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Patel

BCDV 4032

Building Scalable Blockchain  
Apps

Lab 01

13<sup>th</sup> Jan 2024

Keerthi Nelaturu

# Screenshots for Lab 1

## Section 0

```
char@CHARGLEN: ~  
latest: Pulling from library/hello-world  
c1ec31eb5944: Pull complete  
Digest: sha256:4bd78111b6914a99dbc560e6a20eab57ff6655aea4a80c50b0c5491968cbc2e6  
Status: Downloaded newer image for hello-world:latest  
  
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/  
  
char@CHARGLEN:~$ docker ps -a  
CONTAINER ID   IMAGE          COMMAND          CREATED          STATUS          PORTS          NAMES  
329dc902e922   hello-world    "/hello"         10 seconds ago   Exited (0) 9 seconds ago           wizardly_borg  
char@CHARGLEN:~$
```

## Section 1

```
char@CHARGLEN: ~  
char@CHARGLEN:~$ docker pull alpine  
Using default tag: latest  
latest: Pulling from library/alpine  
661ff4d9561e: Pull complete  
Digest: sha256:51b67269f354137895d43f3b3d810bfacd3945438e94dc5ac55fdac340352f48  
Status: Downloaded newer image for alpine:latest  
docker.io/library/alpine:latest  
  
What's Next?  
View a summary of image vulnerabilities and recommendations → docker scout quickview alpine  
char@CHARGLEN:~$ docker images  
REPOSITORY    TAG          IMAGE ID        CREATED         SIZE  
alpine        latest      f8c20f8bbcb6   5 weeks ago    7.38MB  
hello-world   latest     d2c94e258dcb   8 months ago   13.3kB  
char@CHARGLEN:~$
```

```
char@CHARGLEN: ~$ docker run alpine ls -l
total 56
drwxr-xr-x 2 root root 4096 Dec 7 09:43 bin
drwxr-xr-x 5 root root 340 Jan 13 05:13 dev
drwxr-xr-x 1 root root 4096 Jan 13 05:13 etc
drwxr-xr-x 2 root root 4096 Dec 7 09:43 home
drwxr-xr-x 7 root root 4096 Dec 7 09:43 lib
drwxr-xr-x 5 root root 4096 Dec 7 09:43 media
drwxr-xr-x 2 root root 4096 Dec 7 09:43 mnt
drwxr-xr-x 2 root root 4096 Dec 7 09:43 opt
dr-xr-xr-x 300 root root 0 Jan 13 05:13 proc
drwx----- 2 root root 4096 Dec 7 09:43 root
drwxr-xr-x 2 root root 4096 Dec 7 09:43 run
drwxr-xr-x 2 root root 4096 Dec 7 09:43 sbin
drwxr-xr-x 2 root root 4096 Dec 7 09:43 srv
dr-xr-xr-x 11 root root 0 Jan 13 05:13 sys
drwxrwxrwt 2 root root 4096 Dec 7 09:43 tmp
drwxr-xr-x 7 root root 4096 Dec 7 09:43 usr
drwxr-xr-x 12 root root 4096 Dec 7 09:43 var
char@CHARGLEN:~$ docker run alpine echo "hello from alpine by Anishkumar Pankajkumar Patel - 101504708"
hello from alpine by Anishkumar Pankajkumar Patel - 101504708
char@CHARGLEN:~$
```

```
char@CHARGLEN: ~$ docker run alpine /bin/sh
char@CHARGLEN:~$ docker run -it alpine /bin/sh
/ # ls -l
total 56
drwxr-xr-x 2 root root 4096 Dec 7 09:43 bin
drwxr-xr-x 5 root root 360 Jan 13 05:16 dev
drwxr-xr-x 1 root root 4096 Jan 13 05:16 etc
drwxr-xr-x 2 root root 4096 Dec 7 09:43 home
drwxr-xr-x 7 root root 4096 Dec 7 09:43 lib
drwxr-xr-x 5 root root 4096 Dec 7 09:43 media
drwxr-xr-x 2 root root 4096 Dec 7 09:43 mnt
drwxr-xr-x 2 root root 4096 Dec 7 09:43 opt
dr-xr-xr-x 301 root root 0 Jan 13 05:16 proc
drwx----- 1 root root 4096 Jan 13 05:16 root
drwxr-xr-x 2 root root 4096 Dec 7 09:43 run
drwxr-xr-x 2 root root 4096 Dec 7 09:43 sbin
drwxr-xr-x 2 root root 4096 Dec 7 09:43 srv
dr-xr-xr-x 11 root root 0 Jan 13 05:16 sys
drwxrwxrwt 2 root root 4096 Dec 7 09:43 tmp
drwxr-xr-x 7 root root 4096 Dec 7 09:43 usr
drwxr-xr-x 12 root root 4096 Dec 7 09:43 var
/ # uname -a
Linux 1af546753dae 5.15.133.1-microsoft-standard-WSL2 #1 SMP Thu Oct 5 21:02:42 UTC 2023 x86_64 Linux
/ # exit
char@CHARGLEN:~$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
char@CHARGLEN:~$ docker ps -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
1af546753dae alpine "/bin/sh" 39 seconds ago Exited (0) 13 seconds ago quizzical_elion
de8c12519286 alpine "/bin/sh" About a minute ago Exited (0) 59 seconds ago cool_bose
fbd58f545ee1 alpine "echo 'hello from al..." About a minute ago Exited (0) About a minute ago strange_cray
ba22e63ac6ea alpine "ls -l" 3 minutes ago Exited (0) 3 minutes ago funny_saha
329dc902e922 hello-world "/hello" 6 minutes ago Exited (0) 6 minutes ago wizardly_borg
char@CHARGLEN:~$
```

