

Glossary

<https://csci-1301.github.io/about#authors>

May 22, 2024 (01:30:38 PM)

Contents

Keywords/Reserved Words¹: words defined by the C# language and used for one thing

Datatypes²: categories in C# used to define types of values, such as strings

Variable³: values that be changed

Constant⁴: values that can not be changed

Identifier⁵: words defined by the programmer to refer to an object or variable.

Operations:

Operators⁶: symbols used to perform operations

Modulo⁷: the % used to divide two numbers and return the remainder

Escape Sequence⁸: used to represent a non-printable character

Reference Types (Objects and Strings)⁹: a variable of a class object holds a reference to the address of the object on the managed heap.

Value Types (all other reserved words)¹⁰: a variable of a class object stores the exact data value held by the variable

Numeric Types¹¹:

Booleans¹²: a binary datatype that can only be true or false

Decision Structures (**if/else/switch**)¹³:

Control Structures (loops)¹⁴:

Instantiation (instance of a class)¹⁵: the act of creating a object, an instance of a C# class

Initialization¹⁶: the act of both declaring a variable's datatype and identifier and assigning it value

Declaration¹⁷: the act of creating a variable's datatype and identifier

Assignment¹⁸: the act of giving a value to an identifier

Implicit Conversion¹⁹: the act of automatically storing the value of one identifier into another identifier that differs from its own

Explicit Conversion (casting)²⁰: the act of storing the value of one identifier into another identifier that differs from its own using additional syntax

Rules²¹: are required syntactical ways to write a program for it to function Conventions²²: are not required for the program to function, but are heavily encouraged for the readability and comprehension of other programmers

Format Specifiers (C, N, P, E)²³: added to variable calls in strings to format the numeric variable in various ways (see link for specifics)

Constructor²⁴: a method used to instantiate an object and assign it's attributes

Parameter²⁵: any variable declared within a method

Argument²⁶: any value that must passed to a method in order for it to be called

¹³<https://csci-1301.github.io/book.html#decisions-and-decision-structures>

¹⁴<https://csci-1301.github.io/book.html#loops-increment-operators-and-input-validation>

²²<https://csci-1301.github.io/book.html#conventions-of-c-programs>

Attribute²⁷: the variables declared within a class to act as the characteristics of any of its instantiated object

Method²⁸: a code block that contains a series of statements

Class Member (attributes and methods)²⁹: anything defined within a class that can be access within and outside of the class

Scope³⁰: Time and place in program where the variable exists

Iterator: an object that traverses an array or list

Sentinel Value³¹: a special value in the context of an algorithm which uses its presence as a condition of termination, typically in a loop or recursive algorithm.

Guard Condition: boolean expressions (predicates) found at the top of a method or function that determine whether the function should continue to execute.

Accumulator³²:

Counter³³: a variable used to count the number of times a certain condition is met

Complex Condition³⁴: a condition consisting of multiple conditions

Method Signature³⁵: the way a computer reads a method by its name and the datatype of its parameters

Method Overloading³⁶: the act of creating multiple methods with the same signature

Return Type³⁷: the datatype of any value returned from a called method

UML Diagram³⁸: a written diagram used to display a class and all of its members

Input Validation³⁹: whenever a program checks if the user gave a usable input and responds accordingly to avoid errors implementation