**This is ibtisam.**

ibtisam@mint-dell:~$ docker run -it --name con1 busybox (/bin/sh optional), just print messages; echo ; use alpine for softwares.

/ # uname -a

Linux b4dd6aca6a27 6.6.32-linuxkit #1 SMP PREEMPT\_DYNAMIC Thu Jun 13 14:14:43 UTC 2024 x86\_64 GNU/Linux

/ # cat /etc/os-release

cat: can't open '/etc/os-release': No such file or directory

/ # neofetch

sh: neofetch: not found

ibtisam@mint-dell:~$ docker run -it --name con2 alpine here /bin/sh isn" 22 seconds ago Exited (0) 19 seconds ago keen\_napier

1e10bb92c50e alpine "/bin/sh" About a minute ago Exited (0) About a minute ago amazing\_gagarin

ec9cf44637a8 alpine "ls" 3 minutes ago Exited (0) 3 minutes ago hardcore\_kowalevski

ibtisam@mint-dell:~$ docker run alpine uname -a

Linux 818e2ae5f2bf 6.6.32-linuxkit #1 SMP PREEMPT\_DYNAMIC Thu Jun 13 14:14:43 UTC 2024 x86\_64 Linux

ibtisam@mint-dell:~$ docker ps -a

CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES

818e2ae5f2bf alpine "uname -a" 14 seconds ago Exited (0) 10 seconds ago thirsty\_lamarr

d7825dfab906 alpine "echo Linux mint-del" 3 minutes ago Exited (0) 3 minutes ago keen\_napier

1e10bb92c50e alpine "/bin/sh" 4 minutes ago Exited (0) 4 minutes ago amazing\_gagarin

ec9cf44637a8 alpine "ls" 7 minutes ago Exited (0) 7 minutes ago hardcore\_kowalevski

ibtisam@mint-dell:~$

# docker start vs docker start --attach

ibtisam@mint-dell:~$ docker run --name hello hello-world

Hello from Docker!

To try something more ambitious, you can run an Ubuntu container with:

$ docker run -it ubuntu bash

ibtisam@mint-dell:~$ docker attach hello

You cannot attach to a stopped container, start it first

ibtisam@mint-dell:~$ docker start hello only starts the container

hello

ibtisam@mint-dell:~$ docker start --attach hello not only starts the container, but also prints the message

Hello from Docker!

To try something more ambitious, you can run an Ubuntu container with:

$ docker run -it ubuntu bash

ibtisam@mint-dell:~$

# bash vs sh vs /bin/bash vs /bin/sh

ibtisam@mint-dell:~$ docker run -it ubuntu bash

root@af97289d2e3d:/# ls

bin boot dev etc home lib lib64 media mnt opt proc root run sbin srv sys tmp usr var

root@af97289d2e3d:/# exit

exit

ibtisam@mint-dell:~$ docker run -it ubuntu sh

# ls

bin boot dev etc home lib lib64 media mnt opt proc root run sbin srv sys tmp usr var

# exit

ibtisam@mint-dell:~$ docker run -it ubuntu /bin/bash

root@48a3b483e539:/# whoami

root

root@48a3b483e539:/# exit

exit

ibtisam@mint-dell:~$ docker run -it ubuntu /bin/sh

# whoami

root

# exit

ibtisam@mint-dell:~$

# ubuntu image based container

The issue is that your container abc keeps exiting immediately after starting. This happens because the container's default command (/bin/bash) is completing and exiting, leaving the container in a stopped state.

Run a new Ubuntu container with interactive and terminal flags:

docker run -it --name abc ubuntu /bin/bash

This will start the container, and you'll be inside an interactive Bash shell.

ibtisam@mint-dell:~$ docker run -d -it --name abc ubuntu bash

167b14d4409b73a6b85b0f92316cf1a96289e7c96ba90987a7978843b783e03c

ibtisam@mint-dell:~$ docker start --attach abc

^Ccontext canceled

ibtisam@mint-dell:~$ docker start abc

abc

ibtisam@mint-dell:~$ docker exec -it abc /bin/bash

root@167b14d4409b:/# exit

exit

ibtisam@mint-dell:~$

# docker status

ibtisam@mint-dell:~$ systemctl status docker

docker.socket

ibtisam@mint-dell:~$ ls /var/run/docker.sock

/var/run/docker.sock

ibtisam@mint-dell:~$ systemctl status docker.socket

docker.service

ibtisam@mint-dell:~$ systemctl status docker

docker.socket

# port mapping

ibtisam@mint-dell:~$ docker run -d -it --name abc -p 8080:80 nginx

d0984c3a7b1947a2bfa49a30766b62e623a69da1cabfc99d93c3bddb784348c3

ibtisam@mint-dell:~$ curl http://localhost:8080

<!DOCTYPE html>

<html>

<head>

<title>Welcome to nginx!</title>

</body>

</html>

ibtisam@mint-dell:~$ netstat -tulpn | grep 8080

tcp6 0 0 :::8080 :::\* LISTEN -

ibtisam@mint-dell:~$

#lec-10

ibtisam@mint-dell:~/dockr/lec-10$ ls -a

. .. Dockerfile .dockerignore package.json src

ibtisam@mint-dell:~/dockr/lec-10$ cat Dockerfile

FROM node:alpine

ARG PORT=8000

ENV PORT=$PORT

WORKDIR /app

COPY . .

EXPOSE $PORT

RUN npm install

CMD npm start

ibtisam@mint-dell:~/dockr/lec-10$ docker build -t node-img .

View build details: docker-desktop://dashboard/build/desktop-linux/desktop-linux/x9lsp89ffkf0tvi0ub58o113g

ibtisam@mint-dell:~/dockr/lec-10$ docker run -d -it --name node1 -p 4040:8000 node-img

28b99a95345eb5b558b97fc32fc62d85568ffa22be6c466e6c81d7b738ea21aa

ibtisam@mint-dell:~/dockr/lec-10$ curl http://localhost:4040

Hello ibtisam, my sweetheartibtisam@mint-dell:~/dockr/lec-10$

ibtisam@mint-dell:~/dockr/lec-10$ docker logs node1

> Ibtisam my sweetheart@1.0.0 start

> nodemon src/index.js

[nodemon] 2.0.22

[nodemon] to restart at any time, enter `rs`

[nodemon] watching path(s): \*.\*

[nodemon] watching extensions: js,mjs,json

[nodemon] starting `node src/index.js`

Example app listening at http://localhost:8000

ibtisam@mint-dell:~/dockr/lec-10$ docker exec -it node1 /bin/sh

/app # ls

node\_modules package-lock.json package.json src

/app # npm -v

10.8.3

/app # node -v

v22.9.0

/app # exit

ibtisam@mint-dell:~/dockr/lec-10$ docker run -d -it --name node2 -p 4050:8080 -e PORT=8080 node-img

2b3190fc015b0e0246f9b1e345e128ef2c83629664cc8fa8cd84ec89e94416fd

ibtisam@mint-dell:~/dockr/lec-10$ curl http://localhost:4050

Hello ibtisam, my sweetheartibtisam@mint-dell:~/dockr/lec-10$

ibtisam@mint-dell:~/dockr/lec-10$ docker inspect node2

ibtisam@mint-dell:~/dockr/lec-10$ docker ps

CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES

2b3190fc015b node-img "docker-entrypoint.s" 54 minutes ago Up 54 minutes 0.0.0.0:4040->8000/tcp node1

#lec-12 q2

ibtisam@mint-dell:~/dockr/lec-12/q2$ ls

Dockerimage package.json server.js

ibtisam@mint-dell:~/dockr/lec-12/q2$ docker build -t server.js .

[+] Building 0.9s (1/1) FINISHED ERROR: failed to solve: failed to read dockerfile: open Dockerfile: no such file or directory

View build details: docker-desktop://dashboard/build/desktop-linux/desktop-linux/7y8plogepyj7c0gy2rcwxegt3

ibtisam@mint-dell:~/dockr/lec-12/q2$ ls

Dockerimage package.json server.js

ibtisam@mint-dell:~/dockr/lec-12/q2$ cat Dockerimage

FROM node:alpine

WORKDIR /usr/src/app

COPY . .

RUN npm install

EXPOSE 8080

CMD [ "node", "server.js" ]ibtisam@mint-dell:~/dockr/lec-12/q2$

ibtisam@mint-dell:~/dockr/lec-12/q2$ docker build -t server.js .

