# C# Programming Reference Sheet

Built In Data Types & Literals

Integers

byte, sbyte, int, uint, long, ulong short, ushort

Floating Point Numbers

decimal, double, float

Strings and Characters

char, string

Boolean

bool

Working with Strings

Assignment (giving a string a value)

string msg = “Message”;

Concatenation (joining strings)

string msg2 = msg + “ more”;

Comparison

msg.Equals(msg2)

Construction from other types:

dataType.ToString()

Simple Programming Statements

Constant declaration

const int PROCESS\_ID = 123;

Variable declaration

int number;

Assignment

number = 4;

Method call

Console.WriteLine(“Hello”);

Sequence of statements - grouped

{ }

Structured Programming Statements

If statement

if (a == b )

Case statement

switch (choice) {

case 1: break; }

While loop

while (true)

Repeat loop

do { } while (true)

For loop

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

Declaring Methods

Declare a method with parameters:

public void Display(String msg)

Declare a method that returns data:

public int getNumber()

Pass by reference:

public void double(ref x)

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 function/procedure:

return;

Custom Types

Classes

public class Book{}

Enumerations

enum Day {mon, tues, wed, thurs}

Structs

struct Student(

string \_name;

int \_id;

Arrays

Declaration

string[] list = new string[2];

Access

list[2]

Loop with index i

for (int I = 0; I < list.Length; i++)

list[i]

For each loop

foreach(string s in list)

Programs and Modules

Creating a program

class MainClass{

public static void Main(){

Using a class from a library

using System;

Other Things

Reading from Terminal

Console.ReadLine();

Writing to Terminal

Console.WriteLine(“Hello, World!”)

Comments

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