

C# Programming Reference Sheet

Built In Data Types & Literals

Integers

Int, short, long

Floating Point Numbers

Float, double

Strings and Characters

String, double

Boolean

bool

Working with Strings

Assignment (giving a string a value)

```
String a = "Fred";
```

Concatenation (joining strings)

```
a += "Smith";
```

Comparison

```
If a == "Fred Smith"
```

Construction from other types:

```
Name = "F" + Convert.ToString(2) + "S" +
```

```
Convert.ToString(2);
```

Simple Programming Statements

Constant declaration

```
Const int constant =1;
```

Variable declaration

```
Int variable =1;
```

Assignment

```
Variable =1;
```

Method call

```
Method1 ();
```

Sequence of statements - grouped

```
{}
```

Structured Programming Statements

If statement

```
If (a==b) {} else {}
```

Case statement

```
Switch (CaseSwitch) {case1: ; }
```

While loop

```
While (a < 1)
```

Repeat loop

```
Do ... while (a < 1);
```

For loop

```
For (int i =1; i < 10; i++)
```

Declaring Methods

Declare a method with parameters:

```
Public void Method1 (int p1)
```

Declare a method that returns data:

```
Public int Method1 (int p1) {result;}
```

Pass by reference:

```
Method1 (reference variable);
```

```
Public void Method2 (reference int p1)
```

Boolean Operators and Other Statements

Comparison: equal, less, larger, not equal, less eq

```
=, <, >, <=>, <, >
```

Boolean: And, Or and Not

```
&&, ||, !
```

Skip an iteration of a loop

```
Continue
```

End a loop early

```
break
```

End a method:

```
return
```

Custom Types

Classes

```
Public class Class1
```

Enumerations

```
Public enum Enum1 (Pass, Credit,...)
```

Structs

```
Public struct Struct1
```

Arrays

Declaration

```
Int[] intArray
```

Access

```
intArray[0] =14
```

Loop with index i

```
For (int i=0; I > intArray.length; i++)
```

For each loop

```
Foreach (int I in intArray)
```

Programs and Modules

Creating a program

```
Namespace Program1
```

Using a class from a library

```
Using test;
```

```
Namespace Program1;
```

Other Things

Reading from Terminal

```
Console.ReadLine();
```

Writing to Terminal

```
Console.WriteLine ("Fred Smith");
```

Comments

```
//1 line comment
```

```
/* multiple line comment */
```