Module 5:
Introduction to Do-While Loop

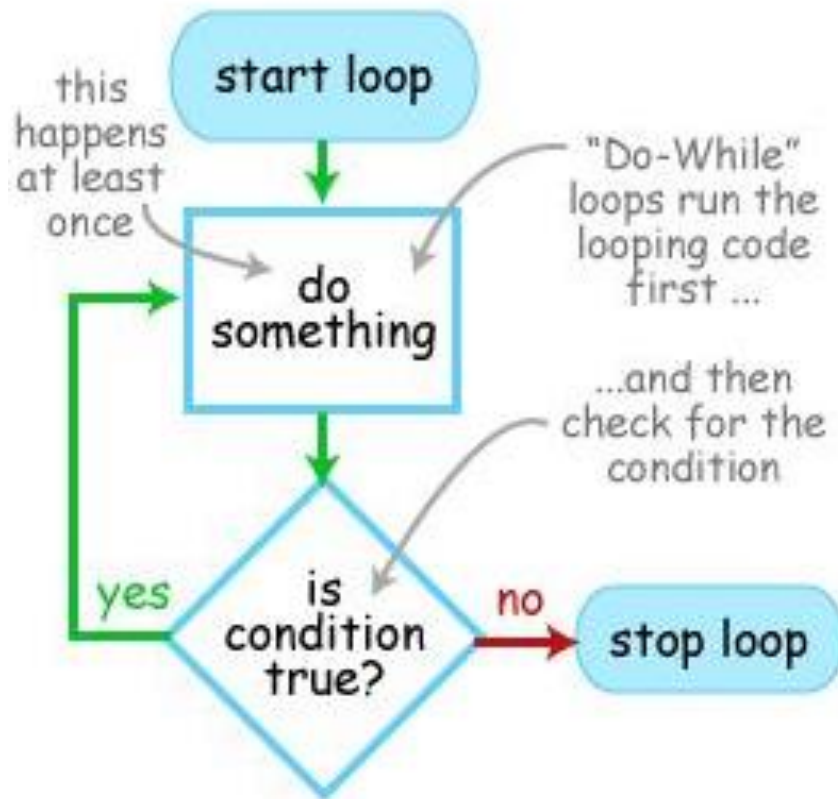# Do While Loop

❑It is an Iterative Construct used to execute set of statements repeatedly.

❑ It is used when number of iterations are not fixed.
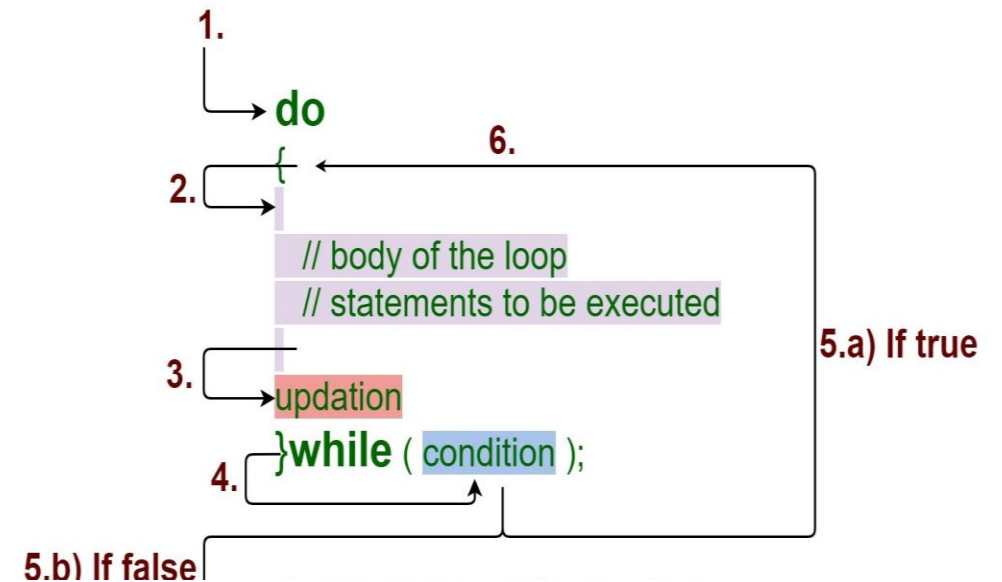
❑ It is guaranteed that loop will execute atleast once.

❑**Syntax:-**   do

{

//Statements

}while(condition);

Working of Do While

Do-While Loop

this happens at least once

start loop

do something

"Do-While" loops run the looping code first ...

...and then check for the condition

yes

is condition true?

no

stop loop

Do - While Loop

1.

do

{

2.

6.

// body of the loop
// statements to be executed

5.a) If true

3.

updation

} while (condition);

4.

5.b) If false

Do While Vs For/While

Do While Loop	For Loop
• It is guaranteed that loop body will execute atleast once.	• It is not guaranteed that how many times loop body will be executed.
• It is the post-tested loop	• It is the pre-tested loop.
• It is a exit-controlled loop.	• It is a entry-controlled loop.

• Example: do{
          int i= 1;
          SOPln(i);
          i++;
          }while(i<=10);
	• Example: for(i=1;i<=10;i++)
	                {
	                    SOPln(i);
	                }

Example Of A Program

WAP to input a number & print the total number of digits present in it.

```java
import java.util.*;
class digits
{
    public static void main(String[] Args)
    {
        int n,d,c=0;
        Scanner sc= new Scanner(System.in);
        System.out.println("Enter a number");
        n=sc.nextInt();
        do
        {
            c++;
            n=n/10;
        }while(n>0);
         System.out.println(c);
    }
```

Programs To Practice On Do While Loop

- WAP to input a number & print the sum of its digit.

- WAP to input a number & print the product of its digit.

- WAP to input a number & print all the even digits.

- WAP to input a number & print its maximum digit.

- WAP to input a number & print it in reverse.

- WAP to input a number & check whether it is Armstrong or not.

- WAP to input a number & check whether it is Palindrome or not.

- WAP to input a number & check whether it is Automorphic or not.

- WAP to input a number & print its HCF using long division method.

- WAP to input a number & print its LCM, without using HCF.

- WAP to input a number and check whether it is a perfect square or not.

Entry Controlled Vs Exit Controlled Loop

Entry-Controlled	Exit-Controlled
• The loop in which the control checks the condition before entering in to the loop, is called entry-controlled loop.	• The loop in which the control enters in to the loop without any checks and after one execution the control checks the condition at the time of exit, is called exit-controlled loop.
• Example: for and while loop.	• Example: do-while loop.

Jump Statements

- Jump statements cause an unconditional jump to another statement elsewhere in the code. They are used primarily to interrupt switch statements and loops.

- In Java, there are two types of jump statements:-
    - Break Statement
    - Continue Statement

- Break Vs Continue

Break	Continue
▪ It is a jump statement which is used to terminate the current loop/block.	▪ It transfers the control at the beginning of the loop and skips the rest of the statement.
▪ It is used in loops as well as in switch-case.	▪ It can only be used in the loop.