Day 6:

JVM ( Java virtual machine)

- JVM is virtual machine physically not available

- It is set of classes & interfaces, which is responsible to execute class file

1) ClassLoaderSubsystem.

- ClassLoaderSubsystem is a parent class of BootstrapClassLoaderSubSystem.

- ClassLoaderSubsystem is responsible to load + execute class file.

- ClassLoaderSubsystem is a super class in JVM

2) BootstrapClassLoderSubsystem.

- BootstrapClassLoaderSubsystem is a child loader subsystem.

- BootstrapClassLoaderSubsystem is parent class of Extension class Loader subsystem

- Boot considered as a root class in jvm.

- Boot is responsible to deploy runtime environment.

- to deploy runtime environment, it execute at jar file.

3) ExtensionClassLoaderSubSystem-

- ExtensionClassLoaderSubSystem is child class of boot

- ExtensionClassLoaderSubSystem is parent class of application

- ExtensionClassLoaderSubSystem is responsible to check given application (run time environment).

4) ApplicationClassLoaderSubSystem-

-ApplicationClassLoaderSubSystem is a child class of ExtensionClassLoaderSubSystem.

- ApplicationClassLoaderSubSystem is responsible to load a class file from source folder to JVM

- to Load class File from source folder to JVM. It was subsystem variable.

- Hence it is system ClassLoader we can initialized system variable implicitly and explicitly too.

# Tupes of memory

1) Class Area memory.

-it also knows as method area memory

-it is responsible to store structure of class

-here non static elements of a class file will be stored during class loading process by using class name

-structure of a class will be stored once in a Lifecycle.

2) Heap Area memory.

-It is also known as main memory

-Heap area can be used to store object of class

- Heap area memory contains special memory like stack area memory, class area memory, PC register , string constant, meta space- thread pool.

-heap area memory consume approx 1/4 or RAM

- Non static variable considered in heap area memory

3) stack area memory

-Stack area memory can be used to store executes blocks. in LIFO manner.

-here blocks means method, loop, try, catch, condition, finally, instance, static block, synchronized black block

-After exit From each block, stack memory destroy that block, hence local variable can not be accesible from outside their block

-local variable can be considered in stack area memory.

-Stack area memory isa faster than heap area memory.

4) PC Register-

-It stands for program counter

-It is set of instruction regarding. memory management.

-by using pc register, we can manage memory

-to Increase heap area memory

5)meta space-

-meta space is responsible to stare elements of a class.

-static elements of class will be stored during class loading process by using class name

-before java 1.8 version, meta - space known as a perm Gen, it has been removed! replace with meta space

6)JNI Java native interface

-It is responsible to execute external application

