

While Loop in C++

While studying **for loop** we have seen that the number of iterations is ***known beforehand***, i.e. the number of times the loop body is needed to be executed is known to us. while loops are used in situations where **we do not know** the exact number of iterations of the loop **beforehand**. The loop execution is terminated on the basis of the test conditions.

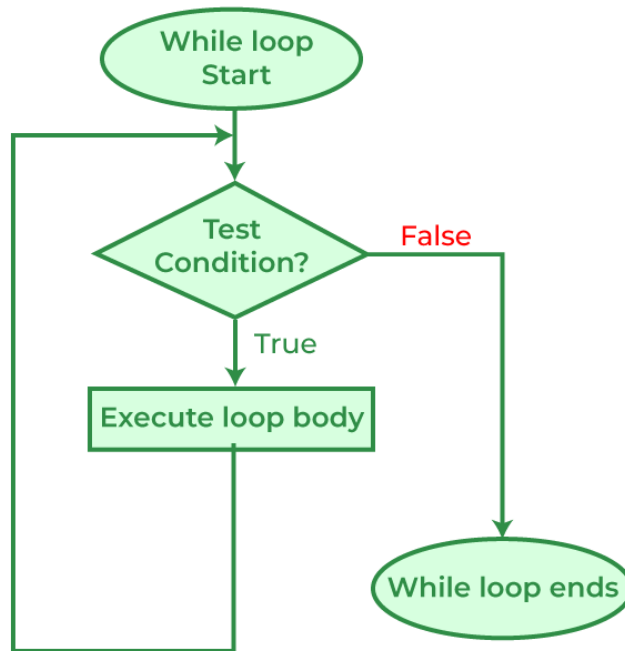
We have already stated that a loop mainly consists of three statements – initialization expression, test expression, and update expression. The syntax of the three loops – For, while, and do while mainly differs in the placement of these three statements.

Syntax:

```
initialization expression;
while (test_expression)
{
    // statements

    update_expression;
}
```

Flow Diagram of while loop:



```
// C++ program to Demonstrate while loop
#include <iostream>
using namespace std;

int main()
{
    // initialization expression
    int i = 1;

    // test expression
    while (i < 6) {
        cout << "Hello World\n";
        // update expression
        i++;
    }

    return 0;
}
```

Output

```
Hello World
```

```
Hello World  
Hello World  
Hello World  
Hello World
```