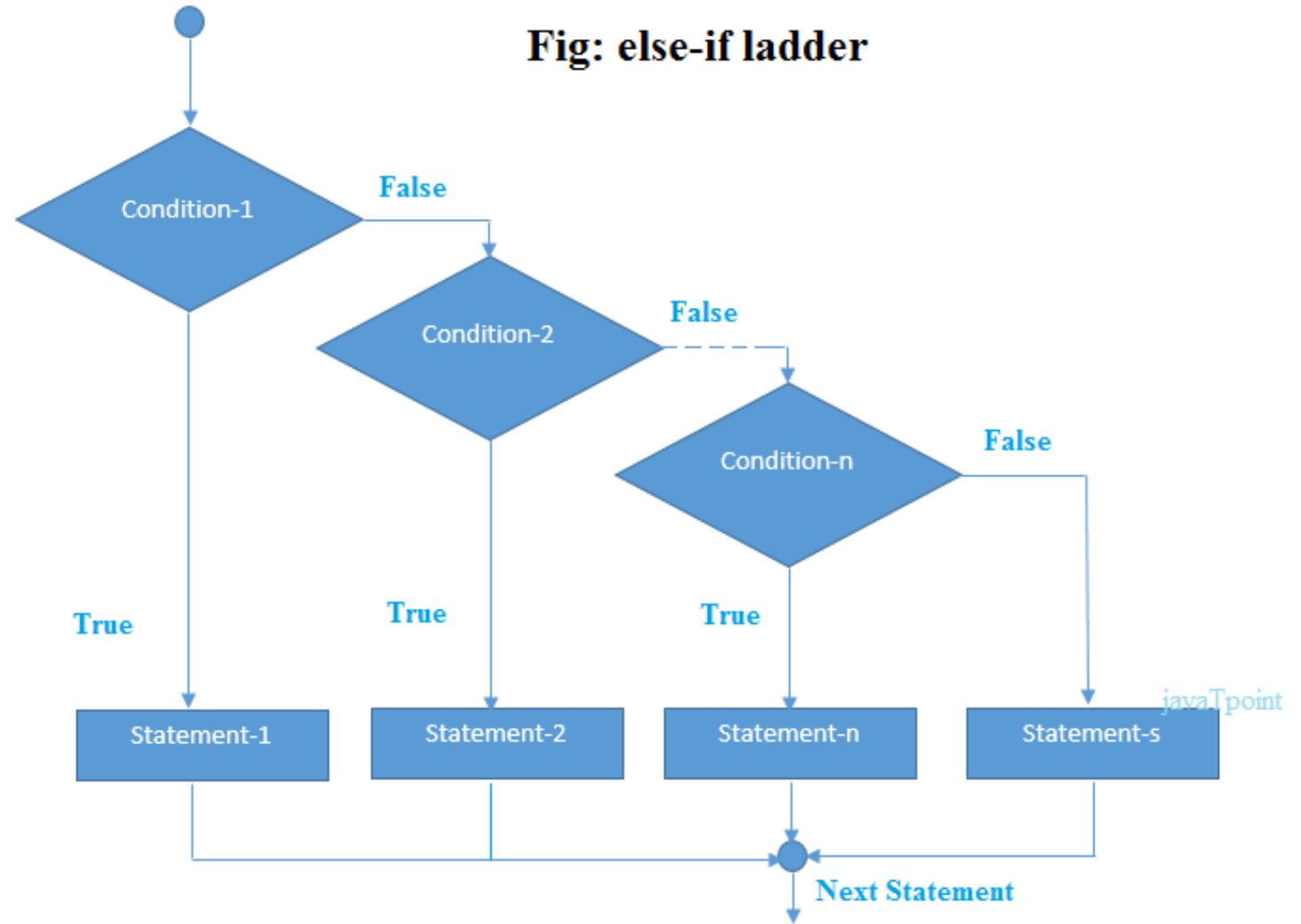# Java Basics

Class 4

Nested if:- If you have to check multiple condition in that case we use nested if conditional statements.

Syntax:-
```
        if (condition)
        {
          if (condition)
          {
            if(condition)
              {
                    block of code/ statement
              }
          }
        } else
              {
                    block of code/ statement
              }
```

Fig: else-if ladder

- If else if :-

- syntax:-
- if (condition1)
- { statement1 }
- else  if (condition2)
- {  statement/block of  }

Loops:-

      Looping in programming languages is a feature which facilitates the execution of a set of instructions/functions repeatedly while some condition evaluates to true.

