# C# Programming Reference Sheet

Built In Data Types & Literals

Integers

Int, short, long

Floating Point Numbers

Float, double, decimal

Strings and Characters

String, char

Boolean

Bool

Working with Strings

Assignment (giving a string a value)

string \_a = “Hello”

Concatenation (joining strings)

string \_b = a + “ World!”

Comparison

string.Compare(\_a, \_b)

Construction from other types:

otherType.toString()

Programs and Modules

Creating a program

namespace program  
class mainclass {}

Using a class from a library

using SwinGameSDK;

Custom Types

Classes

public class Message(string message)

Enumerations

enum Day {sat, sun, mon, tues}

Structs

public struct Point2d {

int \_x, \_y

public Point2d(int x, int y) {…

Arrays

Declaration

String[] Message = new String[5]

Access

Message[0]

Loop with index i

for(int i = 0; i < 5; i++) {

…message[i]…

For each loop

foreach(string str in message) {…

Other Things

Reading from Terminal

Console.ReadLine();

Writing to Terminal

Console.WriteLine(“Hello, World!”)

Comments

// single line comments

/\* multi line comments \*/

Declaring Methods

Declare a method with parameters:

public Message(string text)

Declare a method that returns data:

public Message()

Pass by reference:

public Message(ref String text)

Simple Programming Statements

Constant declaration

const int months = 12

Variable declaration

int months

Assignment

myName = “Bob”

Method call

myMessage = new Message(“Bye”)

Sequence of statements - grouped

{}

Structured Programming Statements

If statement

if (true) {…}

Case statement

switch(var) {case 1: break;…}

While loop

while (i < 5) {…}

Repeat loop

do {…} while (a < 20)

For loop

for (int i = 0; i < count; i++)

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;