



UNIVERSITY WITH A PURPOSE

**UNIVERSITY OF PETROLEUM  
& ENERGY STUDIES**

**Dehradun**

**APPLICATION  
CONTAINERIZATION**

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**Course: B. TECH CSE DevOps (2018-22)**

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# Experiment-4

## Docker Images

### Step-1:

```
rakshit@rakshit-virtual-machine:~$ ls
Desktop  Downloads  Music  Public  Videos
Documents  google-chrome-stable_current_amd64.deb  Pictures  Templates
rakshit@rakshit-virtual-machine:~$ mkdir docker_lab
rakshit@rakshit-virtual-machine:~$ cd Docker
bash: cd: Docker: No such file or directory
rakshit@rakshit-virtual-machine:~$ cd docker_lab
rakshit@rakshit-virtual-machine:~/docker_lab$ gedit Dockerfile
rakshit@rakshit-virtual-machine:~/docker_lab$ gedit index.html
```

Open [icon] Dockerfile  
~/docker\_lab

```
1 FROM ubuntu
2 RUN apt-get update
3 RUN apt-get install nginx -y
4 COPY index.html /var/www/html
5 EXPOSE 80
6 CMD ["nginx","-g","daemon off;"]
```

Open [icon] index.html  
~/docker\_lab

```
1 <html>
2 <body>
3 <h1> Rakshit Kapoor </h1>
4 <p> Hello Docker </p>
5 </body>
6 </html>
```

## Step-2:

```
rakshit@rakshit-virtual-machine:~/docker_lab$ docker build -t hellonginx:1.0 .
Sending build context to Docker daemon 3.072kB
Step 1/6 : FROM ubuntu
--> f63181f19b2f
Step 2/6 : RUN apt-get update
--> Using cache
--> 908d4cf93483
Step 3/6 : RUN apt-get install nginx -y
--> Using cache
--> 237919ae24e9
Step 4/6 : COPY index.html /var/www/html
--> Using cache
--> 83c142a7d957
Step 5/6 : EXPOSE 80
--> Using cache
--> 60ef6823874c
Step 6/6 : CMD ["nginx","-g","daemon off;"]
--> Running in 1c7daf3fa678
Removing intermediate container 1c7daf3fa678
--> 79ee0e86d3e3
Successfully built 79ee0e86d3e3
Successfully tagged hellonginx:1.0
```

```
rakshit@rakshit-virtual-machine:~/docker_lab$ docker images
```

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
hellonginx	1.0	79ee0e86d3e3	15 seconds ago	159MB
<none>	<none>	b1c433ca3d5e	3 minutes ago	159MB
redis	latest	eb0ab2d55fdf	2 weeks ago	104MB
alpine	latest	e50c909a8df2	4 weeks ago	5.61MB
ubuntu	latest	f63181f19b2f	5 weeks ago	72.9MB
hello-world	latest	bf756fb1ae65	14 months ago	13.3kB


## Step-3:

```
rakshit@rakshit-virtual-machine:~/docker_lab$ docker run -d 79ee0e
25aa324aed712b442e44b7dda40d76474cf0978a6942eb775f22e6cdc9748584
rakshit@rakshit-virtual-machine:~/docker_lab$ docker ps -a
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
25aa324aed71	79ee0e	"nginx -g 'daemon of..."	26 seconds ago	Up 25 seconds	80/tcp	ecstatic_mcnulty
483bea37fb29	b1c433ca	"nginx -g 'daemon of..."	About a minute ago	Created	80/tcp	strange_gould
ff3f41dbdf4f	b1c433ca	"nginx -g 'daemon of..."	About a minute ago	Created	80/tcp	condescending_pascal
0c5a8db2ff4e	908d4cf93483	"/bin/sh -c 'apt-get..."	7 minutes ago	Exited (100) 7 minutes ago		lucid_grothendieck
52262f226b8f	alpine	"ping cnt1"	2 weeks ago	Exited (0) 2 weeks ago		cnt4
ca755bb1babc	redis	"docker-entrypoint.s..."	2 weeks ago	Exited (127) 2 weeks ago		cnt3
214a7000c6b2	redis	"docker-entrypoint.s..."	2 weeks ago	Exited (127) 2 weeks ago		cnt2
250ba3529de1	redis	"docker-entrypoint.s..."	2 weeks ago	Exited (0) 2 weeks ago		cnt1
f757e86f6c4f	ubuntu	"/bin/bash"	2 weeks ago	Exited (0) 2 weeks ago		C3
fc0232bf6e8d	alpine	"/bin/sh"	2 weeks ago	Exited (0) 2 weeks ago		C2
9afa8495c59b	alpine	"/bin/sh"	2 weeks ago	Exited (0) 2 weeks ago		C1
a4aca3460e6c	alpine	"/bin/sh"	2 weeks ago	Exited (0) 2 weeks ago		charming_sinoussi
5fid70f3aec9	hello-world	"/hello"	2 weeks ago	Exited (0) 2 weeks ago		hopeful_hawking

