Step 1

Create a Docker volume called 'http-files' and then list all volumes to confirm it was created

$ docker volume create http-files
http-files

$ docker volume ls

```
DRIVER              VOLUME NAME

local               http-files
```

Step 2

Execute the appropriate Docker command to display ALL information on the 'http-files' volume, make a note of the filesystem location that volume is linked to on your host

$ docker volume inspect http-files

```
[
        {
                "CreatedAt": "2017-10-19T21:20:43Z",
                "Driver": "local",
                "Labels": {},
                "Mountpoint": "/var/lib/docker/volumes/http-files/_data",
                "Name": "http-files",
                "Options": {},
                "Scope": "local"
        }
]
```

Step 3

Pull the 'httpd' image from the standard Docker repository and verify it was installed locally

```
$ docker pull httpd
Using default tag: latest

latest: Pulling from library/httpd

85b1f47fba49: Pull complete

3dee1a596b5f: Pull complete

86144720cb98: Pull complete

23273e61b31a: Pull complete

011f98a84808: Pull complete

771652f83cbc: Pull complete

0036b8043a1c: Pull complete

Digest: sha256:b2cf2ae2400c2b49c43bbead8931c489566cf5f150164990447d36c831976a5c

Status: Downloaded newer image for httpd:latest
```

```
$ docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE

httpd               latest              c24f66af34b4        7 days ago          177MB
```

Step 4

Create an 'index.html' file of your choosing and copy it to the HOST directory that your 'http-files' volume is linked to (obtained in Step #2 above)

NOTE: This command is done as ROOT user

```
# echo "This is my test website index file" > /var/lib/docker/volumes/http-files/_data/index.html

# cat /var/lib/docker/volumes/http-files/_data/index.html

This is my test website index file
```

Step 5

Start a container based on the 'httpd' image with the following characteristics:

- the container should run in the background (i.e. you are not connected to it in the current terminal)

- name the container 'test-web'

- associate the created volume 'http-files' with the container directory path of /usr/local/apache2/htdocs

$ docker run -d --name test-web --mount source=http-files,target=/usr/local/apache2/htdocs httpd

09fd2cf1b701287939065cba06d531ae6119b022459b0a865ccfed17e6b28ab0

$ docker ps

```
CONTAINER ID   IMAGE     COMMAND              CREATED          STATUS          PORTS     NAMES
09fd2cf1b701   httpd     "httpd-foreground"   4 seconds ago    Up 3 seconds    80/tcp    test-web
```

Step 6

Using the appropriate Docker command, find out the container's IP address and note it

$ docker inspect test-web | grep IPAddress

```
                    "SecondaryIPAddresses": null,
                    "IPAddress": "172.17.0.2",
                            "IPAddress": "172.17.0.2",
```

Step 7

Execute the 'curl' command against that IP address to display the Apache website running on the container, verify the output is from your created 'index.html' file

$ curl http://172.17.0.2

```
This is my test website index file
```

Step 8

Make a change to the 'index.html' file on the container's host and save the file. Rerun the 'curl' command to verify the container's website is now displaying the new value

NOTE: These commands are run as ROOT user to access the HOST directory the index file is in

```
# echo "This is a CHANGED website file" > /var/lib/docker/volumes/http-files/_data/index.html

# curl http://172.17.0.2

This is a CHANGED website file
```