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CLASS: TE11
BATCH: M11

ASSIGNMENT – 2B
DOCKER

REMOVING PREVIOUS DOCKER:

```
patil@PATIL:~$ sudo apt-get remove docker docker-engine docker.io
[sudo] password for patil:
Reading package lists... Done
Building dependency tree
Reading state information... Done
Package 'docker-engine' is not installed, so not removed
Package 'docker' is not installed, so not removed
The following packages were automatically installed and are no longer required:
  bridge-utils cgroupfs-mount containerd pigz runc ubuntu-fan
Use 'sudo apt autoremove' to remove them.
The following packages will be REMOVED:
  docker.io
0 upgraded, 0 newly installed, 1 to remove and 187 not upgraded.
After this operation, 155 MB disk space will be freed.
Do you want to continue? [Y/n] y
(Reading database ... 178535 files and directories currently installed.)
Removing docker.io (18.09.7-0ubuntu1~16.04.7) ...
'/usr/share/docker.io/contrib/nuke-graph-directory.sh' -> '/var/lib/docker/nuke-graph-directory.sh'
Processing triggers for man-db (2.7.5-1) ...
```

```
patil@PATIL:~$ sudo apt-get update
Hit:1 https://download.docker.com/linux/ubuntu xenial InRelease
Get:2 http://security.ubuntu.com/ubuntu xenial-security InRelease [99.8 kB]
Hit:3 http://in.archive.ubuntu.com/ubuntu xenial InRelease
Hit:4 http://in.archive.ubuntu.com/ubuntu xenial-updates InRelease
Hit:5 http://in.archive.ubuntu.com/ubuntu xenial-backports InRelease
Fetched 99.8 kB in 1s (85.9 kB/s)
Reading package lists... Done
```

```
patil@PATIL:~$ sudo apt-get install \
> ca-certificates \
> curl \
> gnupg \
> lsb-release
Reading package lists... Done
Building dependency tree
Reading state information... Done
ca-certificates is already the newest version (20210119~16.04.1).
curl is already the newest version (7.47.0-1ubuntu2.19).
gnupg is already the newest version (1.4.20-1ubuntu3.3).
```

lsb-release is already the newest version (9.20160110ubuntu0.2).

The following packages were automatically installed and are no longer required:

bridge-utils cgroupfs-mount containerd pigz runc ubuntu-fan

Use 'sudo apt autoremove' to remove them.

0 upgraded, 0 newly installed, 0 to remove and 187 not upgraded.

patil@PATIL:~\$ sudo mkdir -m 0755 -p /etc/apt/keyrings

patil@PATIL:~\$ curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo gpg --dearmor

-o /etc/apt/keyrings/docker.gpg

File '/etc/apt/keyrings/docker.gpg' exists. Overwrite? (y/N) y

**patil@PATIL:~\$ echo **

> "deb [arch=\$(dpkg --print-architecture) signed-by=/etc/apt/keyrings/docker.gpg]

**https://download.docker.com/linux/ubuntu **

> \$(lsb_release -cs) stable" | sudo tee /etc/apt/sources.list.d/docker.list > /dev/null

INSTALLING DOCKER

patil@PATIL:~\$ sudo apt install docker.io

Reading package lists... Done

Building dependency tree

Reading state information... Done

Suggested packages:

aufs-tools btrfs-tools debootstrap docker-doc rinse zfs-fuse | zfsutils

The following NEW packages will be installed:

docker.io

0 upgraded, 1 newly installed, 0 to remove and 187 not upgraded.

Need to get 30.5 MB of archives.

After this operation, 155 MB of additional disk space will be used.

Get:1 http://in.archive.ubuntu.com/ubuntu xenial-updates/universe amd64 docker.io amd64 18.09.7-0ubuntu1~16.04.7 [30.5 MB]

Fetched 30.5 MB in 20s (1,498 kB/s)

Preconfiguring packages ...

Selecting previously unselected package docker.io.

(Reading database ... 178337 files and directories currently installed.)

Preparing to unpack ../docker.io_18.09.7-0ubuntu1~16.04.7_amd64.deb ...

Unpacking docker.io (18.09.7-0ubuntu1~16.04.7) ...

