DevOps : Develop and Operation

Git

Maven

Gradle

Docker

CI and CD -- > Jenkin

Kubernetes

Docker : Docker is an Advanced OS virtualization software platform that makes it easier to create, deploy and run application in Docker container.

Virtualization : it is use to create virtual version of a resource such as server, database, or application or OS. Virtualization let us divided our system into a series of separate section, each one acting as distinct individual system.

VM software

Base is window 11

RAM – 16

Hard disk 1tb

VM

Guest OS

4

100gb

10 Guest OS

Docker is use to create Containerization application.

Container is known a engine or run time environment.

The Docker container is a very light weighted container that allow the developer or programmer to package up an application or program and deploy it as one with the help of inbuilt libraries and other dependencies.

Virtualization and Containerization

Virtualization is an abstract version of a physical machine.

Containerization is the abstract version of an application.

Container : this is a running process or instance of a image. When we run the container then our actual application up or run.

Docker Image : A Docker image that contains everything you need to run our application.

Docker file : Docker file is a blue print/ set of instruction that defines how our images is built.

Docker engine which help to run more than one container and every container is responsible to run specific application and those running instruction written using Docker file.

Docker hub : docker hub is like a Git hub which help to push and pull any images available in Docker hub registry

Create the docker hub account with our personal email id

Docker commands

docker --version

docker images : this command is use to find the images available in your current machine.

docker pull hello-world : this command is use to pull the pre-defined image ie hello-world

docker run hello-world/imageId This command is use to run the docker