C#

Variables Cheatsheet

Get to know some of the basic variable types in C# and what they can do.

Other Types

byte   unsigned 8-bit int

sbyte   signed 8-bit int

ushort   unsigned 16-bit int

short   signed 16-bit int

uint   unsigned 32-bit int

ulong   unsigned 64-bit int

long   signed 64-bit int

float   signed 32-bit double

Bonus: DateTime

DateTime is not actually a type but a struct. For practical purposes, however, it can be used like a variable type. It can store a specific date and time (together). This can then be easily parsed out into its pieces (just the day, just the month, etc.)

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Common Types

These are the variable types that you will be using most often when you are creating applications.

string

Explanation: Holds up to two billion Unicode characters. Basically, any character(s) you want in between double quotes.

Example Values: "Hello World", "1", "Anything I ^#@&* want!", ""

bool

Explanation: Holds either true or false.

Example Values: true, false

int

Explanation: Holds a signed whole number that goes from roughly negative two billion to positive two billion. The number cannot have a decimal in it (thus, whole number). This is equivalent to Int32 and is 32-bit in size.

Example Values: 586, -12, 0, 941

double

Explanation: Holds a signed, possibly non-whole number that is 64-bit in size. A double is used for most non-whole number operations. The exception is for operations where extreme precision are needed such as financial transactions. The double type only holds significant digits to the 16th place after the decimal point – fine for practically anything except money and astrophysics. Basically, use double for any number that might have a decimal point in it unless that value represents money, in which case you should store that value in a decimal type.

Example Values: 18.2514874, 21, -4.12

decimal

Explanation: Holds a signed, possibly non-whole number that is 128-bit in size. A decimal is used for the most precise number operations. It holds significant digits to 28 places after the decimal point. In practical terms, use the decimal type for all variables that are storing money values, otherwise use double.

Example Values: 18.2514874, 21, -4.12

Definitions

signed

A number that can be positive or negative. Unsigned would be a number that is positive only.

bit

A unit of size. For instance, 16-bit is 65,535 (unsigned) where 17-bit would be double that in size.

object

A variable type that indicates that any type can be stored inside of it. Typically used for unknown types.