

02-If Else If

If else if

The if-else if statement allows for multiple conditions to be checked in sequence. If the if condition is false, the program checks the next else if condition, and so on.

Syntax of If-Else if Conditional Statement:

```
if (condition1) {  
    // code to execute if condition1 is true  
} else if (condition2) {  
    // code to execute if condition2 is true  
} else {  
    // code to execute if all conditions are false  
}
```

Example:

To determine the greatest value among three variables (x, y, and z), we can use if-else if statements along with logical operators. This is a common programming scenario where conditional logic helps in decision-making based on multiple criteria.

Example 1: Basic Comparison

```
int x = 8, y = 7, z = 6;  
  
if (x > y && x > z) {  
    System.out.println(x);  
}  
  
else {  
    System.out.println(y);  
}  
  
o/p:8
```

Example 2: Adjusted Values

```
z = 9;  
  
if (x > y && x > z) {  
    System.out.println(x);  
}  
else {
```

```
    System.out.println(y); // Output: 7
}
```

Example 3: Additional Condition

```
y = 17;
if (x > y && x > z) { // Checking if x is the greatest
    System.out.println(x);
} else if (y > x && y > z) { // Checking if y is the greatest
    System.out.println(y); // Output: 17
}
```

Example 4: Complete Comparison with else Block

```
x = 8;
y = 7;
z = 9;

if (x > y && x > z) { // Checking if x is the greatest
    System.out.println(x);
} else if (y > z) { // Checking if y is the greatest
    System.out.println(y);
} else {
    System.out.println(z); // Output: 9
}
```

Key Points

- Logical Operators: Used to combine multiple conditions (e.g., && for "and").
- Conditional Blocks: Use curly braces {} for clarity, especially with multiple statements.
- Complete Conditions: Always cover all possible scenarios, including the final else block.