**Date:29/may/2024- Assignment**

1. What is protected access modifier and write a program using protected?

Answer:

class Parent {

protected void display() {

System.out.println("This is a protected method.");

}

}

class Child extends Parent {

public static void main(String[] args) {

Child obj = new Child();

obj.display();

}

}

1. What is the method overloding and write a program using overloading?

Answer:

class MethodOverloading {

private static void display(int a) {

System.out.println("Got Integer data.");

}

private static void display(String a) {

System.out.println("Got String object.");

}

public static void main(String[] args) {

display(1); // Output: Got Integer data.

display("Hello"); // Output: Got String object.

}

}

3.what is the output of the below program

class MethodOverloading {

private static void display(int a) {

System.out.println("Arguments: " + a);

}

private static void display(int a, int b) {

System.out.println("Arguments: " + a + " and " + b);

}

public static void main(String[] args) {

display(1);

display(1, 4);

}

}Arguments: 1

Arguments: 1 and 4

This output is produced by calling the display method with different sets of arguments. The first call to display(1) calls the method with a single integer parameter, which prints "Arguments: 1". The second call to display(1, 4) calls the overloaded method with two integer parameters, which prints "Arguments: 1 and 4".

4.what is the output of the below program?

class A {

String s = "Class A";

}

class B extends A {

String s = "Class B";

{ System.out.println(super.s); }

}

class C extends B {

String s = "Class C";

{ System.out.println(super.s); }

}

public class MainClass {

public static void main(String[] args) {

C c = new C(); // Output: Class A Class B

System.out.println(c.s); // Output: Class C

}

}