Lessons 1-8

Java is a simple programming language that makes writing, compiling, and debugging a program easy. Helps create modular programs and reusable code.

* Programs are written by programmers
* Its compiled in javac in to bytecode
* Then the Java Virtual Machine (JVM) executes the bytecode generated. Program run phase.

Java is a platform independent language. It can be written on linux and used on Macs and Windows as well. This is because although each operating system has a different JVM, they all will output the same code.

Simple, Robust, Secure, Portable, Multithreading all of these words can be used to describe the java programming language.

A variable is a name associated with a value that can be changed. Variables often need to be declared by following certain syntax. There are 3 types of variables.

* Local- declared inside method of the class meaning you cant change their values and access them outside the method.
* Static- known as class variable because they are associated with the class and common for all the instances of class. Changes made to the variable of one of the objects would reflect when accessed through the others as well.
* Instance- unlike static variable instance variables have their own separate copy of instance variable.

Data type defines the values that a variable can take. There are primitive data types and non-primitive data types. Types of variables must be specified before they can be used. Its good to declare all the variables in the beginning of a program.

Primitive data types

* Boolean- used for variables that hold either true or false
* Char- used for storing characters (letters)
* Byte, Short, Int, Long- are used for storing whole numbers
* Float, Double- used for fractional numbers

Operators in Java

Types of Operators in Java

* Basic arithmetic operators
* Assignment operators
* Auto-increment auto-decrement operators
* Logical operators
* Comparison operators
* Bitwise operators
* Ternary operators