

classmate

Date _____

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Java programming

- * easy to read & understand.
- * used for software development
- * platform independent.
- * uses Java virtual Machine (JVM).

- * Java is a object oriented programming lang that is used in a distributed envnmnt on the internet.
- * It is an high-level lang, easy to read & understand.
- * used to develop software for devices.
- * It is not only used in comp bt also in mob & electronic devices.
- * Java files are converted to ~~bit~~ bit code format using a compiler & then executed by a Java interpret.
- * Java code is run on JVM, which provides a runtime envnmnt.

- Dops concept (Object oriented progrmng)

i) class (blue print of object)

(സൂത്രം സൃഷ്ടിക്കുന്ന വസ്തു ലഭിക്കുന്ന)

2) object

3) Abstraction

4) Encapsulation

5) Inheritance

6) Polymorphism.

2) Object :

eg → human → men, women.

Vehicle → bike, car

obj

3) Class :

class → objects, things obj & obj.

2 types → state

behaviours.

identity

actions of

eg → human's

identity

(name, age)

- State & a obj
- consist of a set of data field with their current values.
- A obj state is defined by the attributes of the obj & by the values.

4) Class :

- * A class is a abstract description of a set of object.
- * A class contains the description of all the behaviours of the obj that

it represents.

* Individual behaviours of a cls → its methods

3) Abstraction :

Abstracted 2nd column diagram, see question

Vehicle

obj

state

behaviour

attr

method

state

behaviour

attr

- * It is the process of hiding the details of exposing only the essential features of a particular concept.

4) Encapsulation :

(Binding variable & methods in a single entity)

- * It is a way to restrict the direct access to some components of an obj, so users cannot access state values for all variables of a particular obj.

- * It can be used to hide both data members & data ()s / methods associated with an obj.

5) Inheritance : (I)

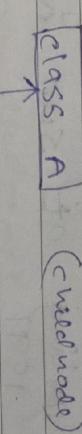
(Acquiring prop from parent cls to child cls)

- * In obj oriented programming, Inheritance is a way to form new cls using bases that are already been defined.

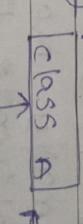
- * It is process of by which the

- * Obj of 1 cls ~~accesses~~ the property of objects of another cls.
- * 2 types :

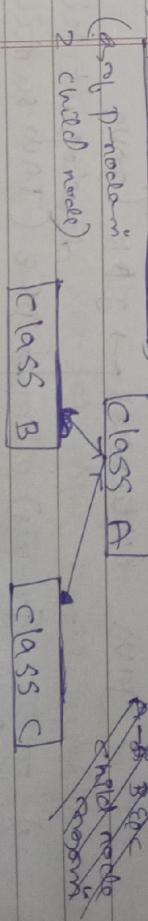
1) Single (I) :



2) Multi-level (II) :



3) Hierarchical (III) :



6) Polymorphism :

- * It is the ability to take more forms (types).
- * It takes an imp role in allowing obj having different internal str to

share the same external interface.

→ History of Java:

It was founded by James Gosling at Sun microSystem in the yr 1991

Java was initially called as oak.
It was renamed as Java in the yr 1995.

