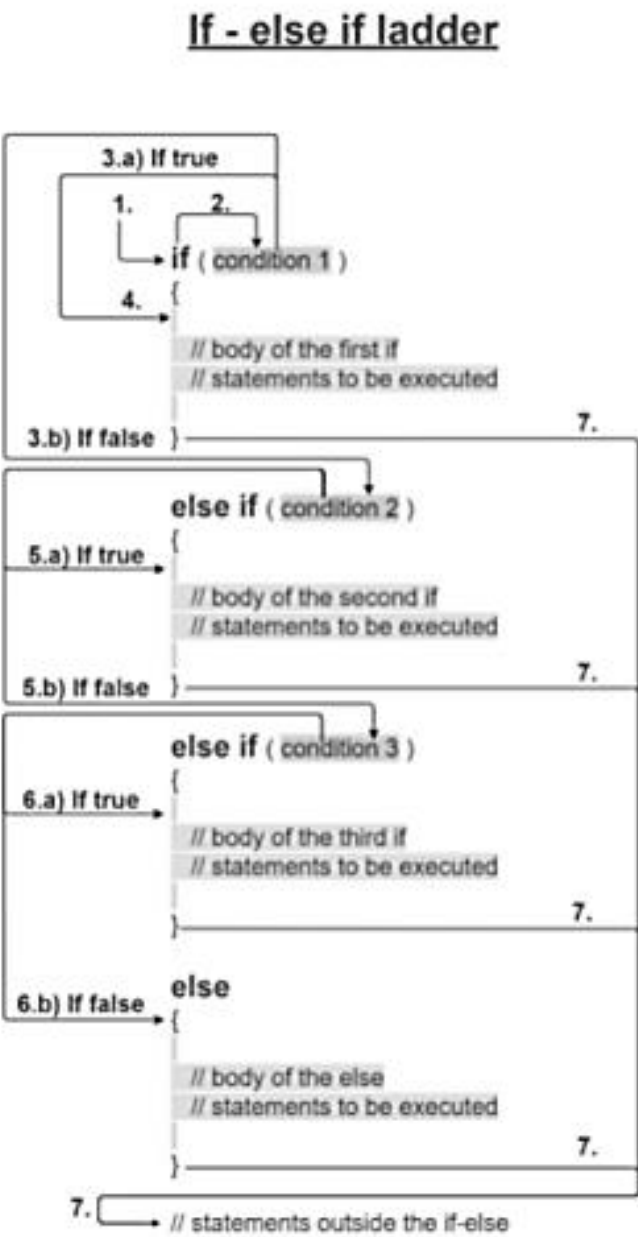
 Formerly Trimex Institute of Science and Technology	Course Code	CC3
	Description	Intermediate Programming
	Pre-Requisites	
Department: College of Computer Studies	Week	4
Java if-else-if ladder		

LEARNING OUTCOMES
<p>At the end of this module, the student will be able to:</p> <ul style="list-style-type: none">• Explain the if-else-if ladder.• Demonstrate the example program of the if-else-if ladder statement.
INTRODUCTION
<p>Decision Making in Java helps to write decision driven statements and execute a particular set of code based on certain conditions.</p>
COURSE CONTENT
<p>Java if-else-if ladder</p> <p>Java if-else-if ladder is used to decide among multiple options. The if statements are executed from the top down. As soon as one of the conditions controlling the if is true, the statement associated with that if is executed, and the rest of the ladder is bypassed. If none of the conditions is true, then the final else statement will be executed.</p>

if-else-if ladder Diagram



Working of the if-else-if ladder:

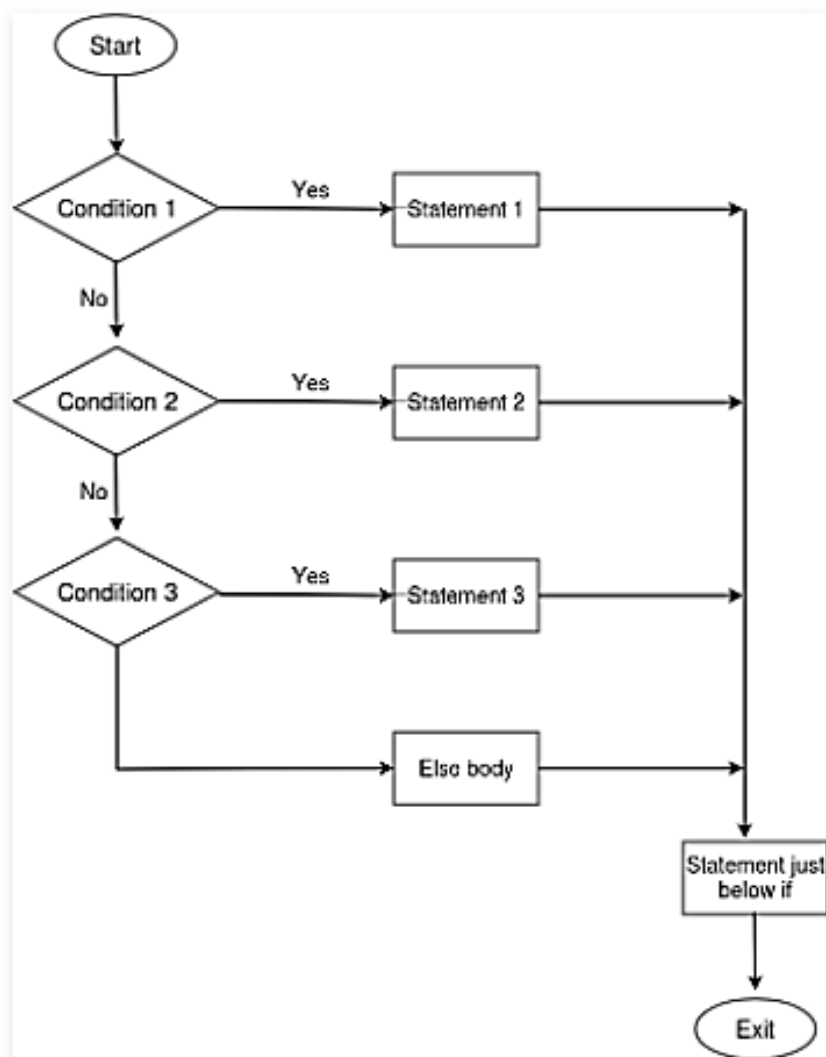
1. Control falls into the if block.
2. The flow jumps to Condition 1.
3. Condition is tested.
 - a. If Condition yields true, goto Step 4.
 - b. If Condition yields false, goto Step 5.
4. The present block is executed. Goto Step 7.
5. The flow jumps to Condition 2.
 - a. If Condition yields true, goto step 4.

