# C# Programming Reference Sheet

Built In Data Types & Literals

Integers

Int, unit, long, ulong(eg:5, 10, 15)

Floating Point Numbers

Double, Float(eg:3.1, 2.5, 2.1)

Strings and Characters

String, Char(eg:’Hello’, ‘H’)

Boolean

Boolean(True, False)

Working with Strings

Assignment (giving a string a value)

name = “Fred”;

Concatenation (joining strings)

name = name + “Smith”;

Comparison

if (name == “Fred Smith”){}

Construction from other types:

name = “R” + Convert.ToString(2) + “D” + Convert.ToString(2);

Programs and Modules

Creating a program

namespace

{

public class Class1

{

public Class1()

{

static void Main(string[] args)

{

}

}

}

Using a class from a library

using System;

Arrays

Declaration

int[] score = new int[6]{0 .. 5};

Access

scores[0] = 10;

friend[0] = ReadContact();

Loop with index i

for(i=0; i<scores.length; i++;)

{scores[i] = i;}

For each loop

foreach(string friends in Contract){}

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;

Structured Programming Statements

If statement

if(done) {} else{}

Case statement

switch(age){case 1:…; break; case 2:…; break; default:…; break;}

While loop

while(not done){}

Repeat loop

while(not done){…; done;}

For loop

for(int i=0; i <= 10; i++){}

Simple Programming Statements

Constant declaration

const double PI = 3.1415;

const int MAX = 10;

Variable declaration

string name;int age;

Assignment

name = “Fred”;age = MAX

Method call

Console.WriteLine(“Hello”, name, age)

Sequence of statements - grouped

{}

Custom Types

Classes

public class Contract

{}

Enumerations

enum Grade{Pass, Credit,…}

Structs

struct Student{public string name; public string grade; }

Other Things

Reading from Terminal

Console.Readline()

Writing to Terminal

Console.Writeline()

Comments

//single line

/\*

Multiple lines\*/

Declaring Methods

Declare a method with parameters:

public string SayHello(string ToName){}

Declare a method that returns data:

public string ReadContract(string Contact){return Contact;}

Pass by reference: