Glossary of Terms

Algorithm	A step-by-step procedure used to perform calculations; for example, the algorithm used to calculate the area of a circle is πr^2 (Pi * r * r)
Argument	A value that is passed to a function/method when called by a program
Array	A variable type that can store multiple items
Array List	A dynamic array type that stores objects and can grow/shrink as needed
Batch	The name given to a script-like file that contains a series of commands to be executed by a command prompt
BODMAS	Brackets, Order, Division, Multiplication, Addition and Subtraction – the order of operation; the order in which mathematical operations are executed in a calculation
Boolean	A data type with a true or false value
Boolean Operators	Operators that are used in conditional control structures to compare values, i.e. > (greater than), < (less than) and != (inequality)
Bytecode	Java bytecode are instructions that enable any device (with a JVM) to interpret and execute them regardless of their platform
Char	A data type with a single unicode character value, i.e. 'A' or 'Q'
Class	A class is a 'blueprint' that can be used to create objects (custom data types featuring properties and methods)
Concatenation	The term given when joining literals, variables and numbers together; the '+' symbol is used in Java to concatenate
Constructor	A constructor prepares new objects for use by accepting arguments (values) that are used to set the new object's properties
Control Structure	A section of code that dictates the logical flow of a program; selection and iteration are examples of control structures
Compiler	The compiler checks (and highlights) the source code document for errors, before converting the document into Java bytecode
Data Types	Describes the type of data being stored in memory; Java is 'type safe' meaning that a variable's data type must be declared before it can be used
Directory	A file and folder structure/location, i.e. C:\My Documents\myText.txt
Double	A data type that is the default choice for decimal values
Exception	The name given to errors that occur in a program
Expression	A combination of operator and operations that equate to a value
Function	The name given to a method that returns a value; in Java, the keyword 'void' is replaced with the data type of the value to be returned
Global/Local	Both terms refer to the scope of a variable; global variables are visible to all methods defined inside of a class, whereas local variables are only visible to the method that they are declared inside of. Local variables are temporary and only exists during the lifespan of a method.
Increment	Increase in value
Initiated	The term used to describe the relationship between a class and an object; an object is initiated (created) from a class
Integer	A data type used to store whole numbers
Java API	The name given to the Java library

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JVM	Java Virtual Machine (JVM) is a software platform that enables Java bytecode (*.class files) to be executed on most electronic gadgets
Iteration	The official term used to describe a loop; a loop is a control structure that enables code to be repeated
Method	A block of code that has a specific purpose and can be called numerous times by a program. A class can hold many methods.
Multidimensional Array	A one-dimensional array is the equivalent to a single column in a spreadsheet; therefore multidimensional arrays are the equivalent to rows and columns in a spreadsheet.
Nesting	A control structure placed inside of another control structure
Object	An instance of a class is referred to as an object; many objects may be created from a single class
Object-Orientated Programming	OOP is a programming paradigm that focuses on the defining of data types and methods/functions in a logical data structure. OOP has many advantages, including the reuse of code and being able to capture 'real-world' object characteristics and behaviour.
Package	A collection of related classes
Parameter	Placeholder values that are required before a method/function can be called. When values are passed to a method/function that has parameters, the passed values are referred to as arguments.
Primitive	Refers to the most basic data types available in a programming language; in Java, int, double and boolean are all examples of primitive data types
Public/Private	Keywords used to set the visibility of properties, methods/functions and classes. Anything set to public is visible to all other classes, whereas anything set to private is restricted to the class that it is declared inside of.
Run-time Error	An error that occurs during the execution of a program
Selection	The official term used to describe choice in a program. Selection enables alternative paths to be taken or avoided during a program's execution. IF statements and SWITCH CASE statements are two examples of selection.
Source Code	A type of document that contains the code written by a programmer, before the document is compiled into machine code
Statement	The name given to a computer instruction. Instructions are written, in order, inside of methods.
Static	Anything that uses the keyword 'static' belongs to the class and not an initiated object; therefore static methods and properties are used by referring to the class name and not an objects' name
String	A data type that stores text values
Syntax	The structure of statements in a computer language
Variable	A location in memory that can be used to store values. In Java, a variable must have a name and a data type before it can be used.
Void	The name given to a method that does not return a value

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