WEEK

3

```java
class Animal {
    void makeSound() {
        System.out.println(x: "Animal makes sound");
    }
}

class Dog extends Animal {
    void makeSound() {
        System.out.println(x: "Dog Barks");
    }
}

public class AnimalMain {
    Run | Debug | Run main | Debug main
    public static void main(String[] args) {
        Animal a = new Animal();
        Dog d = new Dog();
        a.makeSound();
        d.makeSound();
    }
}
```

```
PS C:\Users\VLT-BNT\OneDrive\Documents\Desktop\OOP JAVA> javac AnimalMain.java
PS C:\Users\VLT-BNT\OneDrive\Documents\Desktop\OOP JAVA> java AnimalMain
Animal makes sound
Dog Barks
```

```java
class Vehicle {
    int speed = 50;
}

class Bike extends Vehicle {
    int speed = 100;

    void display() {
        System.out.println("Vehicle speed: " + super.speed);
        System.out.println("Bike speed: " + speed);
    }
}

public class VehicleMain {
    Run | Debug | Run main | Debug main
    public static void main(String[] args) {
        Bike b = new Bike();
        b.display();
    }
}
```

```
PS C:\Users\VLT-BNT\OneDrive\Documents\Desktop\OOP JAVA> javac VehicleMain.java
PS C:\Users\VLT-BNT\OneDrive\Documents\Desktop\OOP JAVA> java VehicleMain
Vehicle speed: 50
Bike speed: 100
```

```java
class Person {
    String name;

    Person(String name) {
        this.name = name;
    }
}

class Student extends Person {
    int grade;

    Student(String name, int grade) {
        super(name);
        this.grade = grade;
    }

    void display() {
        System.out.println("Name: " + name);
        System.out.println("Grade: " + grade);
    }
}

public class personstudent {
    Run | Debug | Run main | Debug main
    public static void main(String[] args) {
        Student s = new Student(name: "Shravan", grade: 22);
        s.display();
    }
}
```

```
PS C:\Users\VLT-BNT\OneDrive\Documents\Desktop\OOP JAVA> javac personstudent.java
PS C:\Users\VLT-BNT\OneDrive\Documents\Desktop\OOP JAVA> java personstudent
Name: Shravan
Grade: 22
```

```java
import java.util.Scanner;

class BankAccount {
    String accountNumber;
    double balance;

    BankAccount(String accountNumber, double balance) {
        this.accountNumber = accountNumber;
        this.balance = balance;
    }
}

class SavingsAccount extends BankAccount {
    double interestRate;

    SavingsAccount(String accountNumber, double balance, double interestRate) {
        super(accountNumber, balance);
        this.interestRate = interestRate;
    }

    void displayAccountDetails() {
        System.out.println(x: "\n--- Account Details ---");
        System.out.println("Account Number: " + accountNumber);
        System.out.println("Balance: ₹" + balance);
        System.out.println("Interest Rate: " + interestRate + "%");
    }
}
```

```java
}

public class BankMain {
    Run | Debug | Run main | Debug main
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        System.out.print(s: "Enter account number: ");
        String accNum = scanner.nextLine();

        System.out.print(s: "Enter balance: ");
        double balance = scanner.nextDouble();

        System.out.print(s: "Enter interest rate : ");
        double interestRate = scanner.nextDouble();

        SavingsAccount savingsAccount = new SavingsAccount(accNum, balance, interestRate);
        savingsAccount.displayAccountDetails();
    }
}
```

```
PROBLEMS 6   OUTPUT   DEBUG CONSOLE   TERMINAL   PORTS

--- Account Details ---
Account Number: 12345
Balance: ?10000.0
Interest Rate: 3.5%
PS C:\Users\VLT-BNT\OneDrive\Documents\Desktop\OOP JAVA>
```

```java
class Person {
    String name;
    int age;

    public Person(String name, int age) {
        this.name = name;
        this.age = age;
    }
}

class Employee extends Person {
    int emp_id;

    public Employee(String name, int age, int emp_id) {
        super(name, age);
        this.emp_id = emp_id;
    }

    void display() {
        System.out.println("name: " + name + ", age: " + age + ", emp_id: " + emp_id);
    }
}

public class personMain {
    Run | Debug | Run main | Debug main
    public static void main(String[] args) {
        Employee e = new Employee(name: "amit", age: 23, emp_id: 101);
        e.display();
    }
}
```

```
PS C:\Users\VLT-BNT\OneDrive\Documents\Desktop\OOP JAVA> javac personMain.java
PS C:\Users\VLT-BNT\OneDrive\Documents\Desktop\OOP JAVA> java personMain
PS C:\Users\VLT-BNT\OneDrive\Documents\Desktop\OOP JAVA> java personMain
name: amit, age: 23, emp_id: 101
```

```java
import java.util.Scanner;

class Shape {
    double area() {
        return 0;
    }
}

class Rectangle extends Shape {
    double length, width;

    Rectangle(double length, double width) {
        this.length = length;
        this.width = width;
    }

    @Override
    double area() {
        return length * width;
    }
}
```

```java
public class RectangleArea {
    Run | Debug | Run main | Debug main
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print(s: "Enter length: ");
        double length = sc.nextDouble();
        System.out.print(s: "Enter width: ");
        double width = sc.nextDouble();

        Rectangle rectangle = new Rectangle(length, width);
        System.out.println("Area of rectangle: " + rectangle.area());
    }
}
```

PROBLEMS 8 OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS C:\Users\VLT-BNT\OneDrive\Documents\Desktop\OOP JAVA> javac RectangleArea.java
PS C:\Users\VLT-BNT\OneDrive\Documents\Desktop\OOP JAVA> java RectangleArea
Enter length: 23
Enter width: 35
Enter width: 35
Area of rectangle: 805.0
```