Java provides three ways for executing the loops. While all the ways provide similar basic functionality, they differ in their syntax and condition checking time.

- While Loop
- Do While Loop
- For Loop

1. While Loop:- It used to execute a code or program repeatedly till the condition is true. While is used in case where we don't know that how many times we have to execute the code.

      Syntax :-  while (condition )
                      {
                          loop statement
                      }

Example for while loop :-

```java
class whileloop
{
    public static void main(String args[])

    {
            int a = 1;
            while(a <=10)   //loop exists when value for a becomes 10
                {
                        System.out.println(a);
                        //increment value for a for next iteration
                         a++;
                }
```

Do while :-

do while loop is similar to while loop with only difference that it checks for condition after executing the statements

Syntax :- do
{
    loop Statement
}
while (condition);

Example for do while loop :-

```java
class dowhileloop
{
    public static void main(String args[]){
        int a = 1;
        do
        {
            System.out.println(a);
            a++; //increment value for a for next iteration
        }
        while (a<=10);
    }
}
```

For loop :-

The Java *for loop* is used to iterate a part of the program several times. If the number of iteration is **fixed.**

**syntax:-** for ( initialization condition , testing condition ,increment/decrement)
```
{

        loop Statement

}
```

Example :-

```
class ForExample{
        Int a;
    public static void main(String args[]) {
        for(a=1; a<=10; a++)
          {
                System.out.println(a);
          }
```
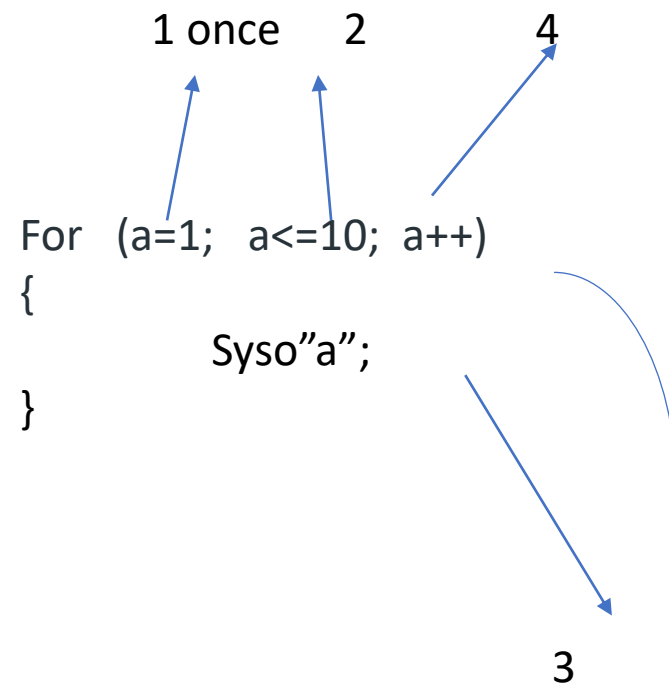
Output :- 1
2
3
4
5      10

1 once    2       4

```
For  (a=1;  a<=10;  a++)
{
        Syso"a";
}
```

3

Java Nested for Loop:-

If we have a for loop inside the another loop, it is known as nested for loop. The inner loop executes completely whenever outer loop executes.

```java
public class NestedForExample
{
    public static void main(String[] args)
    {
        for(int i=1;i<=5;i++)
        {
            for(int j=1;j<=i;j++)
            {
                System.out.print("* ");
            }//end of i
            System.out.println();
        }//end of j
    }
}
```

1) How to find the maximum occurring character in a given String?
2) How to remove all duplicates from a given string?
3) How to print the duplicate characters from the given String?
4) How to reverse a given String?
5) Write a Java program to count the number of words in a string?
6)Write a Java program to remove all white spaces from a string?
7) Write a Java program to reverse each word of a given string. For example,
If **"Java Concept Of The Day"** is input string then output should be **"avaJ tpecnoC fO ehT yaD".**
**8) Palindrome Programs In Java.**
9)Write a Java program to reverse a sentence word by word. For example, If "Java Concept Of The Day" is an input string then output will be "Day The Of Concept Java".