Control Structures (if, else, switch, for loop)

CODE:

public class Main {

public static void main(String[] args) {

int num = 10;

// if-else statement

if (num > 0) {

System.out.println("The number is positive.");

} else {

System.out.println("The number is non-positive.");

}

// switch statement

switch (num) {

case 1:

System.out.println("The number is 1.");

break;

case 10:

System.out.println("The number is 10.");

break;

default:

System.out.println("The number is not 1 or 10.");

break;

}

// for loop

System.out.print("Counting from 1 to 5: ");

for (int i = 1; i <= 5; i++) {

System.out.print(i + " ");

}

System.out.println();

}

}

OUTPUT:

A screenshot of a computer

AI-generated content may be incorrect.

Functions and Methods (calling a method, returning a value):

CODE:

public class Main {

public static void main(String[] args) {

int sumResult = add(5, 3);

System.out.println("Sum of 5 and 3 is: " + sumResult);

int diffResult = subtract(10, 4);

System.out.println("Difference between 10 and 4 is: " + diffResult);

System.out.println("Multiplication of 2 and 3 is: " + multiply(2, 3));

}

public static int add(int a, int b) {

return a + b;

}

public static int subtract(int a, int b) {

return a - b;

}

public static int multiply(int a, int b) {

return a \* b;

}

}

OUTPUT:

A screenshot of a computer

AI-generated content may be incorrect.

Control Structures with Functions (while loop, do-while loop)

CODE:

public class Main {

public static void main(String[] args) {

int counter = 0;

// while loop

while (counter < 3) {

System.out.println("While Loop: Count = " + counter);

counter++;

}

// do-while loop

do {

System.out.println("Do-While Loop: Count = " + counter);

counter++;

} while (counter < 6);

// Calling a method to perform an operation

int result = factorial(5);

System.out.println("Factorial of 5 is: " + result);

}

public static int factorial(int n) {

int fact = 1;

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

fact \*= i;

}

return fact;

}

}

OUTPUT:

A screenshot of a computer

AI-generated content may be incorrect.