

## **Difference Between if and else-if Ladder:**

Both if Statements and else-if ladders are used for conditional branching, allowing the execution of specific block of code based on different conditions.

### **Simple if:**

If we want to execute or skip a block of Statements we have to make use of simple if Conditional control construct.

Example:

```
import java.util.Scanner;

public class Demo
{
    public static void main(String[] args)
    {
        Scanner scan = new Scanner(System.in);
        System.out.println("Enter the percentage");
        Int marks = scan.nextInt();
        If(marks>90)
        {
            System.out.println("Welcome to Techclub");
        }
    }
}
```

### **Output:**

Enter the percentage 92

Welcome to Techclub

**Else-if ladder:**

This is used to evaluate multiple conditions in sequential manner i.e., each condition in else-if manner is checked sequentially and if the result of the condition happens to be true the corresponding Block of statements executed.

If none of the Condition in the else-if ladder are found to be true then by default else block would be executed

**Example:**

```
import java.util.Scanner;

public class Grade
{
    Public static void main(String[] args)
    {
        Scanner scan = new Scanner(System.in);
        System.out.println("Enter marks");
        Int marks = scan.nextInt();
        if(marks<50)
        {
            System.out.println("D-Grade");
            System.out.println("Congratulations");
        }
        else if(marks>=50 && marks<60)
        {
            System.out.println("C-Grade");
            System.out.println("Congratulations");
        }
        else if(marks>=60 && marks<70)
        {
```

```
        System.out.println("B-Grade");
        System.out.println("Congratulations");
    }
    else if(marks>=70 && marks<80)
    {
        System.out.println("A-Grade");
        System.out.println("Congratulations");
    }
    else
    {
        System.out.println("A+-Grade");
        System.out.println("Congratulations");
    }
}
}
```

### **OUTPUT:**

Enter marks 75

A-Grade

Congratulations

### **The main Difference:**

The main difference between an `if` statement and an `else-if` ladder is that an `if` statement is used for a single condition, while an `else-if` ladder is used for multiple mutually exclusive conditions.

