

### Building Docker Images

`docker build -t <image_name>:<tag> <path_to_Dockerfile>` Build an image from a Dockerfile

### Dockerfile layering template

`FROM <image_name>:<tag>` Includes the OS & sometimes the runtime environment

`WORKDIR /app` Specifies which directory to work in

`COPY . .` Copying everything in the root directory into app directory

`RUN npm install` Installing dependencies

`EXPORT port_number` Specifies port number

`CMD ["command"]` Command runs in the container not image

`docker build -t <image name> .`

### Managing Docker Images

`docker images` List all images

`docker image rm <image_name_or_ID>` Remove one or more images

`docker image rm <image_name> -f` Forcefully delete an image even if it is used

### Running Docker Containers

`docker run --name <name> -p local_port:container_port<image_name>:<tag>` Run a command in a new container with name and specifying the local port

`docker ps` List running containers

`docker ps -a` List all containers

`docker stop <container_name_or_ID>` Stop one or more running containers

`docker start` `docker start <container_name_or_ID>`

`docker container rm <container_name>` Deleting containers

### Managing Docker Containers

`docker rm <container_name_or_ID>` Remove one or more containers

`docker exec -it <container_name_or_ID> <command>` Run a command in a running container

`docker logs <container_name_or_ID>` Fetch the logs of a container

### Docker Compose

`docker-compose up` Start services defined in a docker-compose.yml file

`docker-compose down --rmi all -v` Stop and remove containers, networks, images, and volumes

for managing multi-container applications

### Docker Compose Template

```

1 version: "3.8"
2 services:
3   api:
4     build: ./api
5     container_name: api_c
6     ports:
7       - '4000:4000'
8     volumes:
9       - ./api:/app
10      - ./app/node_modules
  
```

### Miscellaneous

`docker pull <image_name>:<tag>` Pull an image or a repository from a registry

`docker tag <source_image> <target_image>` Create a tag TARGET\_IMAGE that refers to SOURCE\_IMAGE

`docker push <image_name>:<tag>` Push an image or a repository to a registry

`docker inspect <container_name_or_image_name_or_ID>` Display detailed information on one or more containers or images

`docker system prune -a` Delete everything

### References

<https://youtube.com/playlist?list=PL4cUxeGkcC9hxjeEtdHFNYMtC-pjNBm3h7&si=sfdexWN70frLfUah>

