

### Building Docker Images

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

### Dockerfile layering template

<code>FROM &lt;image_name&gt;:&lt;tag&gt;</code>	Includes the OS & sometimes the runtime environment
<code>WORKDIR /app</code>	Specifies which directory to work in
<code>COPY . .</code>	Copying everything in the root directory into app directory
<code>RUN npm install</code>	Installing dependencies
<code>EXPORT port_number</code>	Specifies port number
<code>CMD ["command"]</code>	Command runs in the container not image

`docker build -t <image name> .`

### Managing Docker Images

<code>docker images</code>	List all images
<code>docker image rm &lt;image_name_or_ID&gt;</code>	Remove one or more images
<code>docker image rm &lt;image_name&gt; -f</code>	Forcefully delete an image even if it is used

### Running Docker Containers

<code>docker run --name &lt;name&gt; -p local_port:container_port&lt;image_name&gt;:&lt;tag&gt;</code>	Run a command in a new container with name and specifying the local port
<code>docker ps</code>	List running containers
<code>docker ps -a</code>	List all containers
<code>docker stop &lt;container_name_or_ID&gt;</code>	Stop one or more running containers
<code>docker start</code>	<code>docker start &lt;container_name_or_ID&gt;</code>
<code>docker container rm &lt;container_name&gt;</code>	Deleting containers

### Managing Docker Containers

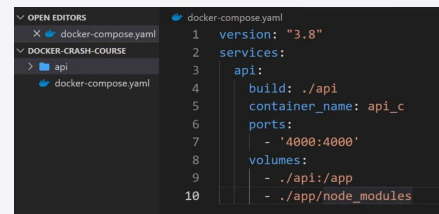
<code>docker rm &lt;container_name_or_ID&gt;</code>	Remove one or more containers
<code>docker exec -it &lt;container_name_or_ID&gt; &lt;command&gt;</code>	Run a command in a running container
<code>docker logs &lt;container_name_or_ID&gt;</code>	Fetch the logs of a container

### Docker Compose

<code>docker-compose up</code>	Start services defined in a docker-compose.yml file
<code>docker-compose down --rmi all -v</code>	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

<code>docker pull &lt;image_name&gt;:&lt;tag&gt;</code>	Pull an image or a repository from a registry
<code>docker tag &lt;source_image&gt; &lt;target_image&gt;</code>	Create a tag TARGET_IMAGE that refers to SOURCE_IMAGE
<code>docker push &lt;image_name&gt;:&lt;tag&gt;</code>	Push an image or a repository to a registry
<code>docker inspect &lt;container_or_image_name_or_ID&gt;</code>	Display detailed information on one or more containers or images
<code>docker system prune -a</code>	Delete everything

### References

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