[+] Building 31.3s (10/10) FINISHED

ibtisam@mint-dell:~/dockr/lec-12/q2$ ls -a

. .. Dockerfile .dockerignore package.json server.js

ibtisam@mint-dell:~/dockr/lec-12/q2$ docker run -it -d --name server1 -p 7070:8080 server.js

43272288eabfdf101ca3ca2044722d08787db84ab0c0342cc9450dee765c62ae

ibtisam@mint-dell:~/dockr/lec-12/q2$ curl http://localhost:7070

Hello sweetheart, my ibtisamibtisam@mint-dell:~/dockr/lec-12/q2$ docker logs server1

Running on http://0.0.0.0:8080

ibtisam@mint-dell:~/dockr/lec-12/q2$ docker exec -it server1 /bin/sh

/usr/src/app # ls

node\_modules package-lock.json package.json server.js

/usr/src/app #

#lec-12 q3

ibtisam@mint-dell:~/dockr/lec-12/q2$ docker run --rm --name nginx -d -p 8000:127.0.0.1:8081/tcp nginx

docker: invalid IP address: 8000.

See 'docker run --help'.

ibtisam@mint-dell:~/dockr/lec-12/q2$ docker run --rm --name nginx -d -p 127.0.0.1:80:8081/tcp nginx

54cabfb49d378f8da6750d124cc300a829ddac8ce3e70b6288eaa79dddb52fb4

ibtisam@mint-dell:~/dockr/lec-12/q2$ curl http://localhost:80

curl: (52) Empty reply from server

ibtisam@mint-dell:~/dockr/lec-12/q2$ docker port nginx

8081/tcp -> 127.0.0.1:80

ibtisam@mint-dell:~/dockr/lec-12/q2$

# Docker volume path in base machine (docker area)

ibtisam@mint-dell:~/dockr/lec-12/q2$ sudo ls /var/lib/docker/image/overlay2/imagedb/metadata/sha256

ibtisam@mint-dell:~/dockr/lec-12/q2$ sudo ls /var/lib/docker/image/overlay2/imagedb/content/sha256

129dd9f673673e9e8507ac837dcd9eaa3906469c10ef4aa63d0cac1f1dfa6b3a 49643eaa8fffd3f2efbe16c22eba6662b5df4ad55a5cf35ea079d4429673c760

ibtisam@mint-dell:~/dockr/lec-12/q2$ docker images --no-trunc

REPOSITORY TAG IMAGE ID CREATED SIZE

server.js latest sha256:b3f0f31c7439ab12e9e31fb20a075e3020031a61ab332c3860093aeec52cacd7 3 hours ago 160MB

node-img latest sha256:ab84540a839a7764759bd0a9d611cda579c0fae4ce9616a650da35b36f79cd7d 4 hours ago 164MB

node-img3 latest sha256:78b785962605fe5e87f4e6515af0d61d7b0cb5ea12fb60d10d66f396c35765f9 6 hours ago 164MB

bash latest sha256:91698992478c66011fc925293008447d42903e2eada741689c7d96f22a5d2a1b 37 hours ago 14.4MB

myubuntu v1 sha256:dcc67a5e34471f90bc9b8fe1fc1bfe7e05d45ac933da122466cd6dd3c9107289 4 days ago 993MB

python latest sha256:ea2ebd905ab246ece277be25520ca0cfe82758b3d2b369e2fd69b374c1d6c7fa 2 weeks ago 1.01GB

python alpine sha256:6b6778b6dd42ae9e4d2cda76e59cba004d64808d2fea220c3074e1e4ab467810 2 weeks ago 46.8MB

jenkins/jenkins latest sha256:fd13cb1b731505dd9231d290ab9688bb33961b8f5cb7d9acbb3375c43aa0764c 4 weeks ago 471MB

ubuntu/apache2 latest sha256:e74a41ebfecfc482123032675228e5ce5c29590447dd78532351648d766ce32a 5 weeks ago 191MB

ubuntu latest sha256:edbfe74c41f8a3501ce542e137cf28ea04dd03e6df8c9d66519b6ad761c2598a 7 weeks ago 78.1MB

alpine latest sha256:324bc02ae1231fd9255658c128086395d3fa0aedd5a41ab6b034fd649d1a9260 2 months ago 7.8MB

