B.Hanumanthu-ISTE60

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.

```
import java.util.Scanner;
class Car{
	private String make, model, color;
	private int year;
	private double price;

	public void setMake(String make){
this.make = make;
	}
	public String getMake(){
		return make;
	}
	public void setModel(String model){
this.model = model;
	}
	public String getModel(){
		return model;
	}
	public void setColor(String color){
this.color = color;
	}
	public String getColor(){
		return color;
	}
	public void setYear(int year){
this.year = year;
	}
	public int getYear(){
		return year;
	}
	public void setPrice(double price){
this.price = price;
	}
	public double getPrice(){
		return price;
	}
```

```
}
public class TestCar{
	static public void main(String args[]){
		Scanner s = new Scanner(System.in);
		Car c = new Car();
System.out.print("Enter the Car Manufacturer: ");
		String make = s.nextLine();
System.out.print("Enter the Car Model: ");
		String model = s.nextLine();
System.out.print("Enter the Color: ");
		String color = s.nextLine();
System.out.print("Enter the Year: ");
		int year = s.nextInt();
System.out.print("Enter the Price: ");
		double price = s.nextDouble();
c.setMake(make);
c.setModel(model);
c.setColor(color);
c.setYear(year);
c.setPrice(price);
System.out.println("Printing Car Details: ");
System.out.println("Manufacturer: "+c.getMake());
System.out.println("Model: "+c.getModel());
System.out.println("Color: "+c.getColor());
System.out.println("Year: "+c.getYear());
System.out.println("Price: "+c.getPrice());
	}
}
```

```
D:\Java>javac TestCar.java

D:\Java>java TestCar
Enter the Car Manufacturer: Toyota
Enter the Car Model: Crysta
Enter the Color: White
Enter the Year: 2022
Enter the Price: 1985632
Printing Car Details:
Manufacturer: Toyota
Model: Crysta
Color: White
Year: 2022
Price: 1985632.0

D:\Java>
```

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.

```
import java.util.Scanner;
class Student{
	private String name, gender, grade;
	private int age;
	private float gpa;
	public String getName() {
	   return name;
	}
	public void setName(String name) {
	   this.name = name;
	}
	public String getGender() {
	   return gender;
	}
	public void setGender(String gender) {
this.gender = gender;
	}
	public String getGrade() {
	   return grade;
	}
	public void setGrade(String grade) {
this.grade = grade;
	}
	public int getAge() {
	   return age;
	}
	public void setAge(int age) {
this.age = age;
	}
	public float getGpa() {
	   return gpa;
	}
	public void setGpa(float gpa) {
this.gpa = gpa;
	}

}
```

```
public class TestStudent {
   static public void main(String args[]){
      Scanner s = new Scanner(System.in);
      Student s1 = new Student();
System.out.print("Enter the Student Name: ");
      String name = s.nextLine();
System.out.print("Enter the Gender: ");
      String gender = s.nextLine();
System.out.print("Enter the Grade: ");
      String grade = s.nextLine();
System.out.print("Enter the Age: ");
      int age = s.nextInt();
System.out.print("Enter the GPA: ");
      float gpa = s.nextFloat();
      s1.setName(name);
      s1.setAge(age);
      s1.setGender(gender);
      s1.setGrade(grade);
      s1.setGpa(gpa);
System.out.println("Displaying student details: ");
System.out.println("Name: "+s1.getName());
System.out.println("Age: "+s1.getAge());
System.out.println("Gender: "+s1.getGender());
System.out.println("Grade: "+s1.getGrade());
System.out.println("GPA: "+s1.getGpa());

   }
}
```

```
D:\Java>javac TestStudent.java

D:\Java>java TestStudent
Enter the Student Name: ABCD
Enter the Gender: M
Enter the Grade: 11
Enter the Age: 18
Enter the GPA: 7.2
Displaying student details:
Name: ABCD
Age: 18
Gender: M
Grade: 11
GPA: 7.2
```

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.

```
import java.util.Scanner;
class Circle{
   private double radius;
   private double area;
   public void setRadius(double radius) {
this.radius = radius;
   }
   public double getArea() {
      area = 3.14*radius*radius;
      return area;
   }
}
public class TestCircle {
   public static void main(String args[]){
      Scanner s = new Scanner(System.in);
System.out.print("Enter the Radius of the circle: ");
      double radius = s.nextDouble();
      Circle c = new Circle();
c.setRadius(radius);
System.out.println("Area of the Circle: "+c.getArea());
   }
}
```

```
D:\Java>javac TestCircle.java

D:\Java>java TestCircle
Enter the Radius of the circle: 5
Area of the Circle: 78.5

D:\Java>
```

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.

```
import java.util.Scanner;
class Rectangle{
   private int length, width;
```

```
   public void setLength(int length) {
this.length = length;
   }

   public void setWidth(int width) {
this.width = width;
   }

   public int getArea(){
      return (2*length*width);
   }

}
public class TestRectangle {
   static public void main(String args[]){
      Scanner s = new Scanner(System.in);
System.out.print("Enter the Length and Width of the Rectangle: ");
      int length = s.nextInt();
      int width = s.nextInt();
      Rectangle r1 = new Rectangle();
      r1.setLength(length);
      r1.setWidth(width);
System.out.println("Area of Rectangle: "+r1.getArea());

   }
```

```
D:\Java>javac TestRectangle.java

D:\Java>java TestRectangle
Enter the Length and Width of the Rectangle: 2 5
Area of Rectangle: 20

D:\Java>
```

```
}
```

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.

```
import java.util.Scanner;


class BankAccount{
```

```
   private long AccNo;
   private String AccName, AccType;
   private double AccBal;
BankAccount(long AccNo, String AccName, String AccType, double AccBal){
this.AccNo = AccNo;
this.AccName = AccName;
this.AccType = AccType;
this.AccBal = AccBal;
System.out.println("Account No: "+AccNo);
System.out.println("Account Holder Name: "+AccName);
System.out.println("Account Type: "+AccType);
System.out.println("Account Initial Balance: "+AccBal);
   }
   public void Deposit(double amount){
AccBal+=amount;
System.out.println("Account Balance After the Deposit: "+AccBal);
   }
   public void WithDraw(double amount){
AccBal-=amount;
System.out.println("Account Balance after the WithDrawl: "+AccBal);
   }
}
public class TestBank{
   static public void main(String args[]){
      Scanner s = new Scanner(System.in);
      long AccNo;
      String AccName, AccType;
      double AccBal,amount;
```

```
System.out.print("Enter the Account Holder Name: ");
AccName = s.nextLine();
System.out.print("Enter the Account Type: ");
AccType = s.nextLine();
System.out.print("Enter the Account No: ");
AccNo = s.nextLong();

System.out.print("Enter the OPENING BALANCE: ");
AccBal = s.nextDouble();
BankAccount b = new BankAccount(AccNo, AccName, AccType, AccBal);

System.out.print("Enter the DEPOSIT AMOUNT: ");
      amount = s.nextDouble();
b.Deposit(amount);

System.out.print("Enter the WITHDRAWL AMOUNT: ");
      amount = s.nextDouble();
b.WithDraw(amount);
   }
}
```

```
D:\Java>javac TestBank.java

D:\Java>java TestBank
Enter the Account Holder Name: ABCD
Enter the Account Type: Savings
Enter the Account No: 12365489551
Enter the OPENING BALANCE: 1200
Account No: 12365489551
Account Holder Name: ABCD
Account Type: Savings
Account Initial Balance: 1200.0
Enter the DEPOSIT AMOUNT: 3600
Account Balance After the Deposit: 4800.0
Enter the WITHDRAWL AMOUNT: 1000
Account Balance after the WithDrawl: 3800.0

D:\Java>
```

