Java is a Computing Platform for executing "bytecode".

Javac is the Java compiler, which translates the sourcecode into byte code.
Java runs the Java virtual machine.

Objects and Classes

Java is an object orientated program. It requires a Class for it to function.

```
public class NameOf Program
 public static void main (String[] args) {
   System.out.println ("   ")

 }
 }

 /*  This is for notes */

 /** documentation */
 // text
```

Primitive types

Variables must be declared by stating the type and name. Thereafter, they may be initiated by assigning a value.

There are 8 Primitive types in Java:

1) byte: 8 bit signed 2's complement integer
        min value. -128   max 127.
        used for saving memory in large arrays

2) **short:** 16 bit signed 2's complement integer.
        min: -32,768   max 32,767

3) **int:** 32 bit.
        min -2^{31} max $2^{31}-1$

4) **long:** 64 bit
        min -2^{13} max $2^{63}-1$

5) **float:**

6) **double:**

7) **boolean:** True / false

8) **char:**

Literals

Primitive types are known as Literals. You can directly assign a value without the need of *new* keyword. eg int Gear = 20 instead of int Gear = new

Arrays

- Each item in an Array is called an element.
- Holds a fixed number of values of a single type.

    int [ ] AnArray; declaring an array

    AnArray = new int [10] How many elements

    AnArray [0] = 100;
       "   [1] = 200;

Can also be declared int[ ] anArray { 100, 200, 300 }

Multidimensional Arrays

int [ ] [ ] an Array;

Complete the rest another day