PRACTICAL 10:

AIM: Develop four Java programs demonstrating different method variations: 1. Passing by value 2. Passing by reference (via object) 3. Returning values from methods 4. Returning objects from methods

CODE:

1)public class PassByValue {

// Method that tries to modify the parameter

static void modify(int x) {

x = x + 10;

System.out.println("Inside method: x = " + x);

}

public static void main(String[] args) {

int x = 20;

modify(x); // Pass the value of x to the method

System.out.println("Outside method: x = " + x); // Original x remains unchanged

}

}

OUTPUT:



2) // File: PassByReference.java

class Number {

int value;

}

public class PassByReference {

// Method that modifies the object's field

static void modify(Number num) {

num.value = num.value + 10;

}

public static void main(String[] args) {

Number n = new Number();

n.value = 20;

modify(n); // Pass the object reference to the method

System.out.println("Modified value: " + n.value); // The change is reflected outside the method

}

}

OUTPUT:



3) public class ReturnValue {

// Method that calculates and returns the square of a number

static int square(int x) {

return x \* x;

}

public static void main(String[] args) {

int num = 5;

int result = square(num); // Calling the method and storing the result

System.out.println("Square of " + num + " is: " + result); // Displaying the result

}

}

OUTPUT:



4) class Student {

String name;

int marks;

// Constructor to initialize name and marks

Student(String n, int m) {

name = n;

marks = m;

}

// Method to display student details

void display() {

System.out.println("Name: " + name + ", Marks: " + marks);

}

}

public class ReturnObject {

// Method that creates and returns a Student object

static Student getStudent() {

Student s = new Student("Riya", 85);

return s;

}

public static void main(String[] args) {

Student result = getStudent(); // Calling method to get a Student object

result.display(); // Displaying student details

}

}

OUTPUT:

