

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