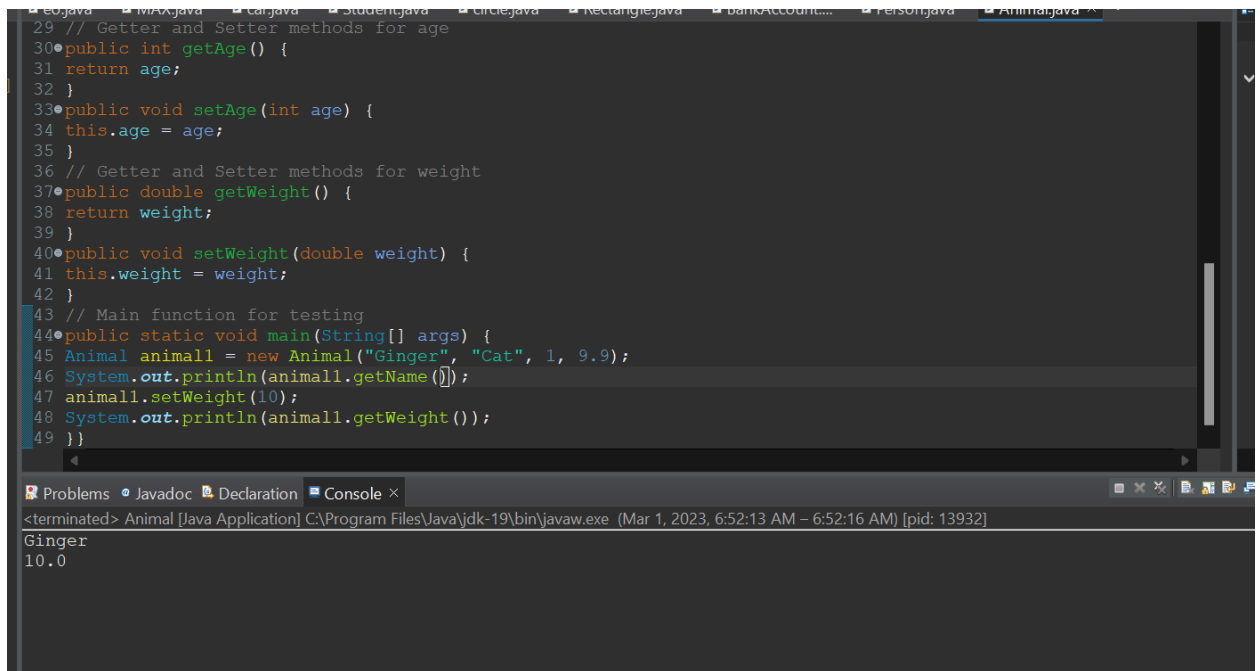
Problems Javadoc Declaration Console ×

<terminated> Person [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Mar 1, 2023, 6:48:14 AM – 6:48:16 AM) [pid: 20516]

Modi
Mysore
4884884884

- 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.

Code: <https://codeshare.io/8plk0v>



```
29 // Getter and Setter methods for age
30 public int getAge() {
31     return age;
32 }
33 public void setAge(int age) {
34     this.age = age;
35 }
36 // Getter and Setter methods for weight
37 public double getWeight() {
38     return weight;
39 }
40 public void setWeight(double weight) {
41     this.weight = weight;
42 }
43 // Main function for testing
44 public static void main(String[] args) {
45     Animal animall = new Animal("Ginger", "Cat", 1, 9.9);
46     System.out.println(animall.getName());
47     animall.setWeight(10);
48     System.out.println(animall.getWeight());
49 }
```

Problems Javadoc Declaration Console ×

<terminated> Animal [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Mar 1, 2023, 6:52:13 AM – 6:52:16 AM) [pid: 13932]

Ginger
10.0

- 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.

Code: <https://codeshare.io/LwEOQb>

```
25 public void setHeight(double height) {
26     this.height = height;
27     this.area = calculateArea();
28 }
29 // Getter method for area
30 public double getArea() {
31     return area;
32 }
33 // Method to calculate the area of the triangle
34 public double calculateArea() {
35     return 0.5 * base * height;
36 }
37 // Main function for testing
38 public static void main(String[] args) {
39     Triangle triangle1 = new Triangle(6.0, 9.0);
40     System.out.println(triangle1.getArea());
41     triangle1.setHeight(7.0);
42     System.out.println(triangle1.getArea());
43 }
44 }
45
```

Problems Javadoc Declaration Console ×

<terminated> Triangle [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Mar 1, 2023, 6:57:02 AM – 6:57:04 AM) [pid: 12516]

27.0
21.0

- 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.

