CS2030 Overview: Java Basics

Java is a OOP based statically typed language, hence everything implemented in Java is encapsulated by a class.

What actually is a class?

A class is a user defined blueprint or prototype from which objects are created. It represents the set of properties or methods that are common to all objects of one type. In general, class declarations can include these components, in order:

1. Modifier
2. Class name
3. Superclass (if any)
4. Interfaces implemented (if any)
5. Body

All objects in java inherit from the base class of Object.

Hence how does Java work?

Essentially, Java works as a compiled language, so when we compile a program in java, it runs through the compiler to convert the Java Code we type into a form that the Java Virtual Machine can process. This will be expounded upon later.

The compiler works to convert the language into Assembly code, ie machine code, that the processer units can understand.

Basic Datatypes in Java:
Java supports 8 primitive datatypes:
bytes, short, int, long, float, double, boolean, char

A variable of primitive type stores the actual value.

However, when we implement classes, it is instead a reference to the object that is assigned to the variable rather than the object itself.