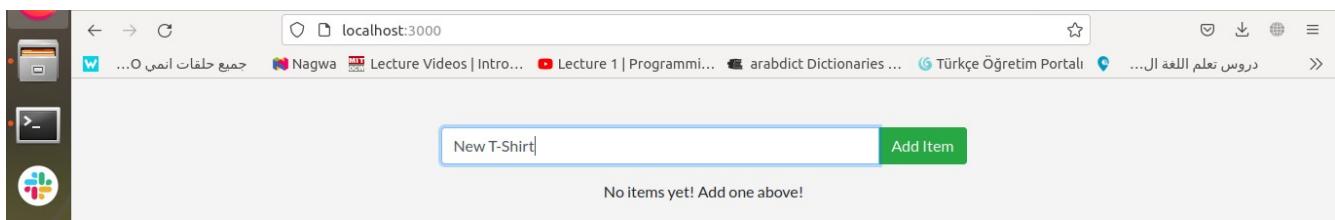


1. Create a Dockerfile to deploy node-app application

```
# syntax=docker/dockerfile:1
FROM node:12-alpine
RUN apk add --no-cache python2 g++ make
WORKDIR /app
COPY . .
RUN yarn install --production
CMD ["node", "src/index.js"]

$ docker build -t getting-started .

$ docker run -dp 3000:3000 getting-started
```



source: https://docs.docker.com/get-started/02_our_app/

2. Create static html file

Write Dockerfile to build image based on httpd to host the html file and

specify the following:

- Copy the html file.
- Copy a new configuration file to listen on port 9999 instead of 80
- Open the port 9999 in the container
- Create volume my-data
- Mount the my-data volume to /code

```
#=====Dockerfile=====
```

```
FROM httpd:2.4
```

```
COPY myindex.html /usr/local/apache2/htdocs/
```

```
RUN sed -i 's/Listen 80/Listen 9999/g' /usr/local/apache2/conf/httpd.conf
```

```
RUN sed -i 's/DirectoryIndex index.html/DirectoryIndex myindex.html/g' /usr/local/apache2/conf/httpd.conf
```

```
EXPOSE 9999
```

```
CMD httpd-foreground
```

```
#=====
```

```
(base) dina@dina-Satellite-L50-B:~/Documents/cloud computing/Sprints - DevOps/Docker/lab2/httpd$ sudo docker run -it -v my-data:/code httpd:v1
.
AH00558: httpd: Could not reliably determine the server's fully qualified domain name, using 172.17.0.2. Set the 'ServerName' directive global
ly to suppress this message
AH00558: httpd: Could not reliably determine the server's fully qualified domain name, using 172.17.0.2. Set the 'ServerName' directive global
ly to suppress this message
[Mon Feb 21 07:49:44.899927 2022] [mpm_event:notice] [pid 7:tid 140512338259264] AH00489: Apache/2.4.52 (Unix) configured -- resuming normal o
perations
[Mon Feb 21 07:49:44.899927 2022] [core:notice] [pid 7:tid 140512338259264] AH00094: Command line: 'httpd -D FOREGROUND'
172.17.0.1 - [21/Feb/2022:07:52:46 +0000] "GET / HTTP/1.1" 304
172.17.0.1 - [21/Feb/2022:07:55:39 +0000] "GET / HTTP/1.1" 200 27
```



```
(base) dina@dina-Satellite-L50-B:~/Documents/cloud computing/Sprints - DevOps/Docker/lab2/httpd$ sudo docker exec -it 5ff60204938f bash
root@5ff60204938f:/usr/local/apache2# ls
bin build cgi-bin conf error htdocs icons include logs modules
root@5ff60204938f:/usr/local/apache2# ls /
bin boot code dev etc home lib lib64 media mnt opt proc root run sbin srv sys tmp usr var
root@5ff60204938f:/usr/local/apache2# cd code
bash: cd: code: No such file or directory
root@5ff60204938f:/usr/local/apache2# cd /code
root@5ff60204938f:/code# touch test_volume
root@5ff60204938f:/code#
```

```
(base) dina@dina-Satellite-L50-B:~/Documents/cloud computing/Sprints - DevOps/Docker/lab2/httpd$ sudo ls /var/lib/docker/volumes/my-data
data
(base) dina@dina-Satellite-L50-B:~/Documents/cloud computing/Sprints - DevOps/Docker/lab2/httpd$ sudo ls /var/lib/docker/volumes/_data
test_volume
(base) dina@dina-Satellite-L50-B:~/Documents/cloud computing/Sprints - DevOps/Docker/lab2/httpd$
```

5. Create a volume called mysql_data

- deploy a MySQL database called app-database. Use the mysql latest image
- use the -e flag to C2 Generalset MYSQL_ROOT_PASSWORD to P4sSw0rd0!.
 - Mount the mysql_data volume to /var/lib/mysql. The container should run in the background.

```
(base) dina@dina-Satellite-L50-B:~/Documents/cloud computing/Sprints - DevOps/Docker/lab2/mysql$ sudo docker run --name app-database -e MYSQL_
ROOT_PASSWORD=P4ssw0rd0! -d -v /var/lib/mysql:/code mysql:latest
[sudo] password for dina:
Unable to find image 'mysql:latest' locally
latest: Pulling from library/mysql
6552179c3509: Already exists
d69aa66e4482: Already exists
3b19465b002b: Already exists
7b0d0cfe99a1: Already exists
9ccda5c8987: Already exists
2dab00d7d232: Already exists
5d726bac08ea: Already exists
11bb049c7b94: Pull complete
7fcdd679c458: Pull complete
11585aaaf4aad: Pull complete
5b5dc265cb1d: Pull complete
fd400dd4ffec: Pull complete
Digest: sha256:e3358f55ea2b0cd432685d7e3c79a33a85c7a359b35fa87fc4993514b9573446
Status: Downloaded newer image for mysql:latest
56971ff0db5d3899dcadba1fdc8bc0fdc9e2fc773f339160bbea5fb71ee5dc6
(base) dina@dina-Satellite-L50-B:~/Documents/cloud computing/Sprints - DevOps/Docker/lab2/mysql$ sudo docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
50971ff0db5d mysql:latest "docker-entrypoint.s..." 12 seconds ago Up 7 seconds 3306/tcp, 33060/tcp app-database
(base) dina@dina-Satellite-L50-B:~/Documents/cloud computing/Sprints - DevOps/Docker/lab2/mysql$ ls /var/lib/
AccountsService bluetooth dpkg hp mlocate polkit-1 ubiquity upower
acpi-support boldt emacs-en-common initramfs-tools ms-ttfcorefonts postgresql ubuntu-advantage ureadahead
alsa colord fwupd ispell libreoffice NetworkManager python ubuntu-drivers-common usb_modeswitch
app-info command-not-found gdm3 libxml-sax-perl nginx samba ucf vlm
apport containerd gens locales os-prober snapd udisks2 whoopsie
apt dbus geoclue locales PackageKit snmp unattended-upgrades xfonts
aspell dhcp ghostscript logrotate Plymouth sudo update-manager xkb
avahi-autoipd dictionaries-common git man-db pam plymouth systemd update-notifier
binfmts docker grub misc Plymouth sudo update-manager xkb
(base) dina@dina-Satellite-L50-B:~/Documents/cloud computing/Sprints - DevOps/Docker/lab2/mysql$
```