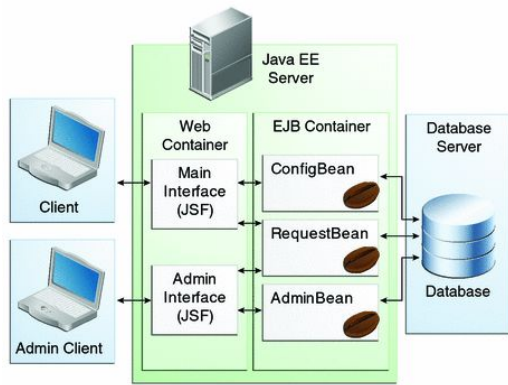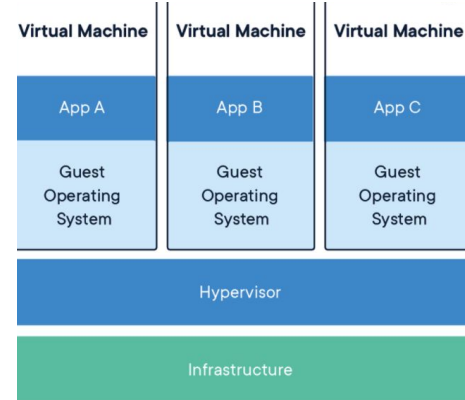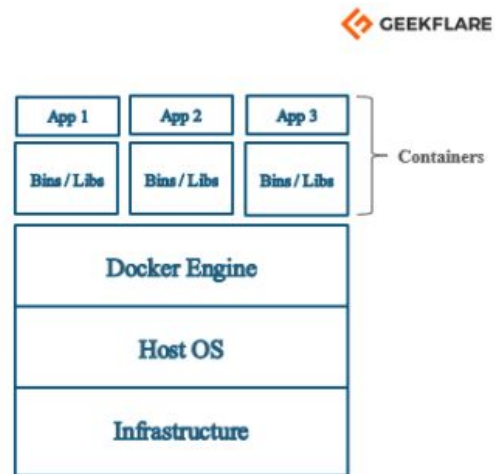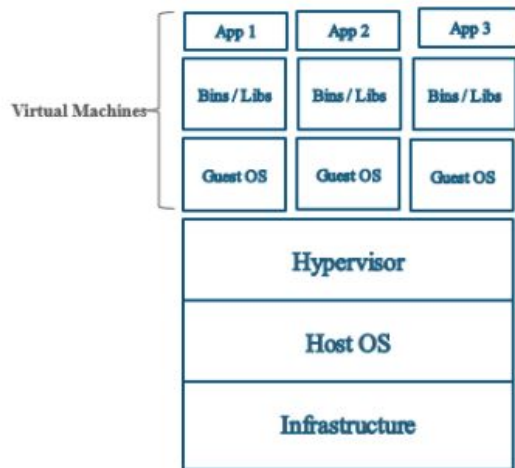# Docker

