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

Program 1: Passing by value

CODE:

//File : PassByValue.java

public class PassByValue{

static void modify(int x){

x=x+10;

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

}

public static void main(String[]args){

int x=20;

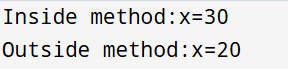
modify(x);

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

}

}

OUTPUT:



Program 2:Passing by reference(via Object)

CODE:

// File: PassByReference.java

class Number {

int value;

}

public class PassByReference {

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);

System.out.println("Modified value: " + n.value);

}

}

Output:



Program 3: Returning Value from Method

CODE:

// File: ReturnValue.java

public class ReturnValue {

static int square(int x) {

return x \* x;

}

public static void main(String[] args) {

int num = 5;

int result = square(num);

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

}

}

OUTPUT:



Program 4: Returning Object from Method

CODE:

// File: ReturnObject.java

class Student {

String name;

int marks;

Student(String n, int m) {

name = n;

marks = m;

}

void display() {

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

}

}

public class ReturnObject {

static Student getStudent() {

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

return s;

}

public static void main(String[] args) {

Student result = getStudent();

result.display();

}

}

Output:

