DOCKER

1. what is Docker?

**Ans:** Docker is a tool.This used for Package the application in side this package everything is their tools,libraries, and files.so run anywhere with out any problem.

1. what is image?

**Ans:**  Image is contains everything is needs for run the app.

This contains App code, programming language ,libraries,settings,

Os files. This is not running -it is only ready made package.

1. what is container?

Ans: The container is a running version of image.

Run the image docker create a container.

it’s a isolated Environment.

1. How docker internally works?

Ans: Docker help run the application inside the container.

Docker file -> Docker Engine -> Docker image -> Docker Container

Docker file:

Docker file is create own our. It’s just set of instruction for

Docker build an image automatically.

Step 1:use a image as a base

From <image>

Step 2: Set the working directory inside the container

WORKDIR /app

Step 3:Copy the Java source file to the container

Copy< filename>

Step4:Compile the source file

Run compile <filename>

Step5:run complie class

CMD [“filetype”,”filename”]

**Docker Engine:**

**docker build -t any name** [this for image name ] [run

command prompt]

Docker Engine reads the Docker file and creates an **image.**

**Docker image:**

In this image contains

App code,system tool,dependecies.

**Docker container:**

**docker run <image name>**  [run command prompt]

It’s create a new container.

1. **How it is different from virtual machine?**

**Ans:** In virtuval machine -it has a own full os,size is very high(GBs),speed slow,startup time -minutes,performance slow.

docker shares host os kernel,size is very light(MBs),startpu time-seconds,performance high.

1. **can we see the logs of our program running inside the container?**

**Ans:**

To debug errors

To see console output

To confirm your app is running correctly

Command:

**docker logs <container name or id>**

Program is still running command:

**docker logs -f <container\_name\_or\_id>**

1. **what is the purpose of DockerFile and docker-compose.yaml?**

**Ans:**

**Docker file:**

A **Docker file** is a **set of instructions** to build a Docker image. Includes base image, dependencies, code, commands

**Docker-compose.yaml:**

This file is used to **run multiple containers and manage easily.**

**Purpose:**

1. **Run multiple services like my app,frontend,data base.**
2. Connect containers with networking

8)**can I run the docker-compose.yaml without DockerFile, if yes how and why?**

****Ans:****

**Yes ,we have use offical image or ready made image we have only use docker-compose.yaml file without Dockerfile.**

**But we build a own image we have must create a docker file.**