192.168.1.4 : 7679

port forwarding
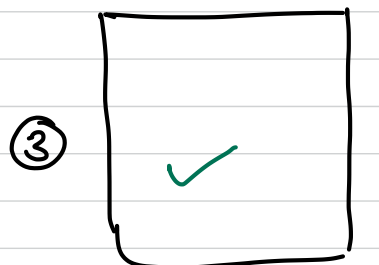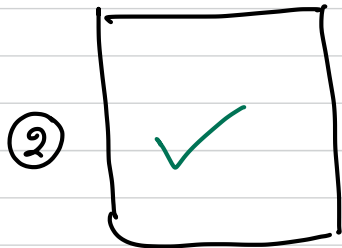
80

index.html

apache

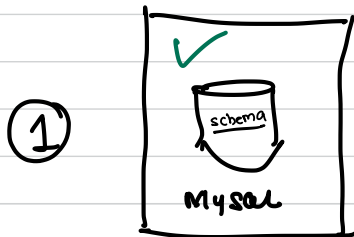container

Docker

OS

Docker Images
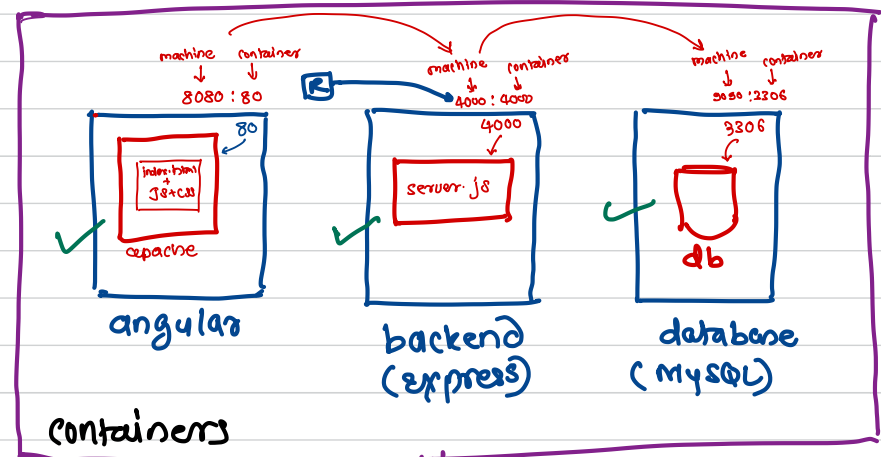
③ frontend (angular)

② backend (Express)

① Database (MySQL)

MySQL

schema

docker image push <>

docker image push <>

docker image push <>

docker image tag <old name> <login name>/<new name>

Docker Hub

Containers

machine → 8080 : 80 ← container

machine → 4000 : 4000 ← containers

machine → 3050 : 3306 ← containers

80

index·html + JS+CSS

apache

angular

4000

server·js

backend (Express)

3306

db

database (MySQL)
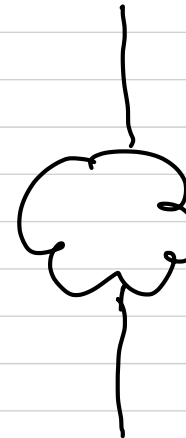
To build an image

① create a file Dockerfile

② add required instructions

FROM : base image
ENV : set environment variable
COPY : used to copy file from local machine to container
ADD : used to copy file from local machine to container
EXPOSE : used to expose port from container
CMD : used to execute command when container starts

③ build the image

> docker image build . -t < image name>

Database image
_____

① database : MySQL   :→ Base Image [Docker Hub]

② database schema
    → tables
      → Store procedures
    → views
      → functions

③ environment variables
    → MYSQL-ROOT-PASSWORD

    → MYSQL_ DATABASE

container   machine

                3306

        mydb (name)   MySQL
                                   (3306)
          MySQL

[9090]

                        mysql