# Why Docker?

Machine

Virtual Machine

Virtual Machine vs Docker

What is Docker

Docker is an open platform for developing, shipping, and running applications. Docker enables you to separate your applications from your infrastructure so you can deliver software quickly. With Docker, you can manage your infrastructure in the same ways you manage your applications.
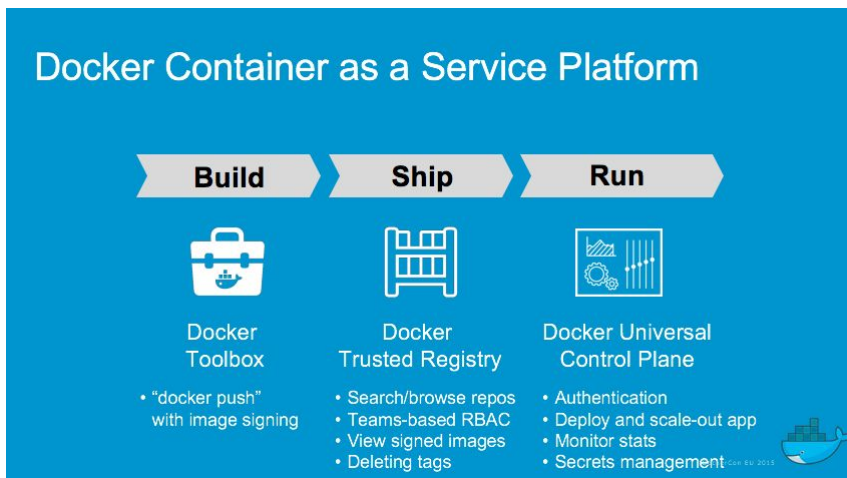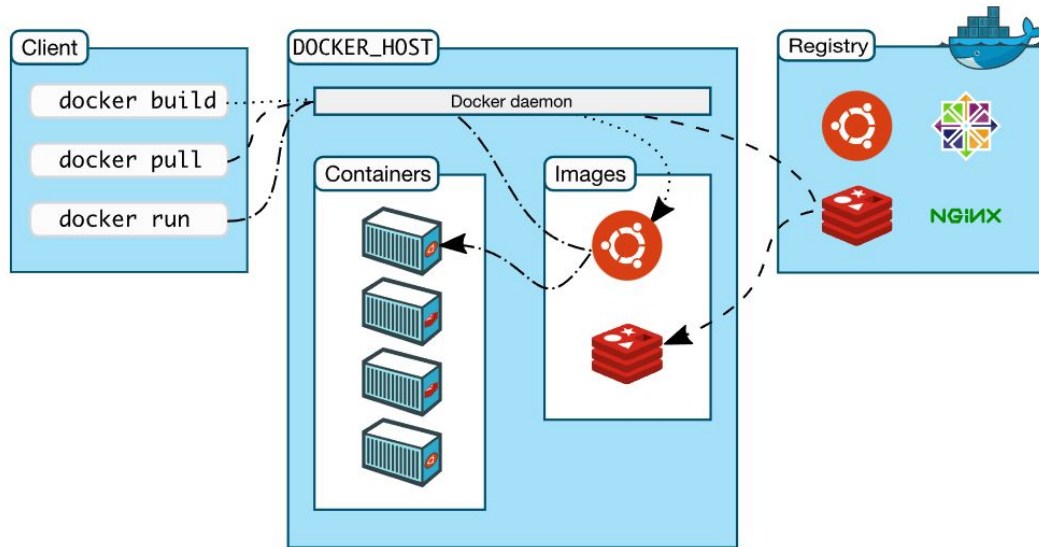
Docker architecture

Image and Container

An *image* is a read-only template with instructions for creating a Docker container. Often, an image is *based on* another image, with some additional customization. For example, you may build an image which is based on the `ubuntu` image, but installs the Apache web server and your application, as well as the configuration details needed to make your application run.

A container is a runnable instance of an image. You can create, start, stop, move, or delete a container using the Docker API or CLI. You can connect a container to one or more networks, attach storage to it, or even create a new image based on its current state.
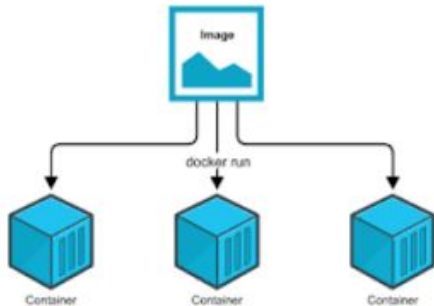
Exercises

1. Create a docker hub account.
2. Follow the steps described in this article https://docs.docker.com/get-started/02_our_app/ and push the image to your repository
3. Create myDataBase image, this image will be based on mysql image tag 8.0, then you will create the USER table with the following columns: username , name, last name, identification number, address, zip code city, state, country, then add 10 records and push the image to your repository
4. In your git create the docker folder and include the following:
   a. Link of your docker repository
   b. Screenshot of the two container running in your docker desktop
   c. Screenshot of mysql workbench querying the USER table