

Looping Statement

A block of program that is executed repeatedly is called as a loop. Until a particular condition is satisfied.

Types

- i. **while loop**
- ii. **do..while loop**
- iii. **for loop**

Three steps of looping process

1. Initialization of the counter
2. Test for a specified condition for execution of the statements in the loop
3. Increment or Decrement the counter

1. While loop

Syntax:

```
Initialize loop counter;
while(condition)
{
    Statement(s);
    Increment or decrement loop counter;
}
```

2. do..while loop

The do..while loop is similar to while loop except that the do-while loop test the condition at the end of the loop.

Hence, the loop will be executed at least once if the condition not satisfied.

While loop will executed only if the condition is satisfied.

Syntax:

```
do
{
    Statements(s);
    -----;
}while(condition);
```

3. For loop

For loop allows us to specify three steps about the loop in a single line

Syntax:

```
for(initialization; condition; increment/decrement)
{
    Statements(s);
}
```

}

Note: The condition specified in the loop should eventually become false at one point, otherwise the loop will become infinite loop

4. Nested Loops

A loop followed by another loop

syntax:

```
for(i=1;i<=n;i++)  
{  
    for(j=1;j<m;j++)  
    {  
        statements;  
        -----;  
    }  
}
```