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.

```
import java.util.Scanner;
class Person{
   private String name;
   private int age;
   private String Address,emailAdd;
   private long Pno;
   public String getName() {
      return name;
   }
   public void setName(String name) {
      this.name = name;
   }
   public int getAge() {
      return age;
   }
   public void setAge(int age) {
this.age = age;
   }
   public String getAddress() {
      return Address;
   }
   public void setAddress(String address) {
```

```
      Address = address;
   }
   public String getEmailAdd() {
      return emailAdd;
   }
   public void setEmailAdd(String emailAdd) {
this.emailAdd = emailAdd;
   }
   public long getPno() {
      return Pno;
   }
   public void setPno(long pno) {
Pno = pno;
   }

}

public class TestPerson {
   public static void main(String args[]){
      Scanner s = new Scanner(System.in);
      String name, Address, emailAdd;
      int age;
      long Pno;


      Person p1 = new Person();
System.out.print("Enter the Name: ");
      name = s.nextLine();
System.out.print("Enter the Email Address:  ");
emailAdd = s.nextLine();
System.out.print("Enter the Address: ");
      Address = s.nextLine();
System.out.print("Enter the Age: ");
      age = s.nextInt();
System.out.print("Enter the Phone No: ");
Pno = s.nextLong();
      p1.setPno(Pno);
      p1.setName(name);
      p1.setEmailAdd(emailAdd);
      p1.setAddress(Address);
      p1.setAge(age);
```

```
System.out.println();
System.out.println("Person Details: ");
System.out.println("Name: "+p1.getName());
System.out.println("Age: "+p1.getAge());
System.out.println("Address: "+p1.getAddress());
System.out.println("Email ID: "+p1.getEmailAdd());
System.out.println("Phone No: "+p1.getPno());

   }
}
```

```
D:\Java>javac TestPerson.java

D:\Java>java TestPerson
Enter the Name: Person1
Enter the Email Address:  address@email.com
Enter the Address: Delhi
Enter the Age: 25
Enter the Phone No: 9988774455

Person Details:
Name: Person1
Age: 25
Address: Delhi
Email ID: address@email.com
Phone No: 9988774455

D:\Java>
```

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.

```
import java.util.Scanner;

class Animal{
   private String name, species;
   private int  age,weight;
   public String getName() {
      return name;
   }
   public void setName(String name) {
      this.name = name;
   }
   public String getSpecies() {
```

```
      return species;
   }
   public void setSpecies(String species) {
this.species = species;
   }
   public int getAge() {
      return age;
   }
   public void setAge(int age) {
this.age = age;
   }
   public int getWeight() {
      return weight;
   }
   public void setWeight(int weight) {
this.weight = weight;
   }


}
public class TestAnimal extends Animal{
   public static void main(String args[]){
      Scanner s = new Scanner(System.in);
System.out.print("Enter the Animal Name: ");
      String name = s.nextLine();
System.out.print("Enter the Species: ");
      String species = s.nextLine();
System.out.print("Enter the Animal Age: ");
      int age = s.nextInt();

System.out.println("Enter the Animal Weight: ");
      int weight = s.nextInt();
TestAnimal a = new TestAnimal();
a.setName(name);
a.setAge(age);
a.setSpecies(species);
a.setWeight(weight);
System.out.println("NAME: "+a.getName());
System.out.println("Age: "+a.getAge());
System.out.println("Species: "+a.getSpecies());
System.out.println("Weight: "+a.getWeight());
```

```
    }
}
```

```
D:\Java>javac TestAnimal.java

D:\Java>java TestAnimal
Enter the Animal Name: Leopard
Enter the Species: genus Panthera
Enter the Animal Age: 5
Enter the Animal Weight:
60
NAME: Leopard
Age: 5
Species: genus Panthera
Weight: 60

D:\Java>
```

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.

```
import java.util.Scanner;

class Triangle{
   private int base, height;

   public void setBase(int base) {
this.base = base;
   }

   public void setHeight(int height) {
this.height = height;
   }

   public int getArea(){
      return ((base*height)/2);
   }
}

public class TestTriangle {
   public static void main(String args[]){
      Scanner s = new Scanner(System.in);
      int base,height;
System.out.println("Enter the base and height of Triangle: ");
```

```
        base = s.nextInt();
        height = s.nextInt();
        Triangle t = new Triangle();
t.setBase(base);
t.setHeight(height);
System.out.println("Area of Triangle: "+t.getArea());

    }

}
```

```
D:\Java>javac TestTriangle.java

D:\Java>java TestTriangle
Enter the base and height of Triangle:
2 5
Area of Triangle: 5

D:\Java>
```

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.

```
import java.util.Scanner;

class Employee{
    private String name,dept,desig,EmpId;
    private float salary;
    public String getName() {
        return name;
    }
    public void setName(String name) {
        this.name = name;
    }
    public String getDept() {
        return dept;
    }
```