nginx latest sha256:900dca2a61f5799aabe662339a940cf444dfd39777648ca6a953f82b685997ed 3 months ago 188MB

kindest/node <none> sha256:9319cf209ac58c5f091c9cb183fdd8784e753cfb5b1b3cb6692b26abd8d4efac 4 months ago 974MB

gcr.io/k8s-minikube/kicbase v0.0.44 sha256:5a6e59a9bdc0d32876fd51e3702c6cb16f38b145ed5528e5f0bfb1de21e70803 4 months ago 1.26GB

kindest/haproxy v20230606-42a2262b sha256:91485233244656d9d093529f97e69c04836ee3b02d3e58f166df9941a122dc16 15 months ago 17.6MB

busybox latest sha256:65ad0d468eb1c558bf7f4e64e790f586e9eda649ee9f130cd0e835b292bbc5ac 16 months ago 4.26MB

hello-world latest sha256:d2c94e258dcb3c5ac2798d32e1249e42ef01cba4841c2234249495f87264ac5a 17 months ago 13.3kB

blueedge/win11react latest sha256:3962edd901c475987f14cd10e77e79a1d89c5070c4dd05ffa42ceec9e88f6354 2 years ago 156MB

linuxacademycontent/ckad-nginx 1.0.0 sha256:4f7ca0526083fcd36ca9070e18daddec077ec420b069c6703a1d628c5475c722 2 years ago 133MB

linuxacademycontent/ckad-nginx green sha256:7d556b71972d9ec5605532b0a49fd6a08b0a517f8ce00272803a3e744e416bd4 2 years ago 133MB

linuxacademycontent/ckad-nginx blue sha256:079aece5e6b201221d614061e234ff302db85c46633c60b54ff6b01288f16254 2 years ago 133MB

kodekloud/webapp-conntest latest sha256:4d20286cbe6802f80d8547f15dcf8b8b7dc78a16de81ad04ecfd410f291ecc65 5 years ago 180MB

ibtisam@mint-dell:~/dockr/lec-12/q2$ sudo ls /var/lib/docker/image/overlay2/imagedb/content/sha256/129dd9f673673e9e8507ac837dcd9eaa3906469c10ef4aa63d0cac1f1dfa6b3a

/var/lib/docker/image/overlay2/imagedb/content/sha256/129dd9f673673e9e8507ac837dcd9eaa3906469c10ef4aa63d0cac1f1dfa6b3a

ibtisam@mint-dell:~/dockr/lec-12/q2$ sudo cat /var/lib/docker/image/overlay2/imagedb/content/sha256/129dd9f673673e9e8507ac837dcd9eaa3906469c10ef4aa63d0cac1f1dfa6b3a

