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Docker

Why Containers:-

First of all how I will deploy my ML model without container.

Data-science-App

Install a lot of dependencies like Anaconda, MySQL, Mongo. Windows Developer A

Install is well. Same.

After few years new developer joins Linux he use Linux Developer B.

If there is any dependencies that Linux doesn't support then there are a lot of problem for application to run.



QA Environment (had new app)

Install all dependencies QA Server if some missed then this application doesn't work.

Main Problem:- The installation of libraries, or dependencies or configuration.



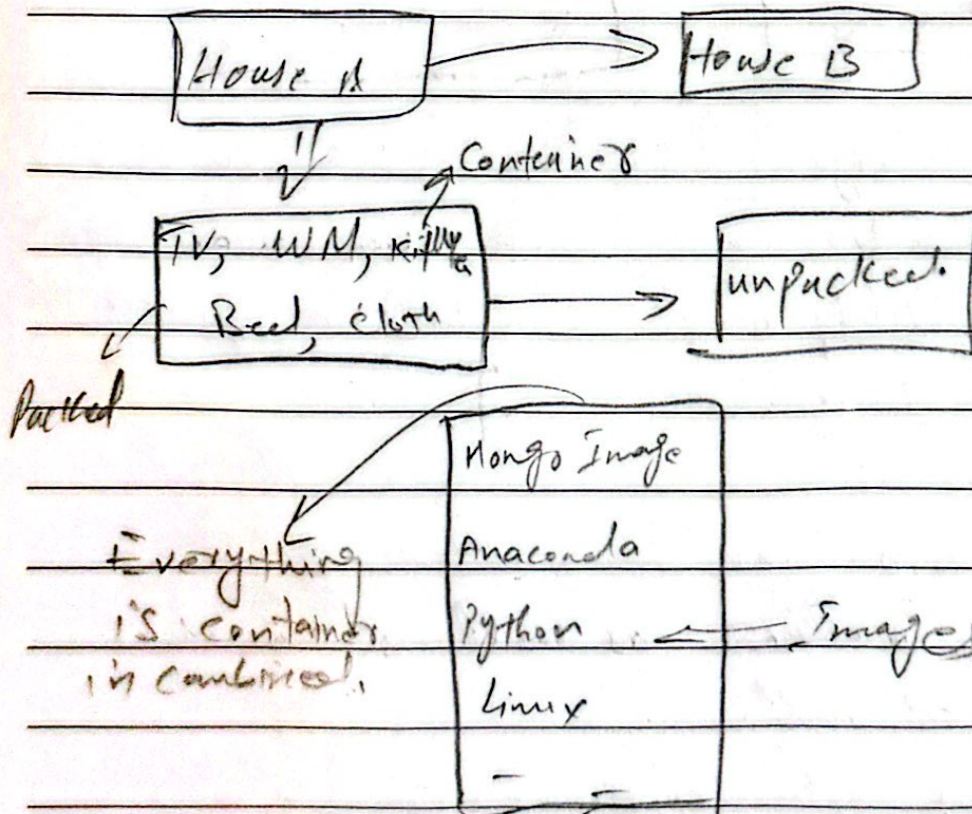
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These all problems are solved by using docker container.

- ① So, Container is a way to package application with all the necessary dependencies and configuration
- ② This Package is a portable artifacts, which easily share and move this package to any environment.
- ③ This makes the development and deployment more easy and efficient.





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Docker Image

Container

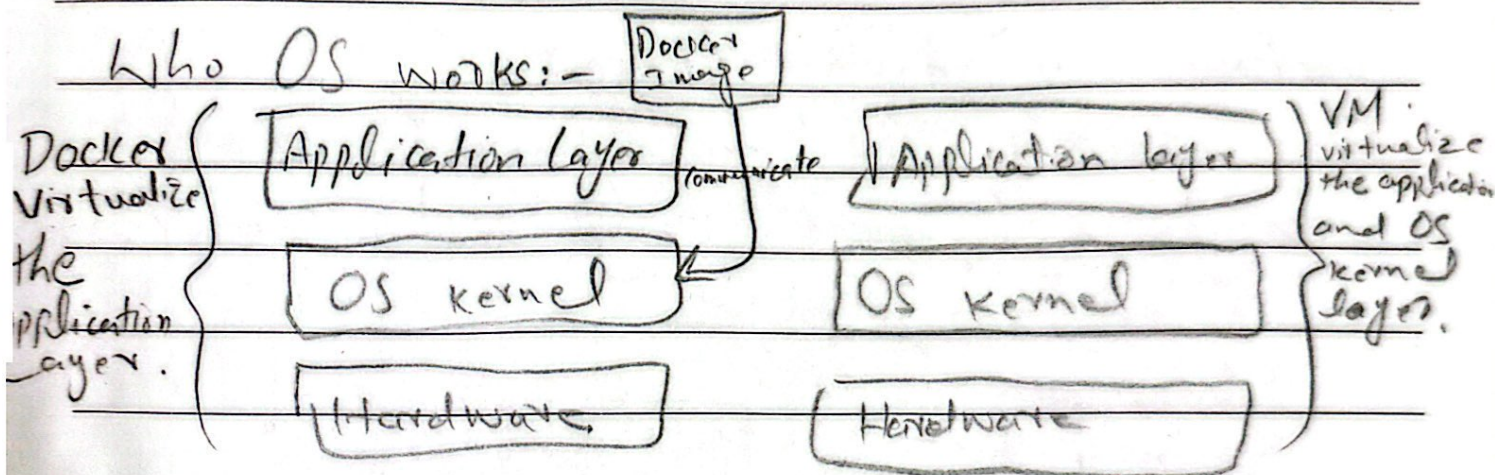
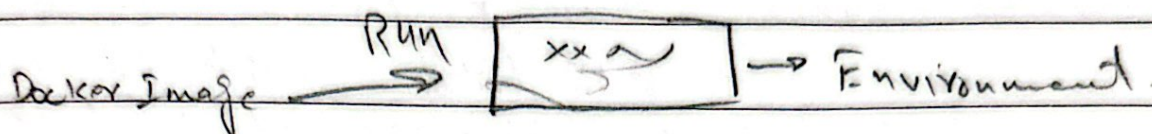
1. Package or Artifacts

2. Move or share the Artifacts
{ Small }

1. Docker Image → Run.

2. Start the application.

3. Create a Container - Running



→ It will be small in size

→ Start and run faster

→ Might have compatibility issues until windows 10.

→ This is huge in size

→ It is slower.

→ Install on any OS.

In host: 0.0.0.0 can be written so it will run on localhost as well as on the IP address as well.

Docker build -t welcome-app . ⇒ Command for Making a docker image.



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*could be
change*

docker run -p 5000:5000 welcome-app => To run.

docker login => Push to docker repository.

docker image rm -f welcome-app => Remove Image.

docker images => Total images.

docker push username/repository:latest } -> Push in repo.

Docker Compose:-

By using this we can use multiple containers at the same time.

Docker-compose.yml to run multi-container.

