

## 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.