tutlane (/)

C# Do While Loop with Examples

In c#, the **Do-While** loop is used to execute a block of statements until the specified expression return as true.

Generally, in c# the **do-while** loop is same as the while loop (/tutorial/csharp/csharp-while-loop-with-examples), but only the difference is while loop (/tutorial/csharp/csharp-while-loop-with-examples) will execute the statements only when the defined condition returns **true,** but the **do-while** loop will execute the statements at least once because first it will execute the block of statements and then it will check the condition.

Syntax of C# Do-While Loop

Generally, **do** and **while (/tutorial/csharp/csharp-while-loop-with-examples)** keywords are used to create a **do...while** loop in C#. Following is the syntax of defining a **do-while** loop in c# programming language to execute the block of statements until the defined condition evaluates as **false**.

```
do
{

// Statements to Execute

}while (boolean_expression);
```

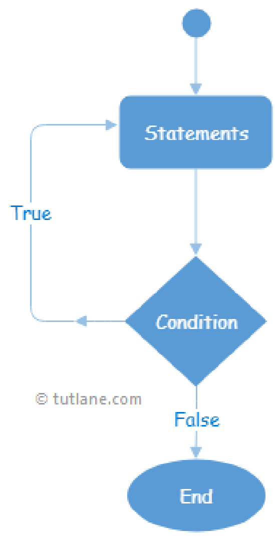
If you observe the above syntax, the do-while loop starts with the **do** keyword followed by a block of statements and while (/tutorial/csharp/csharp-while-loop-with-examples) with a parameter called **boolean_expression**.

Here the body of the do-while loop will be executed first, and the **boolean_expression** will be evaluated. If **boolean_expression** returns **true** again, the statements inside of the do-while loop will be executed.

In case the **boolean_expression** is evaluated to **false**, then the do-while loop stops the execution of statements, and the program comes out of the loop.

C# Do...While Loop Flow Chart Diagram

Following is the pictorial representation of the **do-while** loop process flow in the c# programming language.



Now we will see how to use the do-while loop in the c# programming language with examples.

C# Do...While Loop Example

Following is the example of using a **do-while** loop in c# programming language to execute the block of statements based on our requirements.

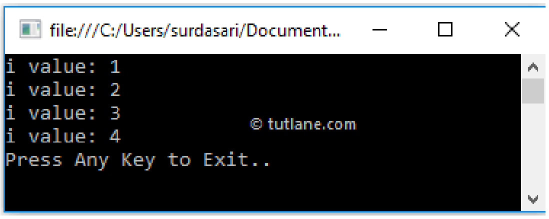
```
using System;

namespace Tutlane
{
    class Program
    {
       static void Main(string[] args)
       {
           int i = 1;
           do
           {
                Console.WriteLine("i value: {0}", i);
                i++;
            } while (i <= 4);
            Console.WriteLine("Press Enter Key to Exit..");
            Console.ReadLine();
        }
    }
}
```

If you observe the above example, first we are executing the statements within the do-while loop and increasing the variable **i** (**i++**) value to **1** by using the increment operator.

After that, the condition (**i <= 4**) will be evaluated, and again it will execute the block of statements if the condition returns **true** otherwise, it terminates the loop.

When we execute the above c# program, we will get the result below.



```
i value: 1
i value: 2
i value: 3
i value: 4
Press Any Key to Exit..
```

If you observe the above result, the do-while loop has been executed until it matches the defined condition (**i <= 4**), and the program came out of the loop whenever the defined condition returns **false**.

C# Nested Do-While Loop

In c#, we can use one do-while loop within another do-while loop to implement the application based on our requirements.

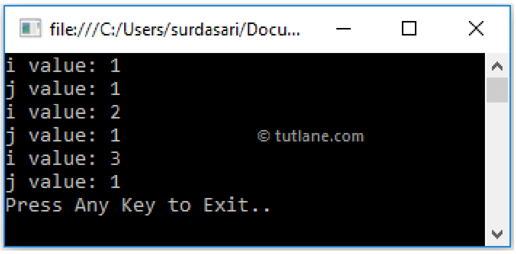
Following is the example of implementing a nested do-while loop in the c# programming language.

```
using System;

namespace Tutlane
{
    class Program
    {
        static void Main(string[] args)
        {
            int i = 1;
            do
            {
              Console.WriteLine("i value: {0}", i);
              i++;
              int j = 1;
              do
              {
                 Console.WriteLine("j value: {0}", j);
                 j++;
              } while (j < 2);
            } while (i < 4);
            Console.WriteLine("Press Enter Key to Exit..");
            Console.ReadLine();
        }
    }
}
```

If you observe the above example, we used one **do-while** loop within another **do-while** loop to achieve nested do-while loop functionality in our application based on our requirements.

When we execute the above c# program, we will get the result below.



```
i value: 1
j value: 1
i value: 2
j value: 1
i value: 3
j value: 1
Press Any Key to Exit..
```

If you observe the above example, both do-while loops got executed and returned the result based on our requirements.

C# Do-While Loop with Break Statement

In c#, we can exit or terminate the execution of a **do-while** loop immediately by using the **break** keyword.

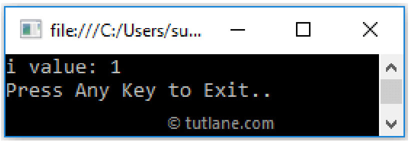
Following is the example of using the **break** keyword in a **do-while** loop to terminate the loop's execution in the c# programming language.

```
using System;

namespace Tutlane
{
     class Program
     {
         static void Main(string[] args)
         {
            int i = 1;
            do
            {
               Console.WriteLine("i value: {0}", i);
               i++;
               if (i == 2)
                  break;
            } while(i < 4);
            Console.WriteLine("Press Enter Key to Exit..");
            Console.ReadLine();
         }
     }
}
```

If you observe the above example, whenever the variable (**i**) value becomes **2**, we terminate the loop using the **break** statement.

When we execute the above c# program, we will get the result below.



```
i value: 1
Press Any Key to Exit..
```

This is how we can use the break statement with a do-while loop to terminate the loop's execution based on our requirements.

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