Day1 – 8 April 2025

DevOps tools

Docker

Docker Compose

CI and CD using Jenkin

AWS Overview -🡪 AWS modules

**Docker:** Docker is a platform used to develop, ship (created compress required dependencies which help to run the application) and run that application inside a docker container.

Container -🡪 run time environment.

JRE 🡪 Java run time environment

Web container : it is a type of container which is responsible to run servlet, jsp or spring application.

Database container : we can store the data in table format.

If we want to run any **application software** we need **system software(OS)** with run time environment.

Window

Linux

Unix

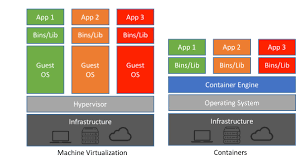
Multi OS machine.

**VMWare software** : this software help us to run multiple OS in local machine.

Base machine -🡪Window

With help of VM ware software we can run different OS machine.

With help of VMWare software we are making **abstract version of an OS**. This concept is known as **virtualization**. With help of docker we are creating **containerization**. Containerization is an **abstract version of an application**.



**Docker image**: Docker image is a read only template file which is responsible to run the application in docker container.

**dockerFile** : it is a type of text file which contains set of instruction like application details like java, python, angular, react et and external dependencies to run that application. Using Docker file we create Docker images.

**Docker container** : once you run the image the container become up. Container is responsible to run the application with help of images.

To run the container with help of docker image we need **docker engine** (docker software).

Docker container are light weighted, portable, isolated environment that allow application to run consistently across all machine with different OS.

**Docker hub:** docker hub is a type of an open source repository like git hub. Which help to push or publish and pull open source as well as public images.

After installed docker in local machine or Virtual Lab

Open the terminal or command prompt

**docker --version**

This command display the version of the docker.

**docker info**

This command provide the information about the docker

Non window user start with pre-fix

**sudo docker info**

**docker images**

this command is use to display all images present in your machine.

Pull the image

**docker pull imageName**

**docker pull hello-world**

**run the image**

**docker run imageName/imageId**

**docker run hello-world**

**hello-world:v1 first message**

**hello-world:v2 second message**

**hello-world:v3 third message**

**hello-world:v4 fourth message**