

# A simple example of recursion

```
/*
C#: The Complete Reference
by Herbert Schildt

Publisher: Osborne/McGraw-Hill (March 8, 2002)
ISBN: 0072134852
*/

// A simple example of recursion.

using System;

class Factorial {
    // This is a recursive function.
    public int factR(int n) {
        int result;

        if(n==1) return 1;
        result = factR(n-1) * n;
        return result;
    }

    // This is an iterative equivalent.
    public int factI(int n) {
        int t, result;

        result = 1;
        for(t=1; t <= n; t++) result *= t;
        return result;
    }
}

public class Recursion {
    public static void Main() {
        Factorial f = new Factorial();
        Console.WriteLine("Factorials using recursive method.");
        Console.WriteLine("Factorial of 3 is " + f.factR(3));
        Console.WriteLine("Factorial of 4 is " + f.factR(4));
        Console.WriteLine("Factorial of 5 is " + f.factR(5));
        Console.WriteLine();
        Console.WriteLine("Factorials using iterative method.");
        Console.WriteLine("Factorial of 3 is " + f.factI(3));
    }
}
```

```
Console.WriteLine("Factorial of 4 is " + f факт(4));  
Console.WriteLine("Factorial of 5 is " + f факт(5)); } }  
[/csharp]
```