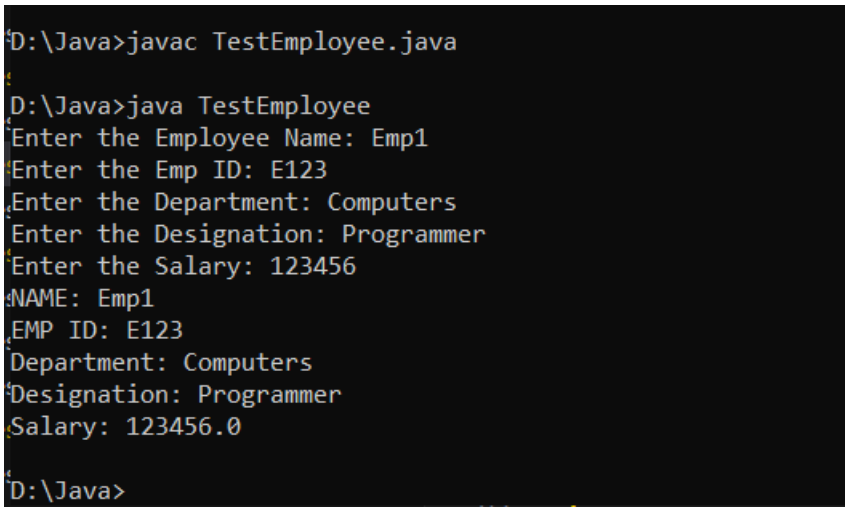
```
   public void setDept(String dept) {
this.dept = dept;
   }
   public String getDesig() {
      return desig;
   }
   public void setDesig(String desig) {
this.desig = desig;
   }
   public String getEmpId() {
      return EmpId;
   }
   public void setEmpId(String empId) {
EmpId = empId;
   }
   public float getSalary() {
      return salary;
   }
   public void setSalary(float salary) {
this.salary = salary;
   }

}
public class TestEmployee {
   public static void main(String args[]){
      Scanner s = new Scanner(System.in);
System.out.print("Enter the Employee Name: ");
      String name = s.nextLine();
System.out.print("Enter the Emp ID: ");
      String EmpId = s.nextLine();
System.out.print("Enter the Department: ");
      String dept = s.nextLine();
System.out.print("Enter the Designation: ");
      String desig = s.nextLine();
System.out.print("Enter the Salary: ");
      float salary = s.nextFloat();
      Employee e = new Employee();
e.setDept(dept);
e.setEmpId(EmpId);
e.setName(name);
e.setSalary(salary);
e.setDesig(desig);
```

```
System.out.println("NAME: "+e.getName());
System.out.println("EMP ID: "+e.getEmpId());
System.out.println("Department: "+e.getDept());
System.out.println("Designation: "+e.getDesig());
System.out.println("Salary: "+e.getSalary());

   }

}
```



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.

```
import java.util.Scanner;

class Address{
   private String street, city, state, country;
   private int zipcode;
   public String getStreet() {
      return street;
   }
   public void setStreet(String street) {
this.street = street;
   }
   public String getCity() {
```

```
      return city;
   }
   public void setCity(String city) {
this.city = city;
   }
   public String getState() {
      return state;
   }
   public void setState(String state) {
this.state = state;
   }
   public String getCountry() {
      return country;
   }
   public void setCountry(String country) {
this.country = country;
   }
   public int getZipcode() {
      return zipcode;
   }
   public void setZipcode(int zipcode) {
this.zipcode = zipcode;
   }

}
public class TestAddress {
   public static void main(String args[]){
      Address a = new Address();
      Scanner s = new Scanner(System.in);
System.out.print("Enter the Street: ");
a.setStreet(s.nextLine());
System.out.print("Enter the City: ");
a.setCity(s.nextLine());
System.out.print("Enter the State: ");
a.setState(s.nextLine());
System.out.print("Enter the Country: ");
a.setCountry(s.nextLine());
System.out.print("Enter the ZIPCODE: ");
a.setZipcode(s.nextInt());

System.out.println("Address Details: ");
System.out.println("Street: "+a.getStreet());
```

```
System.out.println("City: "+a.getCity());
System.out.println("State: "+a.getState());
System.out.println("ZIPCODE: "+a.getZipcode());
System.out.println("Country: "+a.getCountry());

   }
}
```