root@mint-dell:/var/lib/docker# ls -l

total 44

drwx--x--x 4 root root 4096 Aug 10 01:24 buildkit

drwx--x--- 2 root root 4096 Aug 10 01:24 containers

-rw------- 1 root root 36 Aug 10 01:24 engine-id

drwx------ 3 root root 4096 Aug 10 01:24 image

drwxr-x--- 3 root root 4096 Aug 10 01:24 network

drwx--x--- 15 root root 4096 Sep 22 22:10 overlay2

drwx------ 4 root root 4096 Aug 10 01:24 plugins

drwx------ 2 root root 4096 Sep 22 22:10 runtimes

drwx------ 2 root root 4096 Aug 10 01:24 swarm

drwx------ 2 root root 4096 Sep 25 15:47 tmp

drwx-----x 2 root root 4096 Sep 22 22:10 volumes

#Volume

ibtisam@mint-dell:~/dockr/lec-14$ docker volume create my-vol

my-vol

ibtisam@mint-dell:~/dockr/lec-14$ docker volume ls

DRIVER VOLUME NAME

local 23ccbf365d5a3b719c19cb9c546a106fc664e3361fd4a2073aa94e739791702d

local 29306faab619f8dd6bf8f5234a6e2db9e4810a064fac4315ad16558abf6d7d21

local a2a6839241b4b0d4eae76e8dc4d8c9e4cfb3eb3467632340a3c8b93a004c7bc9

local a53596c4f1273128b0df3f11771075f00e61a2fa55b54030f2b95bffd39fe35f

local b8c43804f69017544b8e62e3527fad4b6ac4602fa90c0f0a05204851ebe94d9a

local c10dd2a119f81d12dc0290f36f9c849e15310bd7df35592e3872d21eebffdb71

local my-vol

ibtisam@mint-dell:~/dockr/lec-14$ docker inspect my-vol

[

{

"CreatedAt": "2024-09-25T12:59:24Z",

"Driver": "local",

"Labels": null,

"Mountpoint": "/var/lib/docker/volumes/my-vol/\_data",

"Name": "my-vol",

"Options": null,

"Scope": "local"

}

]

ibtisam@mint-dell:~/dockr/lec-14$ docker run -it -d --name con1 -v my-vol:/vol-1 alpine

98f9b2abe1fdcc757e27622384ed9cee62e15fbf92e59e978c9073570215947a

ibtisam@mint-dell:~/dockr/lec-14$ docker exec -it con1 /bin/sh

/ # cd vol-1

/vol-1 # echo "this is from con1, vol-1" > file1

/vol-1 # exit

ibtisam@mint-dell:~/dockr/lec-14$ docker inspect my-vol

"Mounts": [

{

"Type": "volume",

"Name": "my-vol",

"Source": "/var/lib/docker/volumes/my-vol/\_data",

"Destination": "/vol-1",

"Driver": "local",

"Mode": "z",

"RW": true,

"Propagation": ""

}

ibtisam@mint-dell:~/dockr/lec-14$ sudo ls /var/lib/docker/volumes/my-vol/\_data

ls: cannot access '/var/lib/docker/volumes/my-vol/\_data': No such file or directory

ibtisam@mint-dell:~/dockr/lec-14$ docker run -it -d --name con2 --mount src=my-vol,dst=/vol-2 alpine

89691dd190b7411c98307675c7d64999b94e3b8ca358a7f9794b1e5eef545720

ibtisam@mint-dell:~/dockr/lec-14$ docker exec -it con2 /bin/sh

/ # ls

bin dev etc home lib media mnt opt proc root run sbin srv sys tmp usr var vol-2

/ # cd vol-2/

/vol-2 # echo "this is from vol-2 con2" > file2.txt

/vol-2 # ls

file1 file2.txt

/vol-2 # mv file1 file1.txt

/vol-2 # ls

file1.txt file2.txt

ibtisam@mint-dell:~/dockr/lec-14$ sudo ls /var/lib/docker/volumes/my-vol

ls: cannot access '/var/lib/docker/volumes/my-vol': No such file or directory

ibtisam@mint-dell:~/dockr/lec-14$ docker inspect con2

"Mounts": [

{

"Type": "volume",

"Name": "my-vol",

"Source": "/var/lib/docker/volumes/my-vol/\_data",

"Destination": "/vol-2",

"Driver": "local",

"Mode": "z",

"RW": true,

"Propagation": ""

ibtisam@mint-dell:~/dockr/lec-14$ docker run -it --rm --mount source=my-vol,target=/vol alpine /bin/sh

/ # cd vol/

/vol # cat file1.txt

this is from con1, vol-1

/vol # cat file2.txt

this is from vol-2 con2

/vol #

# docker bind

ibtisam@mint-dell:~/dockr$ mkdir bind

ibtisam@mint-dell:~/dockr$ cd bind

ibtisam@mint-dell:~/dockr/bind$ pwd

/home/ibtisam/dockr/bind

ibtisam@mint-dell:~/dockr/bind$ echo "this is from local host" > localhost.txt

ibtisam@mint-dell:~/dockr/bind$ cat localhost.txt

this is from local host

ibtisam@mint-dell:~/dockr/bind$

ibtisam@mint-dell:~/dockr/lec-14$ docker run -it -d --name bind1 --mount type=bind,src=/home/ibtisam/dockr/bind,dst=/bind1 alpine