Processing triggers for ureadahead (0.100.0-19.1) ...

Processing triggers for systemd (229-4ubuntu21.28) ...

Processing triggers for man-db (2.7.5-1) ...

Setting up docker.io (18.09.7-0ubuntu1~16.04.7) ...

patil@PATIL:~\$ sudo apt update

Hit:1 https://download.docker.com/linux/ubuntu xenial InRelease

Hit:2 http://in.archive.ubuntu.com/ubuntu xenial InRelease

Hit:3 http://in.archive.ubuntu.com/ubuntu xenial-updates InRelease

Hit:4 http://in.archive.ubuntu.com/ubuntu xenial-backports InRelease

Get:5 http://security.ubuntu.com/ubuntu xenial-security InRelease [99.8 kB]

Fetched 99.8 kB in 1s (67.1 kB/s)

Reading package lists... Done

Building dependency tree

Reading state information... Done

187 packages can be upgraded. Run 'apt list --upgradable' to see them.

```
patil@PATIL:~$ sudo apt install docker.io
Reading package lists... Done
Building dependency tree
Reading state information... Done
docker.io is already the newest version (18.09.7-0ubuntu1~16.04.7).
0 upgraded, 0 newly installed, 0 to remove and 187 not upgraded.
```

```
patil@PATIL:~$ mkdir WAD_2B
patil@PATIL:~$ cd WAD_2B/
```

CLONING FROM GITHUB

```
patil@PATIL:~/WAD_2B$ git clone https://github.com/docker/getting-started.git
Cloning into 'getting-started'...
remote: Enumerating objects: 952, done.
remote: Total 952 (delta 0), reused 0 (delta 0), pack-reused 952
Receiving objects: 100% (952/952), 5.18 MiB | 1.62 MiB/s, done.
Resolving deltas: 100% (541/541), done.
Checking connectivity... done.
```

```
patil@PATIL:~/WAD_2B/getting-started/app$ touch Dockerfile
```

```
# syntax=docker/dockerfile:1
```

```
FROM node:18-alpine
WORKDIR /app
COPY . .
RUN yarn install --production
CMD ["node", "src/index.js"]
EXPOSE 3000
```

ADDING GROUP FOR DOCKER

```
patil@PATIL:~/WAD_2B/getting-started/app$ sudo groupadd docker1
patil@PATIL:~/WAD_2B/getting-started/app$ sudo usermod -aG docker1 $USER
patil@PATIL:~/WAD_2B/getting-started/app$ newgrp docker1
```

CHECKING VERSION OF DOCKER

```
patil@PATIL:~$ docker version
Client: Docker Engine - Community
Version: 23.0.1
API version: 1.42
Go version: go1.19.5
Git commit: a5ee5b1
Built: Thu Feb 9 19:46:56 2023
OS/Arch: linux/amd64
Context: default
```

```
patil@PATIL:~/33346/WAD/Assignment 2B/getting-started/app$
docker run hello-world
Hello from Docker!
```

This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:

1. The Docker client contacted the Docker daemon.
2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
(amd64)
3. The Docker daemon created a new container from that image which runs the executable that produces the output you are currently reading.
4. The Docker daemon streamed that output to the Docker client, which sent it to your terminal.

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

```
$ docker run -it ubuntu bash
```

Share images, automate workflows, and more with a free Docker ID:

<https://hub.docker.com/>

For more examples and ideas, visit:

<https://docs.docker.com/get-started/>

```
patil@PATIL:~/33346/WAD/Assignment 2B/getting-started/app$
```

```
docker build -t getting-started .
```

```
[+] Building 74.2s (11/11) FINISHED
```

```
=> [internal] load .dockerignore
```

```
0.8s
```

```
=> => transferring context: 2B
```

```
0.0s
```

```
=> [internal] load build definition from Dockerfile
```

```
1.0s
```

```
=> => transferring dockerfile: 185B
```

```
0.0s
```

```
=> resolve image config for docker.io/docker/dockerfile:1
```

```
4.0s
```

```
=> docker-
```

```
image://docker.io/docker/dockerfile:1@sha256:39b85bbfa7536a5feceb7372a0817649ecb2724562a38360f4d6a778
```

```
8.4s
```

```
=> => resolve
```

```
docker.io/docker/dockerfile:1@sha256:39b85bbfa7536a5feceb7372a0817649ecb2724562a38360f4d6a7782a40
```

```
0.4s
```

```
=> => sha256:39b85bbfa7536a5feceb7372a0817649ecb2724562a38360f4d6a7782a409b14 8.40kB / 8.40kB
```

```
0.0s
```

```
=> => sha256:966d40f9ba8366e74c2fa353fc0bc7bbc167d2a0f3ad2420db8b9e633049462d 482B / 482B
```

```
0.0s
```

```
=> => sha256:dbdd11720762ad504260c66161c964e59eba06b95a7aa64a68634b598a830a91 2.90kB / 2.90kB
```

```
0.0s
```

```
=> => sha256:a47ff7046597eea0123ea02817165350e3680f75000dc5d69c9a310258e1bedd 11.55MB / 11.55MB
```

```
7.0s
```

```
=> => extracting
```

```
sha256:a47ff7046597eea0123ea02817165350e3680f75000dc5d69c9a310258e1bedd
```

```
0.1s
```

=> [internal] load metadata for docker.io/library/node:18-alpine
3.5s
=> [1/4] FROM docker.io/library/node:18-
alpine@sha256:f8a51c36b0be7434bbf867d4a08decf0100e656203d893b9b0f8b1fe
35.8s
=> => resolve docker.io/library/node:18-
alpine@sha256:f8a51c36b0be7434bbf867d4a08decf0100e656203d893b9b0f8b1fe9
0.3s
=> => sha256:f8a51c36b0be7434bbf867d4a08decf0100e656203d893b9b0f8b1fe9e40daea 1.43kB /
1.43kB
0.0s
=> => sha256:fdbd2737cb94e25cae3db9fc5d7dc073c9675dad34239bfb3948c499a6908c19
1.16kB / 1.16kB
0.0s
=> => sha256:9423415aa47ab401c3f202dd56fdf379f6161a620cc51caa048887d9bddd246
6.44kB / 6.44kB
0.0s
=> => sha256:63b65145d645c1250c391b2d16ebe53b3747c295ca8ba2fcb6b0cf064a4dc21c
3.37MB / 3.37MB
6.3s
=> => sha256:478140d591162fa9113c5ba76c16afafe2aa04bccd8ec45c232ffeb4f31e9c23 2.35MB /
2.35MB
5.8s
=> => sha256:061765f30124ad9dd30397cf60c64741d3fb3b34c36f9566796687b1299183f5
47.51MB / 47.51MB
32.1s
=> => sha256:00ca3aba45c3a9811387d943d26291284ca6f938036760fcf85dbb2ab78e496a 450B /
450B
6.3s
=> => extracting
sha256:63b65145d645c1250c391b2d16ebe53b3747c295ca8ba2fcb6b0cf064a4dc21c
0.1s
=> => extracting
sha256:061765f30124ad9dd30397cf60c64741d3fb3b34c36f9566796687b1299183f5
0.7s
=> => extracting sha256:478140d591162fa9113c5ba76c16afafe2aa04bccd8ec45c232ffeb4f31e9c23
0.1s
=> => extracting
sha256:00ca3aba45c3a9811387d943d26291284ca6f938036760fcf85dbb2ab78e496a
0.0s
=> [internal] load build context
0.6s
=> => transferring context: 4.59MB
0.0s
=> [2/4] WORKDIR /app
2.2s
=> [3/4] COPY . .
0.9s
=> [4/4] RUN yarn install --production
14.3s
=> exporting to image
2.9s

=> => exporting layers

2.8s

=> => writing image

sha256:e055a9bc58c3a391990e7aa8e7d669dc6ad15f833a536598fcfa06919de5e5b5

0.0s

=> => naming to docker.io/library/getting-started

0.0s

patil@PATIL:~/33346/WAD/Assignment 2B/getting-started/app\$

docker run -dp 3000:3000 getting-started

3c3f6fa95797d57fc6d61102f180b53c415189be306f8db4fdefa157ab167a27

OUTPUT:

