Lab 23

Classroom Activity: Java Conditional Statements

**Task: Explain different Java Conditional Statements**

Java provides conditional statements to control the flow of your program based on certain conditions. The primary conditional statements in Java are `if`, `else if`, and `else`. Here are some examples of conditional statements in Java with complete code examples:

**1. If Statement:**

public class IfExample {

public static void main(String[] args) {

int number = 10;

if (number > 0) {

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

}

}

}

In this example, if the `number` is greater than 0, it will print "The number is positive."

**2. If-Else Statement:**

public class IfElseExample {

public static void main(String[] args) {

int number = -5;

if (number > 0) {

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

} else {

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

}

}

}

In this example, if the `number` is greater than 0, it will print "The number is positive." Otherwise, it will print "The number is non-positive."

**3. If-Else If-Else Statement:**

public class IfElseIfExample {

public static void main(String[] args) {

int number = 0;

if (number > 0) {

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

} else if (number < 0) {

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

} else {

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

}

}

}

In this example, it checks if the `number` is positive, negative, or zero and prints the corresponding message.

**4. Nested If Statements:**

public class NestedIfExample {

public static void main(String[] args) {

int x = 10;

int y = 5;

if (x > y) {

if (x % y == 0) {

System.out.println("x is divisible by y.");

} else {

System.out.println("x is not divisible by y.");

}

} else {

System.out.println("x is not greater than y.");

}

}

}

In this example, we have nested `if` statements to check if `x` is greater than `y` and if `x` is divisible by `y`.

These are the basic examples of Java conditional statements. You can use these constructs to control the flow of your program based on various conditions.