

## C# For Loop

**For loop** is another powerful loop construct in C#.

**For-loops** are a slightly more complicated than while and do-while loops but on the other hand they can solve more complicated tasks with less code

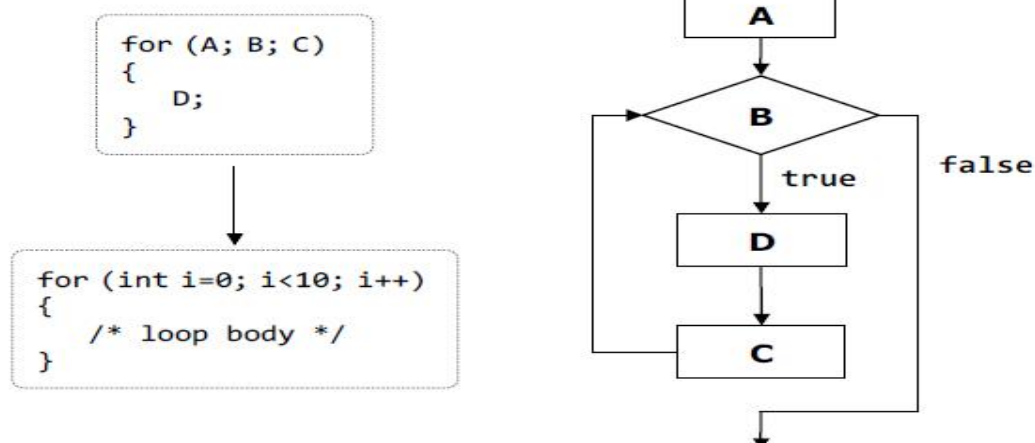
It is powerful and easy to use. for loop includes all three characteristics as **initialization**, **termination** and **increment/decrement** in a **single line**.

Syntax of a **for-loop** looks like:

```
for (initialization; condition; update)
{
    Loop's body;
}
```

- It consists of an **initialization** part for the counter (in the pattern `int i = 0`)
- a **Boolean** condition (`i < 10`)
- an **expression** for **updating** the **counter** (`i++`, it might be `i--` or for instance, `i = i + 3`)
- **body of the loop**

**For Loop Scheme:**



**A. Initialization** is executed only once, just **before** entering the loop.

- Usually the initialization block is used to declare the counter-variable (also called a loop variable) and to set its initial value.
- This variable is "visible" and can be used only within the loop.
- In the initialization block is possible to declare and initialize more than one variable.

- B.** The **condition** (loop condition) is evaluated once **before** each iteration of the loop, just like in the while loops.
- For result true the loop's body is executed,
  - For result false it is skipped and the loop ends (the program continues immediately after the last line of the loop's body).
- D.** The **body of the loop** contains a block with source code.
- C.** **Update** is executed at each iteration, after the loop's body has been executed.

#### Sample Program

```
. using System;
. using System.Collections.Generic;
. using System.Linq;
. using System.Text;
.
. namespace for_loop
. {
.     class Program
.     {
.         static void Main(string[] args)
.         {
.             int i;
.             for (i = 0; i < 5; i++)
.             {
.                 Console.WriteLine("For loop Example");
.             }
.             Console.ReadLine();
.         }
.     }
. }
```

#### Output

```
For loop Example
For loop Example
For loop Example
For loop Example
```

## For loop Example

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