df10edeb6c1c4cc21eac0d257ba1a2b7637f591c33f0d42c2297fd7cf5e2103a

ibtisam@mint-dell:~/dockr/lec-14$ docker inspect bind1

"Mounts": [

{

"Type": "bind",

"Source": "/home/ibtisam/dockr/bind",

"Destination": "/bind1",

"IPAddress": "172.17.0.2",

ibtisam@mint-dell:~/dockr/lec-14$ docker exec -it bind1 /bin/sh

/ # ls

bin bind1 dev etc home lib media mnt opt proc root run sbin srv sys tmp usr var

/ # cd bind1

/bind1 # ls

localhost.txt

/bind1 # echo "this is from bind1 container" > bind1.txt

/bind1 # ping 172.17.0.2

PING 172.17.0.2 (172.17.0.2): 56 data bytes

64 bytes from 172.17.0.2: seq=0 ttl=64 time=0.277 ms

64 bytes from 172.17.0.2: seq=1 ttl=64 time=0.160 ms

64 bytes from 172.17.0.2: seq=2 ttl=64 time=0.226 ms

64 bytes from 172.17.0.2: seq=3 ttl=64 time=0.151 ms

^C

--- 172.17.0.2 ping statistics ---

4 packets transmitted, 4 packets received, 0% packet loss

round-trip min/avg/max = 0.139/0.176/0.277 ms

/bind1 # exit

ibtisam@mint-dell:~/dockr/lec-14$ ls /home/ibtisam/dockr/bind/

bind1.txt localhost.txt

ibtisam@mint-dell:~/dockr/lec-14$

ibtisam@mint-dell:~/dockr/lec-14$ docker run -it -d --name web1 -p 7666:80 -v /home/ibtisam/dockr/healet-html:/usr/share/nginx/html/ nginx

1e11c74d7321a07788efadc968a817c977c1100d4321b662e94e2982b3b57350

ibtisam@mint-dell:~/dockr/lec-14$ docker inspect web1

"Mounts": [

{

"Type": "bind",

"Source": "/host\_mnt/home/ibtisam/dockr/healet-html",

"Destination": "/usr/share/nginx/html",

ibtisam@mint-dell:~/dockr/lec-10$ pwd

/home/ibtisam/dockr/lec-10

ibtisam@mint-dell:~/dockr/lec-10$ docker build -t v-node .

ibtisam@mint-dell:~/dockr/lec-10$ docker run -it -d -p 6500:8000 --mount type=bind,src=/home/ibtisam/dockr/lec-10/src,dst=/app/src v-node

51db5631a19b450d835cf2b4df374c40d457199d84a1b4685a53ce3357ba60ae

ibtisam@mint-dell:~/dockr/lec-10$ curl http://localhost:6500

Hello ibtisam, my sweetheartibtisam@mint-dell:~/dockr/lec-10$

ibtisam@mint-dell:~/dockr/lec-10$ code .

ibtisam@mint-dell:~/dockr/lec-10$ curl http://localhost:6500

Hello ibtisam, my loveibtisam@mint-dell:~/dockr/lec-10$

# docker multi-stage #lec-16

ibtisam@mint-dell:~/dockr/lec-16$ ls -a

. .. Dockerfile .dockerignore package.json src

ibtisam@mint-dell:~/dockr/lec-16$ code .

ibtisam@mint-dell:~/dockr/lec-16$ tree

.

package.json

index.js

2 directories, 3 files

ibtisam@mint-dell:~/dockr/lec-16$ cat Dockerfile

FROM node:alpine as abc

ARG PORT=8000

ENV PORT=$PORT

WORKDIR /app

COPY . .

EXPOSE $PORT

RUN npm install --only=prod

CMD npm run start:prod

FROM abc as xyz

RUN npm install --only=dev

CMD npm start

ibtisam@mint-dell:~/dockr/lec-16$ docker build -t node-abc --target abc .

ibtisam@mint-dell:~/dockr/lec-16$ docker build -t node-xyz --target xyz .

ibtisam@mint-dell:~/dockr/lec-16$ docker images | head -n 3

REPOSITORY TAG IMAGE ID CREATED SIZE

node-xyz latest c18f62427d39 26 seconds ago 164MB dev

node-abc latest 2a55acc1fbad About a minute ago 163MB prod

ibtisam@mint-dell:~/dockr/lec-16$ ls

Dockerfile package.json src

ibtisam@mint-dell:~/dockr/lec-16$ pwd

/home/ibtisam/dockr/lec-16

ibtisam@mint-dell:~/dockr/lec-16$ docker run -it -d --name prod -p 8900:8000 --mount type=bind,src=$PWD/src,dst=/app/src node-abc

1fa99404f07f53ef5ad08f779c0adfb24b26aafbfbc3e0e4002c042aa56e6aac

ibtisam@mint-dell:~/dockr/lec-16$ curl http://localhost:8900

Hello ibtisam, my loveibtisam@mint-dell:~/dockr/lec-16$ curl http://localhost:8900

Hello ibtisam, my loveibtisam@mint-dell:~/dockr/lec-16$ Change not shown, because its dev, nodemon dependencies are installed.