- b. If Condition yields false, goto Step 6.
- 6. The flow jumps to Condition 3.
 - a. If Condition yields true, goto step 4.
 - b. If Condition yields false, execute else block.
Goto Step 7.
- 7. Exit the if-else-if ladder.

Syntax:

```
if (condition)
    statement 1;
else if (condition)
    statement 2;
.
.
else
    statement;
```

Flowchart if-else-if ladder:



Example 1:

```
import java.util.Scanner;
public class Main
{
// Java program to illustrate if-else-if ladder

    public static void main(String[] args)
    {
        // initializing expression
        int x = 20;
```

```

// condition 1
if (x == 10)
    System.out.println("x is 10\n");

// condition 2
else if (x == 15)
    System.out.println("x is 15\n");

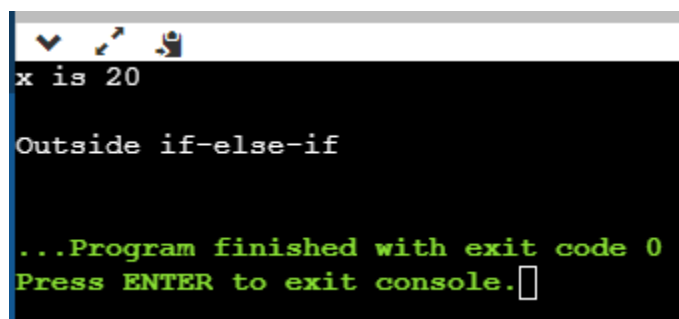
// condition 3
else if (x == 20)
    System.out.println("x is 20\n");

else
    System.out.println("x is not present\n");

System.out.println("Outside if-else-if");
}
}

```

Ouput:



```

x is 20

Outside if-else-if

...Program finished with exit code 0
Press ENTER to exit console.

```

Example 1 Explanation:

1. Program starts.
2. i is initialized to 20.
3. condition 1 is checked. $20 == 10$, yields false.
4. condition 2 is checked. $20 == 15$, yields false.

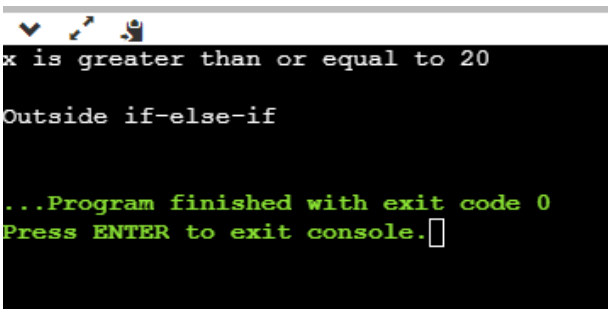
- 5. condition 3 is checked. 20 == 20, yields true.
 - a) "i is 20" gets printed.
- 6. "Outside if-else-if" gets printed.
- 7. Program ends.

FOCUS QUESTIONS

- 1. How it is different from if-else ladder?
- 2. When all condition become false what will be executed in an else if ladder?

Practice Quiz/Laboratory Activity

Create a program that will display an output:



Answer Program Code:

```
import java.util.Scanner;
public class Main
{
    public static void main(String[] args)
    {
        int x = 20;

        if (x < 10)
            System.out.println("x is less than 10\n");

        else if (x < 15)
            System.out.println("x is less than 15\n");

        else if (x < 20)
            System.out.println("x is less than 20\n");

        else
```

<pre>System.out.println("x is greater than "+ "or equal to 20\n"); System.out.println("Outside if-else-if"); } }</pre>
LEARNING ACTIVITIES
<p>A. Discussion Direction: The instructor will discuss if-else-if ladder statement.</p> <p>B. Demonstration Direction: The instructor will demonstrate on how to create a program using if-else-if ladder statement.</p> <p>C. Individual Activity. Explore and execute what you have learned from the Instructors demonstration.</p>
ASSESSMENT
<p>Recitation</p> <p>Direction: Question and Answer from instructor to student to evaluate the learning's.</p>
ASSIGNMENT
Read Module 5 found the Learning Paths
RELATED READINGS / REFERENCES
<p>READINGS: https://www.javatpoint.com/java-data-types https://www.javatpoint.com/java-variable https://www.geeksforgeeks.org/</p>

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