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Create a Dockerfile

`$ touch Dockerfile`

Open Dockerfile and type

FROM ubuntu

RUN apt-get update

ENV DEBIAN_FRONTEND noninteractive

RUN apt-get install nginx -y

RUN echo "daemon off;" >> /etc/nginx/nginx.conf

COPY index.html /var/www/html/

EXPOSE 80

CMD ["nginx"]

Create a index.html file and type

`$ touch index.html`

<html>

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</html>

Now run command

`$ docker build –t nginx:1.0 .`

```
[node1] (local) root@192.168.0.23 ~
$ docker build -t nginx:1.0 .
Sending build context to Docker daemon     47MB
Step 1/6 : FROM ubuntu
latest: Pulling from library/ubuntu
83ee3a23efb7: Pull complete
db98fc6f11f0: Pull complete
f611acd52c6c: Pull complete
Digest: sha256:703218c0465075f4425e58fac086e09e1de5c340b12976ab9eb8ad26615c3715
Status: Downloaded newer image for ubuntu:latest
 ---> f63181f19b2f
```

```
Step 2/6 : RUN apt-get update
 ---> Running in 092070eaa219
Get:1 http://security.ubuntu.com/ubuntu focal-security InRelease [109 kB]
Get:2 http://archive.ubuntu.com/ubuntu focal InRelease [265 kB]
Get:3 http://security.ubuntu.com/ubuntu focal-security/main amd64 Packages [612 kB]
Get:4 http://security.ubuntu.com/ubuntu focal-security/restricted amd64 Packages [165 kB]
Get:5 http://security.ubuntu.com/ubuntu focal-security/multiverse amd64 Packages [13.3 kB]
Get:6 http://security.ubuntu.com/ubuntu focal-security/universe amd64 Packages [664 kB]
Get:7 http://archive.ubuntu.com/ubuntu focal-updates InRelease [114 kB]
Get:8 http://archive.ubuntu.com/ubuntu focal-backports InRelease [101 kB]
Get:9 http://archive.ubuntu.com/ubuntu focal/main amd64 Packages [1275 kB]
Get:10 http://archive.ubuntu.com/ubuntu focal/multiverse amd64 Packages [177 kB]
Get:11 http://archive.ubuntu.com/ubuntu focal/universe amd64 Packages [11.3 MB]
Get:12 http://archive.ubuntu.com/ubuntu focal/restricted amd64 Packages [33.4 kB]
Get:13 http://archive.ubuntu.com/ubuntu focal-updates/restricted amd64 Packages [198 kB]
Get:14 http://archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 Packages [21.1 kB]
Get:15 http://archive.ubuntu.com/ubuntu focal-updates/universe amd64 Packages [924 kB]
Get:16 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 Packages [1016 kB]
Get:17 http://archive.ubuntu.com/ubuntu focal-backports/universe amd64 Packages [4301 B]
Fetched 17.0 MB in 2s (7807 kB/s)
Reading package lists...
Removing intermediate container 092070eaa219
```

```
Step 3/6 : RUN apt-get install nginx -y
 ---> Running in f50047b3634d
Reading package lists...
Building dependency tree...
Reading state information...
The following additional packages will be installed:
  fontconfig-config fonts-dejavu-core iproute2 libatm1 libbsd0 libcap2
  libcap2-bin libelf1 libexpat1 libfontconfig1 libfreetype6 libgd3 libicu66
  libjbig0 libjpeg-turbo8 libjpeg8 libmnl0 libnginx-mod-http-image-filter
  libnginx-mod-http-xslt-filter libnginx-mod-mail libnginx-mod-stream
  libpam-cap libpng16-16 libssl1.1 libtiff5 libwebp6 libx11-6 libx11-data
  libxau6 libxcb1 libxdmcp6 libxml2 libxpm4 libxslt1.1 libxtables12
  nginx-common nginx-core tzdata ucf
Suggested packages:
  iproute2-doc libgd-tools fcgiwrap nginx-doc ssl-cert
```

```
Step 4/6 : COPY index.html /var/www/html/
 ---> ac32b17925dc
Step 5/6 : EXPOSE 80
 ---> Running in bb88e2bfbbfb
Removing intermediate container bb88e2bfbbfb
 ---> e7479d7fc604
Step 6/6 : CMD ["nginx","-g","daemon off;"]
 ---> Running in b23b2ed34a14
Removing intermediate container b23b2ed34a14
 ---> f957344aaa43
Successfully built f957344aaa43
Successfully tagged nginx:1.0
```