# docker compose # lec-17

MY\_ENV=prod

docker build -t node:$prod --target $prod .

ibtisam@mint-dell:~/dockr/lec-16$ MY\_ENV=abc

ibtisam@mint-dell:~/dockr/lec-16$ docker build -t node:$MY\_ENV --target $MY\_ENV .

ibtisam@mint-dell:~/dockr/lec-16$ MY\_PORT=8001

ibtisam@mint-dell:~/dockr/lec-16$ docker run -it -d --name con1 -e PORT=$MY\_PORT -p 7600:$MY\_PORT --mount type=bind,src=$PWD/src,dst=/app/src node:$MY\_ENV

0f9d0ccc6a47150525992210190edf05c6de8c8bd1937cf83c5525a94367d49f

ibtisam@mint-dell:~/dockr/lec-16$ curl http://localhost:7600

Hello sweetheartibtisam@mint-dell:~/dockr/lec-16$ cat Dockerfile

FROM node:alpine as abc

ARG PORT=8000

ENV PORT=$PORT

WORKDIR /app

COPY . .

EXPOSE $PORT

RUN npm install --only=prod

CMD npm run start:prod

FROM abc as xyz

RUN npm install --only=dev

CMD npm start

ibtisam@mint-dell:~/dockr/lec-16$ MY\_PORT=8002

ibtisam@mint-dell:~/dockr/lec-16$ MY\_ENV=xyz

ibtisam@mint-dell:~/dockr/lec-16$ docker build -t node:$MY\_ENV --target $MY\_ENV .

ibtisam@mint-dell:~/dockr/lec-16$ docker run -it -d --name con2 -e PORT=$MY\_PORT -p 7700:$MY\_PORT --mount type=bind,src=$PWD/src,dst=/app/src node:$MY\_ENV

86de9d1211cc2a933d1bcc3c937726aa4dc03941128733d7d1588bc843f53efc

ibtisam@mint-dell:~/dockr/lec-16$ curl http://localhost:7700

Hello sweetheartibtisam@mint-dell:~/dockr/lec-16$

Docker Compose is a tool for defining and running multi-container Docker applications. It allows you to manage a group of services (containers) together using a YAML file (docker-compose.yml).

ibtisam@mint-dell:~/dockr/lec-17$ docker-compose

Command 'docker-compose' not found, but can be installed with:

sudo apt install docker-compose

ibtisam@mint-dell:~/dockr/lec-17$ docker compose version

Docker Compose version v2.28.1-desktop.1

ibtisam@mint-dell:~/dockr/lec-17$ ls -a

. .. Dockerfile .dockerignore package.json src

ibtisam@mint-dell:~/dockr/lec-17$

ibtisam@mint-dell:~/dockr/lec-17$ code .

ibtisam@mint-dell:~/dockr/lec-17$ touch docker-compose.yml

ibtisam@mint-dell:~/dockr/lec-17$ touch .env

ibtisam@mint-dell:~/dockr/lec-17$ docker images | head -n 3

REPOSITORY TAG IMAGE ID CREATED SIZE

node xyz b229c0c20c6f About an hour ago 164MB

node abc 33b8a107264f 2 hours ago 163MB

ibtisam@mint-dell:~/dockr/lec-17$ pwd

/home/ibtisam/dockr/lec-17

ibtisam@mint-dell:~/dockr/lec-17$ docker compose up -d

6.0s

ibtisam@mint-dell:~/dockr/lec-17$ docker compose ps -a

WARN[0000] /home/ibtisam/dockr/lec-17/docker-compose.yml: `version` is obsolete

NAME IMAGE COMMAND SERVICE CREATED STATUS PORTS

lec-17-my-app-1 node:xyz "docker-entrypoint.s" 11 minutes ago Up 11 minutes 8000/tcp, 0.0.0.0:7911->9600/tcp lec-17-my-app-1

