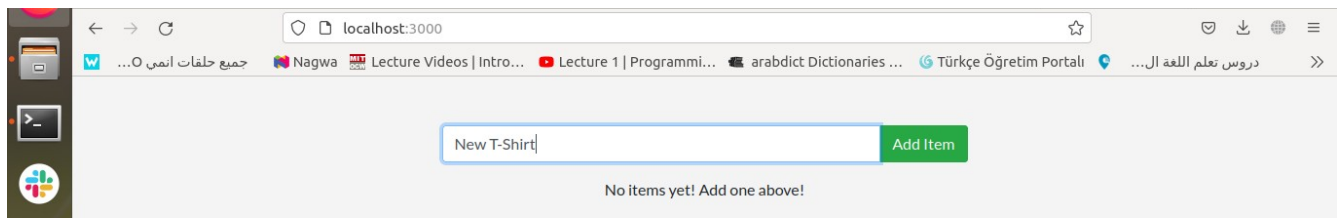


1. Create a Dockerfile to deploy node-app application

```
# 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:v1.0
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 07:49:44.899781 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/my-data/_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.

```
File Edit View Search Terminal Help
(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
9ccd5a5c8987: Already exists
2dab00d7d232: Already exists
5d726bac08ea: Already exists
11bb049c7b94: Pull complete
7fcd679c458: Pull complete
11585aaf4aad: Pull complete
5b5dc265cbid: Pull complete
fd400d64ffec: Pull complete
Digest: sha256:e3358f55ea2b0cd432685d7e3c79a33a85c7a359b35fa87fc4993514b9573446
Status: Downloaded newer image for mysql:latest
50971ff0db5d38999dcadbaf1dbc8bc6fdc9e2fc773f339160bbea5fb71ee5dc6
(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              inetransfs-tools  msttcorefonts  postgresql  ubuntu-drivers-common  ureadahead
alsa             boltd          emacsen-common  initramfs-tools  ispell            mysql           private      ubuntu-drivers-common  usb_modeswitch
app-info         command-not-found  gdm3           libreoffice     NetworkManager    python          samba        ubuntu-release-upgrader  usbutils
appport          containerd     gems            locales         os-prober          snapd          ucf          unattended-upgrades    vim
apt              dhcpcd        geoclue         logrotate       PackageKit         snmp           udisks2     update-manager         whoopsie
aspell           dictionaries-common  git            man-db          pam                sudo           update-notifier  xfonts
avahi-autoipd    binfmts       docker          grub            misc               plymouth       systemd
binfmts          docker         grub            misc               plymouth       systemd
(base) dina@dina-Satellite-L50-B:~/Documents/cloud computing/Sprints - DevOps/Docker/lab2/mysql$
```