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Q1 ==> Using an emptyDir volume
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Step 1: make directory fortune
Step 2: Building the fortune container image.
Step 3: Create a file called Dockerfile

```
taherzadeh19529@cloudshell:~ (phonic-axle-307118)$ mkdir fortune
taherzadeh19529@cloudshell:~ (phonic-axle-307118)$ cd fortune
taherzadeh19529@cloudshell:~/fortune (phonic-axle-307118)$ vim fortuneloop.sh
taherzadeh19529@cloudshell:~/fortune (phonic-axle-307118)$ cat fortuneloop.sh
#!/bin/bash
trap "exit" SIGINT
mkdir /var/htdocs
while :
do
echo $(date) Writing fortune to /var/htdocs/index.html
/usr/games/fortune > /var/htdocs/index.html
sleep 10
done
```

```
taherzadeh19529@cloudshell:~/fortune (phonic-axle-307118)$ cat Dockerfile
FROM ubuntu:latest
RUN apt-get update ; apt-get -y install fortune
ADD fortuneloop.sh /bin/fortuneloop.sh
RUN chmod +x /bin/fortuneloop.sh
ENTRYPOINT /bin/fortuneloop.sh
```

```
taherzadeh19529@cloudshell:~/fortune (phonic-axle-307118)$ chmod +x fortuneloop.sh
```

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Step 4: docker run

Step:5 After preparing both files and run docker, build and upload the image to Docker Hub

-docker build -t tahezadeh19529/fortune .

```
RUN chmod +x /bin/fortuneloop.sh
ENTRYPOINT /bin/fortuneloop.sh
taherzadeh19529@cloudshell:~/fortune (phonic-axle-307118)$ chmod +x fortuneloop.sh
taherzadeh19529@cloudshell:~/fortune (phonic-axle-307118)$ docker build -t tahezadeh19529/fortune .
Sending build context to Docker daemon   5.12kB
Step 1/5 : FROM ubuntu:latest
latest: Pulling from library/ubuntu
5d3b2c2d21bb: Pull complete
3fc2062ea667: Pull complete
75adf526d75b: Pull complete
Digest: sha256:b4f9e18267eb98998f6130342baacaeb9553f136142d40959a1b46d6401f0f2b
Status: Downloaded newer image for ubuntu:latest
 ---> 4dd97cefde62
Step 2/5 : RUN apt-get update ; apt-get -y install fortune
 ---> Running in 930b80854d10
Get:1 http://archive.ubuntu.com/ubuntu focal InRelease [265 kB]
Get:2 http://security.ubuntu.com/ubuntu focal-security InRelease [109 kB]
Get:3 http://security.ubuntu.com/ubuntu focal-security/multiverse amd64 Packages [21.6 kB]
Get:4 http://archive.ubuntu.com/ubuntu focal-updates InRelease [114 kB]
Get:5 http://security.ubuntu.com/ubuntu focal-security/main amd64 Packages [716 kB]
Get:6 http://archive.ubuntu.com/ubuntu focal-backports InRelease [101 kB]
Get:7 http://archive.ubuntu.com/ubuntu focal/universe amd64 Packages [11.3 MB]
Get:8 http://security.ubuntu.com/ubuntu focal-security/universe amd64 Packages [682 kB]
Get:9 http://security.ubuntu.com/ubuntu focal-security/restricted amd64 Packages [197 kB]
```

Step:6 Docker Push

- docker push tahezadeh19529/fortune

```
taherzadeh19529@cloudshell:~/fortune (phonic-axle-307118)$ docker push tahezadeh19529/fortune
Using default tag: latest
The push refers to repository [docker.io/tahezadeh19529/fortune]
b3f832072db8: Pushed
40286d40face: Pushed
6ec52467c2e5: Layer already exists
ca07633425ec: Layer already exists
c20d459170d8: Layer already exists
db978cae6a05: Layer already exists
aeb3f02e9374: Layer already exists
latest: digest: sha256:a48bb038d79e641ae5e8fa0182a67468d42a67fc6281542fe3aa6961c714315f size: 1779
```

## Step:7 Creating a pod

```
taherzadeh19529@cloudshell:~/fortune (phonic-axle-307118)$ vim fortune-pod.yaml
taherzadeh19529@cloudshell:~/fortune (phonic-axle-307118)$ cat fortune-pod.yaml
apiVersion: v1
kind: Pod
metadata:
  name: fortune
spec:
  containers:
  - image: tahezadeh19529/fortune
    name: html-generator
    volumeMounts:
    - name: html
      mountPath: /var/htdocs
  - image: nginx:alpine
    name: web-server
    volumeMounts:
    - name: html
      mountPath: /usr/share/nginx/html
      readOnly: true
    ports:
    - containerPort: 80
      protocol: TCP
  volumes:
  - name: html
    emptyDir: {}
```

## Step:8 Seeing the pod in action

```
taherzadeh19529@cloudshell:~/fortune (phonic-axle-307118)$ kubectl create -f fortune-pod.yaml
pod/fortune created
```

-kubectl get po

```
taherzadeh19529@cloudshell:~/fortune (phonic-axle-307118)$ kubectl get po
NAME      READY   STATUS    RESTARTS   AGE
fortune   2/2     Running   142        11h
```

Step 9:
- kubectl port-forward fortune 8080:80

```
taherzadeh19529@cloudshell:~/fortune (phonic-axle-307118)$ kubectl port-forward fortune 8080:80
Forwarding from 127.0.0.1:8080 -> 80
```

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Step 10: open the new terminal then type **curl http://localhost:8080**

```
taherzadeh19529@cloudshell:~ (phonic-axle-307118)$ curl http://localhost:8080
You will be recognized and honored as a community leader.
taherzadeh19529@cloudshell:~ (phonic-axle-307118)$ curl http://localhost:8080
Many a writer seems to think he is never profound except when he can't
understand his own meaning.
                -- George D. Prentice
taherzadeh19529@cloudshell:~ (phonic-axle-307118)$ curl http://localhost:8080
Day of inquiry.  You will be subpoenaed.
taherzadeh19529@cloudshell:~ (phonic-axle-307118)$ curl http://localhost:8080
Something's rotten in the state of Denmark.
                -- Shakespeare
taherzadeh19529@cloudshell:~ (phonic-axle-307118)$ █
```