```
rakshit@rakshit-virtual-machine:~/docker_lab$ docker tag 79ee0e rakshitkapoor456/nginx:1.0
rakshit@rakshit-virtual-machine:~/docker_lab$ docker push rakshitkapoor456/nginx:1.0
The push refers to repository [docker.io/rakshitkapoor456/nginx]
08e3a2f3f890: Pushed
a307be7c3bc5: Pushed
da1f4b6555e7: Pushed
02473afd360b: Mounted from library/ubuntu
dbf2c0f42a39: Mounted from library/ubuntu
9f32931c9d28: Mounted from library/ubuntu
1.0: digest: sha256:d2599cf912baad369c265d035117f13fec2922e2d12e92f623e97baa596715e2 size: 1574
```

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 **docker hub**

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rakshitkapoor456

▼

Search by repository name...

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rakshitkapoor456 / nginx

Updated a few seconds ago

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☆ 0

↓ 1

Public

rakshitkapoor456 / web


Updated 3 months ago


Not Scanned

☆ 0


↓ 4

Public

 Tip: Not finding your repository? Try switching namespace via the top left dropdown.



Create an Organization  
Manage Docker Hub repositories  
with your team



INTRODUCING: AUDIT LOG

## Step-4:

```
rakshit@rakshit-virtual-machine:~/docker_lab$ docker run -d rakshitkapoor456/nginx:1.0
48c22cadcf137d59496d9b4fc025045e9081fac8c2b68ee561467d3135057105
rakshit@rakshit-virtual-machine:~/docker_lab$ docker ps -a
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES	
48c22cadcf13	rakshitkapoor456/nginx:1.0	"nginx -g 'daemon of..."	15 seconds ago	Up 13 seconds	80/tcp	interesting_gan	
guly	25aa324aed71	79ee0e	"nginx -g 'daemon of..."	5 minutes ago	Up 5 minutes	80/tcp	ecstatic_mcnult
y	483bea37fb29	b1c433ca	"nginx -g 'daemon of..."	6 minutes ago	Created	80/tcp	strange_gould
ff3f41dbdf4f	b1c433ca	"nginx -g 'daemon of..."	6 minutes ago	Created	80/tcp	condescending_p	
ascal	0c5a8db2ff4e	908d4cf93483	"/bin/sh -c 'apt-get..."	12 minutes ago	Exited (100) 12 minutes ago		lucid_grothendi
eck	52262f226b8f	alpine	"ping cnt1"	2 weeks ago	Exited (0) 2 weeks ago		cnt4
ca755bb1babc	redis	"docker-entrypoint.s..."	2 weeks ago	Exited (127) 2 weeks ago			cnt3
214a7000c6b2	redis	"docker-entrypoint.s..."	2 weeks ago	Exited (127) 2 weeks ago			cnt2
250ba3529de1	redis	"docker-entrypoint.s..."	2 weeks ago	Exited (0) 2 weeks ago			cnt1
f757e86f6c4f	ubuntu	"/bin/bash"	2 weeks ago	Exited (0) 2 weeks ago			C3
fc0232bf6e8d	alpine	"/bin/sh"	2 weeks ago	Exited (0) 2 weeks ago			C2
9afa8495c59b	alpine	"/bin/sh"	2 weeks ago	Exited (0) 2 weeks ago			C1
a4aca3460e6c	alpine	"/bin/sh"	2 weeks ago	Exited (0) 2 weeks ago			charming_sinous
si	5f1d70f3aec9	hello-world	"/hello"	2 weeks ago	Exited (0) 2 weeks ago		hopeful_hawking

```
rakshit@rakshit-virtual-machine:~/docker_lab$ docker run -d -p 5000:80 rakshitkapoor456/nginx:1.0
6156b3dcd7c19895e80cbe54bf1344ec70d5fd9ba2ca00c5574b677e991630a2
rakshit@rakshit-virtual-machine:~/docker_lab$
```