To check images

$ docker images

```
[node1] (local) root@192.168.0.23 ~
$ docker images
REPOSITORY     TAG        IMAGE ID        CREATED            SIZE
nginx          1.0        f957344aaa43    About a minute ago  159MB
ubuntu         latest     f63181f19b2f    3 weeks ago         72.9MB
```

```
$ docker run -d f957
2d74a73400822227dbb1efc73dd0e746c0794379586a52f4855366bb473189b4
[node1] (local) root@192.168.0.23 ~
$ docker ps
CONTAINER ID   IMAGE     COMMAND     CREATED    STATUS     PORTS      NAMES
[node1] (local) root@192.168.0.23 ~
$ docker ps -a
CONTAINER ID   IMAGE     COMMAND             CREATED        STATUS                   PORTS      NAMES
2d74a7340082   f957      "/bin/sh -c '["nginx…"  24 seconds ago  Exited (127) 23 seconds ago          sharp_archimedes
```

Login to docker

$ docker login

(Enter your username and passsword)

```
[node1] (local) root@192.168.0.23 ~
$ docker login
Login with your Docker ID to push and pull images from Docker Hub. If you don't have a Do
o create one.
Username: animesh9
Password:
WARNING! Your password will be stored unencrypted in /root/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

Login Succeeded
```

Change tag name and version

`$ docker tag f957 animesh9/ngnixtag`
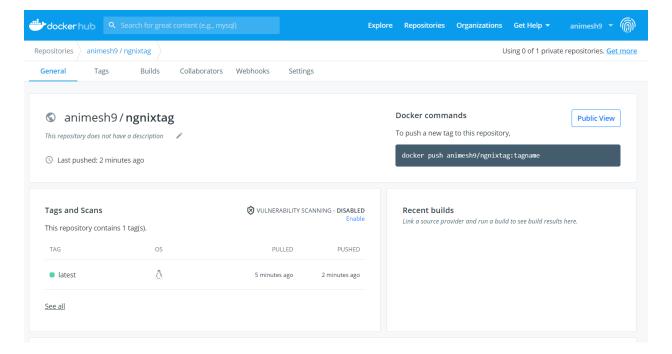
```
[node1] (local) root@192.168.0.23 ~
$ docker tag f957 animesh9/ngnixtag
[node1] (local) root@192.168.0.23 ~
$ docker images
REPOSITORY          TAG      IMAGE ID        CREATED          SIZE
animesh9/ngnixtag   latest   f957344aaa43    26 minutes ago   159MB
nginx               1.0      f957344aaa43    26 minutes ago   159MB
ubuntu              latest   f63181f19b2f    3 weeks ago      72.9MB
```

Push to docker repository

`$ docker push animesh9/ngnixtag`

```
[node1] (local) root@192.168.0.23 ~
$ docker push animesh9/ngnixtag
Using default tag: latest
The push refers to repository [docker.io/animesh9/ngnixtag]
32c5b0407ab8: Pushed
816517827930: Pushed
a720080bb25c: Pushed
02473afd360b: Mounted from library/ubuntu
dbf2c0f42a39: Mounted from library/ubuntu
9f32931c9d28: Mounted from library/ubuntu
latest: digest: sha256:c40a3d1f4e1e2d6ec406b48403e87a3262e7fb8
```

Check dockerhub you will find a new repository as ngnixtag and your image in it.

To pull this repository to your local machine

$ docker pull animesh9/ngnixtag:latest

```
$ docker pull animesh9/ngnixtag:latest
latest: Pulling from animesh9/ngnixtag
83ee3a23efb7: Pull complete
db98fc6f11f0: Pull complete
f611acd52c6c: Pull complete
3142a7c4f685: Pull complete
ccc69fc611be: Pull complete
e2f8cea2765b: Pull complete
Digest: sha256:c40a3d1f4e1e2d6ec406b48403e87a3262e7fb8b871ae972503d7fb959ef995d
Status: Downloaded newer image for animesh9/ngnixtag:latest
$
```

Running a container

$ docker run –d –p 5000:80 animesh9/ngnixtag:latest

```
$ docker run -d -p 5000:80 animesh9/ngnixtag:latest
76a7ea5b053da3cae3a9c29cb5dabb5dc60a4bc0a802849aa23f1f8d3b4bb412
$ docker ps -a
CONTAINER ID       IMAGE                    COMMAND           CREATED         STATUS
        PORTS                NAMES
76a7ea5b053d       animesh9/ngnixtag:latest "/bin/sh -c '["nginx…"  8 seconds ago   Exited (127) 7 secon
ds ago                       wonderful_nobel
```