1. Java program to sum the elements of a 2D array:

public class Main {

public static void main(String[] args) {

int[][] matrix = {

{1, 2, 3},

{4, 5, 6},

{7, 8, 9}

};

int sum = 0;

for (int i = 0; i < matrix.length; i++) {

for (int j = 0; j < matrix[i].length; j++) {

sum += matrix[i][j];

}

}

System.out.println("Sum of all elements in 2D array: " + sum);

}

}

1. Do-while loop that prompts the user to enter a number until they enter a negative number:

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int number;

do {

System.out.print("Enter a number (negative number to exit): ");

number = scanner.nextInt();

} while (number >= 0);

System.out.println("You entered a negative number, exiting...");

}

}

1. Java program demonstrating the use of the break statement in nested loops:

public class Main {

public static void main(String[] args) {

for (int i = 1; i <= 3; i++) {

for (int j = 1; j <= 3; j++) {

if (i == 2 && j == 2) {

break; // Breaks out of the inner loop

}

System.out.println(i + "," + j);

}

}

}

}

1. Program that prints numbers from 1 to 10 but skips the number 5:

public class Main {

public static void main(String[] args) {

for (int i = 1; i <= 10; i++) {

if (i == 5) {

continue;

}

System.out.println(i);

}

}

}

1. Program to swap the values of two numbers without using a third variable:

public class Main {

public static void main(String[] args) {

int a = 5, b = 10;

System.out.println("Before Swap: a = " + a + ", b = " + b);

a = a + b;

b = a - b;

a = a - b;

System.out.println("After Swap: a = " + a + ", b = " + b);

}

}