# Introduction to Java

- Developed in 1995 by James Grosling & team which is also called "Green Sun microsystem".

- Free downloadable.

- Open Source

- Object Oriented language.

* Features of Java.
1. Simple
2. OOPs
3. Portable
4. Platform Independent / WORA (Write once Run anywhere)
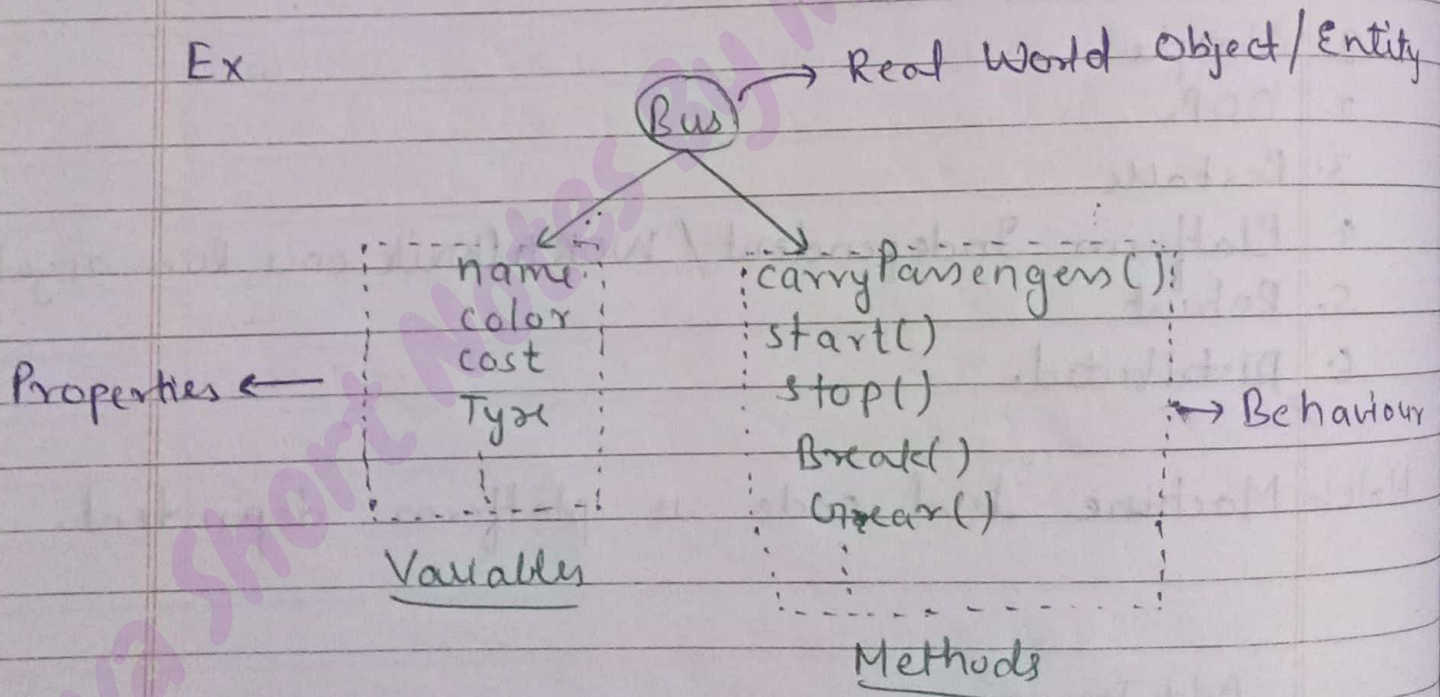5. Robust
6. Distributed.

Note:- Machine level code is platform depandent.