ibtisam@mint-dell:~/dockr/lec-17$ curl http:localhost:7911

curl: (3) URL rejected: Port number was not a decimal number between 0 and 65535

ibtisam@mint-dell:~/dockr/lec-17$ curl http://localhost:7911

Hello ibtisam, my loveibtisam@mint-dell:~/dockr/lec-17$

ibtisam@mint-dell:~/dockr/lec-17$ cat docker-compose.yml

version: "3.8"

services:

my-app:

image: node:$MY\_ENV

ports:

- "7911:$MY\_PORT"

volumes:

- $PWD/src:/app/src

environment:

- PORT=$MY\_PORT

ibtisam@mint-dell:~/dockr/lec-17$

ibtisam@mint-dell:~/dockr/lec-17$ cat .env

MY\_ENV=xyz

MY\_PORT=9600ibtisam@mint-dell:~/dockr/lec-17$

ibtisam@mint-dell:~/dockr/lec-10$ docker compose ps -a

no configuration file provided: not found

ibtisam@mint-dell:~/dockr/lec-10$ docker ps -a

CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES

c34738609434 node:xyz "docker-entrypoint.s docker-compose.yml

package.json

src

Network 02\_default Created 1.1s

" 21 seconds ago Up 18 seconds 8000/tcp, 0.0.0.0:7911->6665/tcp 02-my-app-1

ibtisam@mint-dell:~/dockr/lec-17/02$ docker compose ps -a

WARN[0000] /home/ibtisam/dockr/lec-17/02/docker-compose.yml: `version` is obsolete

NAME IMAGE COMMAND SERVICE CREATED STATUS PORTS

02-my-app-1 node:xyz "docker-entrypoint.s" 34 seconds ago Created lec-18

ab5799ba694e node:xyz "docker-entrypoint.s" 44 hours ago Up 35 hours 127.0.0.1:43807->6443/tcp ibtisam-external-load-balancer

bdc84c1e7915 kindest/node:v1.30.0 "/usr/local/bin/entr" 44 hours ago Up 44 hours 127.0.0.1:39271->6443/tcp ibtisam-control-plane2

2a28a4fdaef1 kindest/node:v1.30.0 "/usr/local/bin/entr" 44 hours ago Up 44 hours ibtisam-worker

ibtisam@mint-dell:~/k8s/10-1$ cat Dockerfile

FROM nginx

RUN echo "this is ibtisam"

ENTRYPOINT [ "sleep" ]

CMD [ "10" ]

10/13/24

ibtisam@mint-dell:~/dockr$ docker run -it -d ubuntu /bin/sh

3d41cc85b2b8c3aea183df7715cb419ce8d7b177cf0188d4221b9b06d3fbcd92

ibtisam@mint-dell:~/dockr$ docker run -it -d ubuntu

b6dc11131c2501a741a74dcdc0495c5a14719fcf394af8fc5fdb636982332198

ibtisam@mint-dell:~/dockr$ docker run -it -d alpine

5b276d0637aa444b93009c5993231d5856f865f57481099fbfc54488eb4d3931

ibtisam@mint-dell:~/dockr$ docker run -it -d busybox

0a4101ebd6fe118b52eff0fd882bd0c232f84e0e70ddc5319a54ff90e3786f84

ibtisam@mint-dell:~/dockr$ docker ps

CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES

0a4101ebd6fe busybox "sh" 12 seconds ago Up 10 seconds charming\_antonelli

5b276d0637aa alpine "/bin/sh" 36 seconds ago Up 34 seconds awesome\_lederberg

b6dc11131c25 ubuntu "/bin/bash" 2 minutes ago Up 2 minutes recursing\_merkle

3d41cc85b2b8 ubuntu "/bin/sh" 3 minutes ago Up 3 minutes adoring\_williams

c79c786e1db9 portainer/portainer-ce "/portainer" 2 hours ago Up 2 hours 0.0.0.0:8000->8000/tcp, 0.0.0.0:9443->9443/tcp, 9000/tcp portainer

ibtisam@mint-dell:~/dockr$