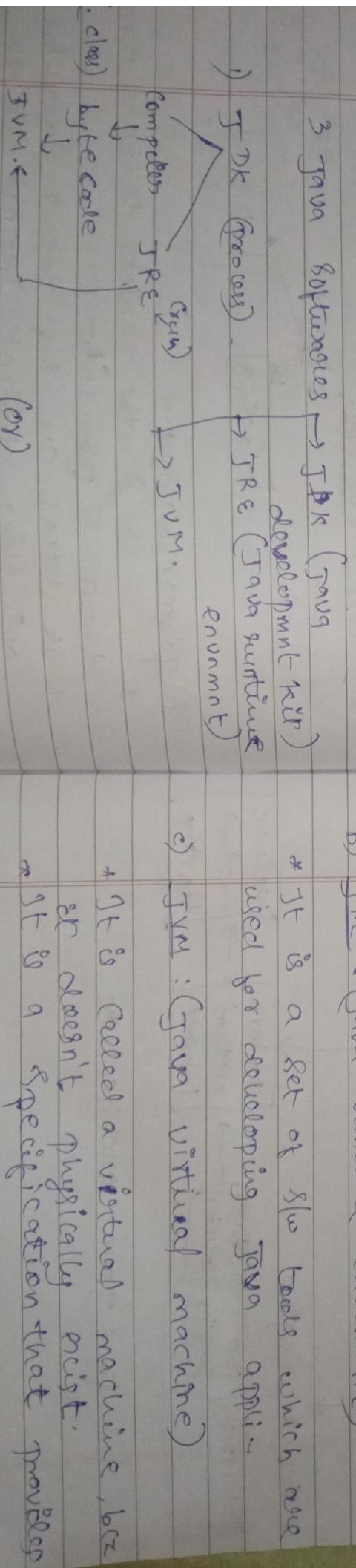
The primary motivation is to develop software for electronic device in second way negative way to develop world wide web (www).

→ Java working :

b) JRE : (Java runtime environment)

- * It is a set of S/W tools which are used for developing Java application.

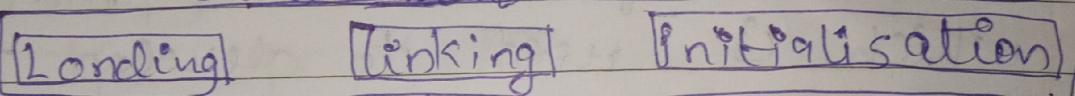
c) JVM : (Java virtual machine)



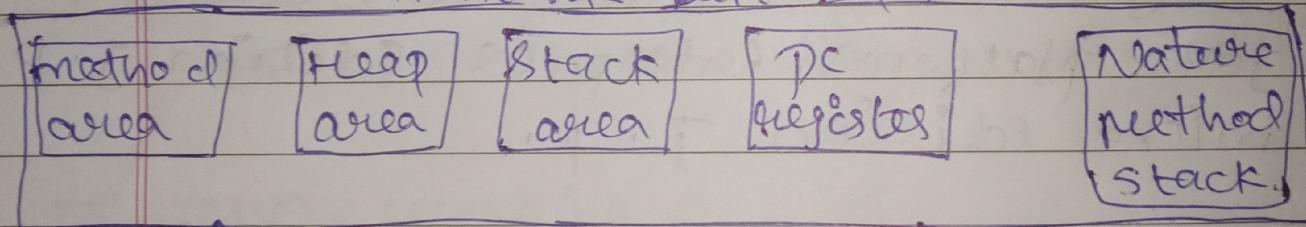
a runtime envmnt in which java byte code can be executed.

- * It can also run those prgms which are written in other lang & compiled to java byte code.

Class Loader



Runtime Data Area



Executor Engine

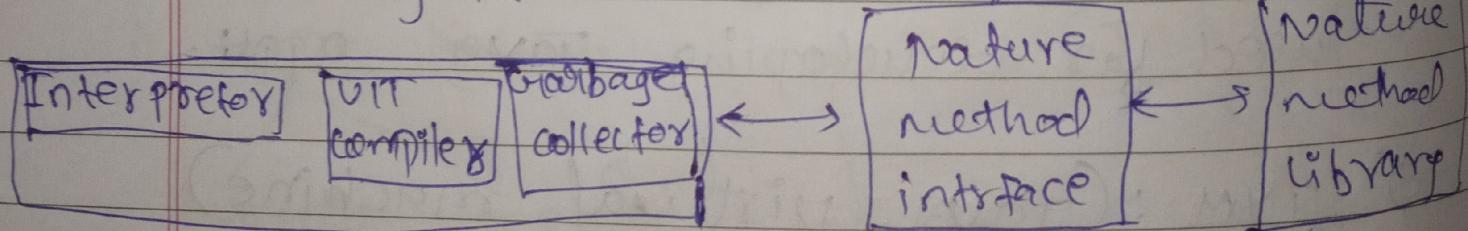


fig : Java architecture