Add. Java

Source file → Java Compiler → Byte Code → JVM → o/p
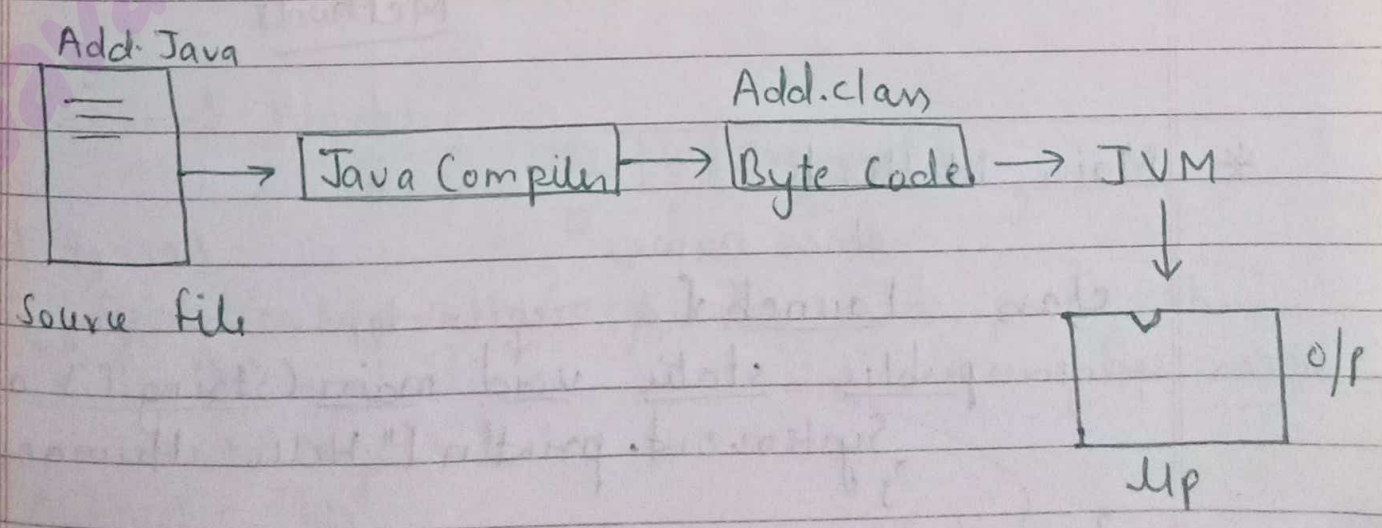
Add. class

Classes and Objects (Basics)

- A class is a similar traits, behaviours, & attributes, collection.
      objects

- An object is an entity with state and behaviour.

- Methods are ~~beh the~~ behaviour in a class and variables are properties.

Ex   → Real World Object/Entity

                    (Bus)

              name   carryPassengers();
              color   start()
              cost   stop()   → Behaviour
Properties ←   Type   Break()
                                Gear()

              Variables

                                Methods

* Main Method
              class name   Accept Argument
   class   Launch & return type   during Execution
acess specifier→ public, static void main (String [] args) {
              System.out.println ("Hello Humans");
      }
   }   If Method static no object required to call it.

main → function name. It must all always main
JVM finds main function to ex start executia
of program. It is entry point of program.

static → It is static because JVM can't create
object of main function. So it kept static.

public → Acess specifier, so that JVM can't find
main fun° and main can be used in other
files @ too.

launch → Name of clam which can be anything.
But file name must be launch so that JVM
know in which clam main func is present.

main (String [] args) :- It take argument
during compilation. Argument stored in the
args array.
Ex :- javac Launch.java   (java byte code generatif)
         → file name

java Launch This is Argument.
compilation statement   Argument

Internal Working

args =

This	is	Argument	
0	1	2	3

System.out.println(args[0]);   To print the
    sout (args [1]);   argument.
    sout (args [2]);
Output : This
         is
         Argument

* Statically Typed Prog^m language	Dynamically Typed Prog^m language
• In these languages we need to pre defined the data of variables, ~~the~~ we are working with.	• In these languages we don't need to pre-def data type.
• Ex→ C, C++, Java int age = 19 string name = "Mohit"	Ex→ Python, JavaScript. name = "Mohit"; age = 19;
• Memory of Variable provided at the time of compilation	Memory of Variable provided at the time of execution.