**Docker:**

Docker is containerization program which is used for process isolation.

Docker creates containers which can be used to run the individual application as a separate process.

**Virtualization:**

This is the process of running the multiple operating systems on one single operating system.

This can be done by using software is called hypervisor.

The hypervisor installed on the host Operating system (OS) and on the hypervisor we install the guest operating systems.

This guest operating system will have application install in it.

The problem of virtualization the application on the guest operation system should pass through multiple layers in order to access the hardware resources.

**Tomcat, jenkins, my SQL🡪Guest OS1, OS2, OS3🡪Hypervisor🡪Host (OS)🡪Bare metal.**

**Containerzation:**

Docker is istall directly on the (OS) in the form of a thin linux kernal which is a docker engine.

On the docker engine we can directly install the required application.

These application have to pass through very less no.of layers in order to access the hardware resources.

**Docker image:** it is a combination of binaries and libraries which are necessary for an application.

**Container:** It is a running instance of a docker image.

**Docker work flow:**

The terminal where we can execute the docker command.

This docker client is forwards the Docker Daemon .

Docker Daemon is background process running the docker engine.it is responsible for executing the docker commands on docker image and containers.

**Docker cloud is two types:**

* **Public coud**
* **Private cloud**

**Public cloud:**

It is Hub.docker.com where all the docker images are present.

And any one can able to access the public cloud .

**Private cloud:** it is execlusively for an organization servers.

**Docker host:**

This is the machine where the docker is installed.