

ITERATIVE Statements

The statements which appears in the source code only once but execute many times, Such kind of statements are called 'loops' or 'iterative statements'.

There are 3 types of loop statements

- a) while
- b) do... while
- c) for loop

⇒ while

while statement is used when the program needs to perform repetitive tasks.

Syntax

```
while (condition)
{
    statements;
}
```

\* The program will repeatedly execute the statement inside the while loop until the condition becomes false (0).

```
void main ()
{
    int i = 0;
    while (i <= 2)
    {
        printf ("Hello\n");
        i = i + 1; // ++i
    }
    getch();
}
```



Output  
Hello  
Hello  
Hello

Explanation

In while loop ( $i <= 2$ ) is checked first where at first time  $i = 0$  and condition  $i <= 2$  is true so it prints Hello and  $i = i + 1$ ; becomes  $i = 0 + 1 \Rightarrow i = 1$ ; now after  $i = i + 1$ ; compiler goes to again to while loop to check  $i <= 2$ ;  $1 <= 2$  which is true so it again prints Hello and  $i = 1 + 1 \Rightarrow 2$  and compiler again goes to while loop and check  $2 <= 2$  which is true so again prints Hello and  $i = 1 + 2 \Rightarrow i = 3$  and