

WHILE LOOP STATEMENT:

Syntax of while loop

```
while (test expression) {  
statement/s to be executed.  
}
```

The while loop checks whether the test expression is true or not. If it is true, code/s inside the body of while loop is executed, that is, code/s inside the braces { } are executed. Then again the test expression is checked whether test expression is true or not. This process continues until the test expression becomes false.

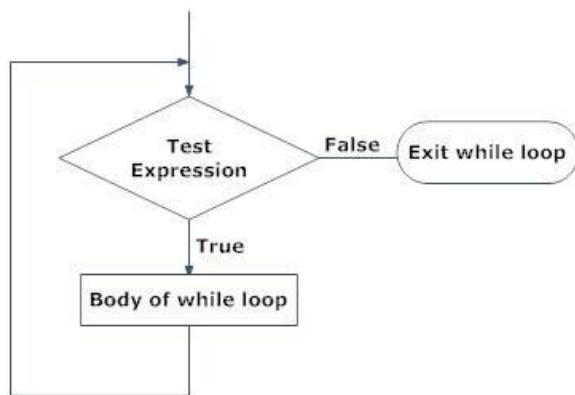


Figure: Flowchart of while loop

Do...while loop

In C, do...while loop is very similar to while loop. Only difference between these two loops is that, in while loops, test expression is checked at first but, in do...while loop code is executed at first then the condition is checked. So, the code are executed at least once in do...while loops.

Syntax of do...while loops

```
do {  
    some code/s;  
}  
while (test expression);
```

At first codes inside body of do is executed. Then, the test expression is checked. If it is true, code/s inside body of do are executed again and the process continues until test expression becomes false(zero).

Notice, there is semicolon in the end of while (); in do...while loop.

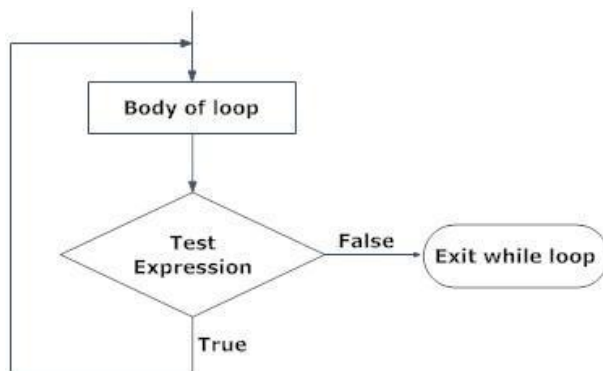


Figure: Flowchart of do...while loop

BREAK & CONTINUE STATEMENT:

There are two statements built in C programming, break; and continue; to alter the normal flow of a program. Loops perform a set of repetitive task until test expression becomes false but it is sometimes desirable to skip some statement/s inside loop or terminate the loop immediately without checking the test expression. In such cases, break and continue statements are used. The break;statement is also used in switch statement to exit switch statement.

break Statement

In C programming, break is used in terminating the loop immediately after it is encountered. The break statement is used with conditional if statement.

Syntax of break statement

break;

The break statement can be used in terminating all three loops for, while and do...while loops.

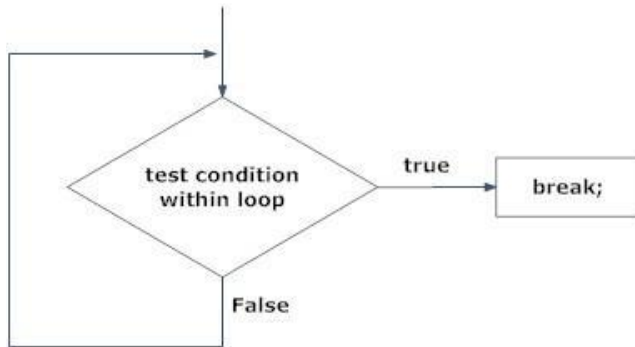


Figure: Flowchart of break statement

The figure below explains the working of break statement in all three type of loops.

CONTINUE STATEMENT

It is sometimes desirable to skip some statements inside the loop. In such cases, continue statements are used.

Syntax of continue Statement

continue;

Just like break, continue is also used with conditional if statement.

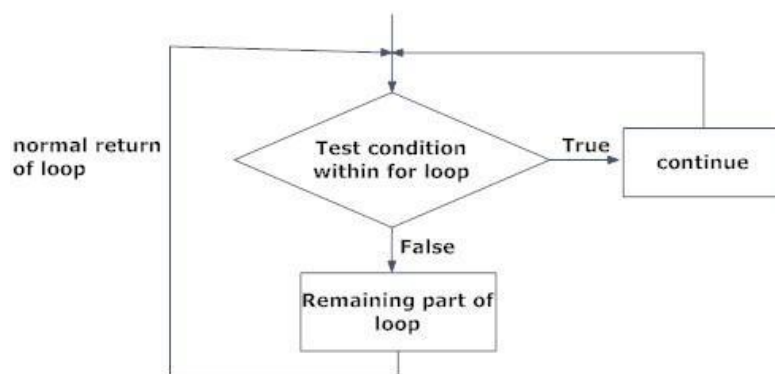


Fig: Flowchart of continue statement