

Topic 6 :

Lesson 1:

What is **Loop** in programming language ?

In computer programming, a loop is a sequence of instructions that is continually repeated until a certain condition is reached.

If you want show a message 50 times ,then rather than typing the same code 50 times ,you can use loops .

➤ There are three types of loops in java :

- for loop
- while loop
- do while loop

Lesson 2 :

for loop - When you know exactly how many times you want to loop through a block of code, use the **for** loop

how to write for loop in java-:

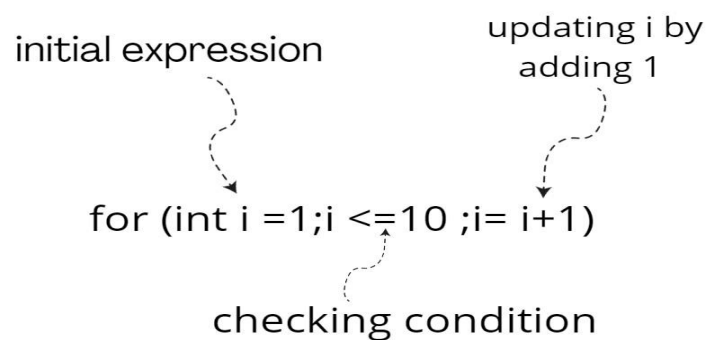
for (initial expression ,test condition , update expression)

{

 // your code here

}

1. **initial expression** : The initial expression initializes and/or declares variables and executes only once.
2. **test condition** : It is used for testing the exit condition for a loop.
If the condition is true , the body of the for loop is executed
3. **update expression** : update expression update the value of initial expression .



Example :

Display a text “ java is easy ”

```
public class fiveTimes {  
    public static void main (String args [])  
    {  
        for (int i=1;i<=5;i=i+1)  
        {  
            System.out.println("java is easy");  
        }  
    }  
}
```

```
output
java is easy
java is easy
java is easy
java is easy
java is easy
```

Lesson 3 :

While loop - *while loop* is used to iterate a part of the program repeatedly until the specified Boolean condition is true. As soon as the Boolean condition becomes false, the loop automatically stops.

While(condition / expression)

```
{
//code to be executed
// update expression
}
```

Example

Print “java is fun” 5 times

Code
Int i=1; while(i<=5) { System.out.println(“java is fun “); i=i+1; }

output
java is fun java is fun java is fun java is fun java is fun