Code: <https://codeshare.io/MNEz6Q>

```
41 }
42 public void setJobTitle(String jobTitle) {
43     this.jobTitle = jobTitle;
44 }
45 // Getter and Setter methods for salary
46 public double getSalary() {
47     return salary;
48 }
49 public void setSalary(double salary) {
50     this.salary = salary;
51 }
52 // Main function for testing
53 public static void main(String[] args) {
54     Employee employee1 = new Employee("Modi", 1001, "Accounting", "Accountant", 60000.0);
55     System.out.println(employee1.getName());
56     System.out.println(employee1.getSalary());
57     employee1.setSalary(55000.0);
58     System.out.println(employee1.getSalary());
59 }
60 }
61
```

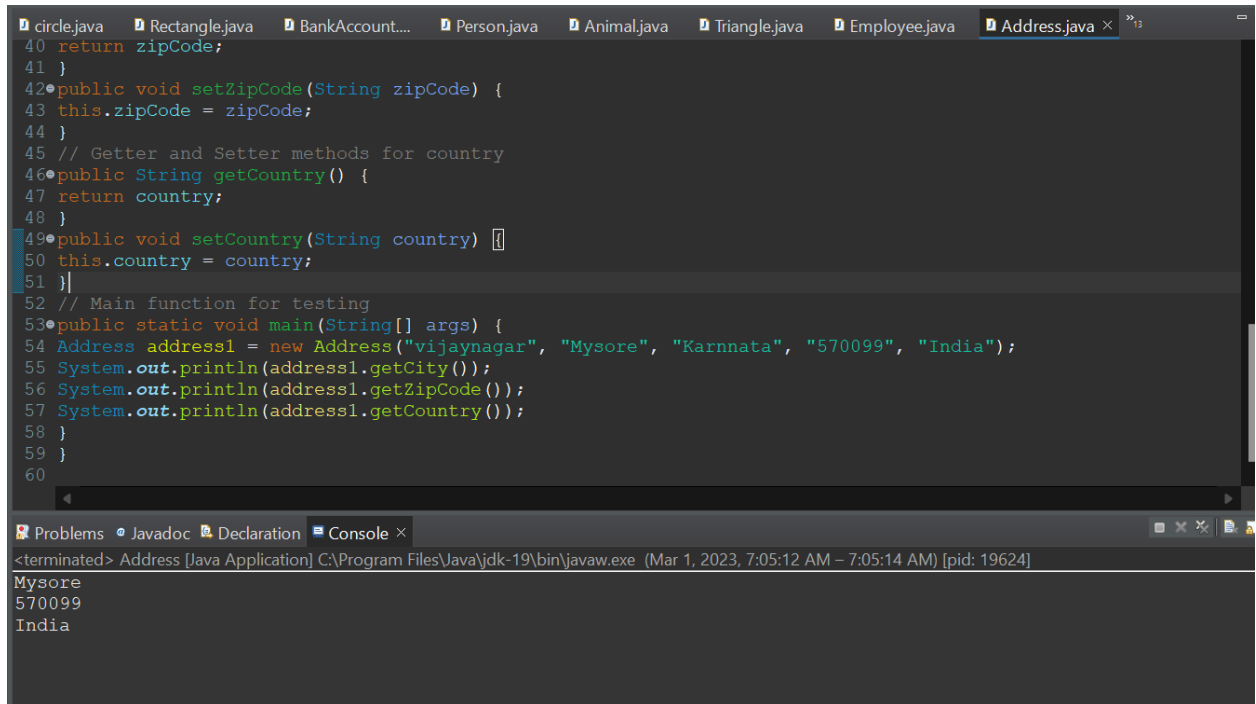
Problems Javadoc Declaration Console ×

<terminated> Employee [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Mar 1, 2023, 7:00:54 AM – 7:00:56 AM) [pid: 18852]

Modi
60000.0
55000.0

- 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.

Code: <https://codeshare.io/9OLxeX>



```
40 return zipCode;
41 }
42 public void setZipCode(String zipCode) {
43     this.zipCode = zipCode;
44 }
45 // Getter and Setter methods for country
46 public String getCountry() {
47     return country;
48 }
49 public void setCountry(String country) {
50     this.country = country;
51 }
52 // Main function for testing
53 public static void main(String[] args) {
54     Address address1 = new Address("vijaynagar", "Mysore", "Karnnata", "570099", "India");
55     System.out.println(address1.getCity());
56     System.out.println(address1.getZipCode());
57     System.out.println(address1.getCountry());
58 }
59 }
60
```

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<terminated> Address [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Mar 1, 2023, 7:05:12 AM – 7:05:14 AM) [pid: 19624]

Mysore
570099
India