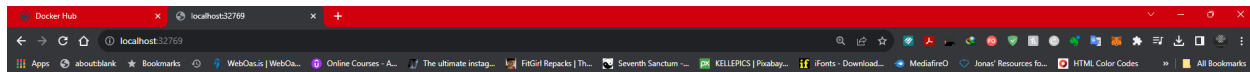
## Section 2

```
char@CHARGLEN: ~$ docker run -d dockersamples/static-site
Unable to find image 'dockersamples/static-site:latest' locally
latest: Pulling from dockersamples/static-site
fdd5d7827f33: Pull complete
a3ed95caeb02: Pull complete
716f7a5f3082: Pull complete
7b10f03a0309: Pull complete
aff3ab7e9c39: Pull complete
Digest: sha256:daa686c61d7d239b7977e72157997489db49f316b9b9af3909d9f10fd28b2dec
Status: Downloaded newer image for dockersamples/static-site:latest
b3e918b8a58ad8b3ae455786009196cd5fcd5bd8a6717e54a388fe4eceeab94eb
char@CHARGLEN:~$ docker ps
CONTAINER ID   IMAGE                                COMMAND                  CREATED        STATUS        PORTS                NAMES
b3e918b8a58a   dockersamples/static-site          "/bin/sh -c 'cd '/usr..." 34 seconds ago Up 33 seconds    80/tcp, 443/tcp      nervous_zhukovsky
char@CHARGLEN:~$ docker stop b3
b3
char@CHARGLEN:~$ ^C
char@CHARGLEN:~$ docker rm b3
b3
char@CHARGLEN:~$ docker ps
CONTAINER ID   IMAGE                                COMMAND                  CREATED        STATUS        PORTS                NAMES
char@CHARGLEN:~$
```

```
char@CHARGLEN:~$ docker run --name static-site -e AUTHOR="Anishkumar Pankajkumar Patel - 101504708" -d -P dockersamples/static-site
53e179940330c22288e26796eb34bc36e9da124ebe249ea686e829f7b75639e0
char@CHARGLEN:~$ docker port
"docker port" requires at least 1 and at most 2 arguments.
See 'docker port --help'.

Usage:  docker port CONTAINER [PRIVATE_PORT[/PROTO]]

List port mappings or a specific mapping for the container
char@CHARGLEN:~$ docker port static-site
80/tcp -> 0.0.0.0:32769
443/tcp -> 0.0.0.0:32768
char@CHARGLEN:~$ |
```



**Hello Anishkumar Pankajkumar Patel - 101504708!**

This is being served from a **docker**  
container running Nginx.

```
char@CHARGLEN:~$ docker run --name static-site-2 -e AUTHOR="Anishkumar - Part 2" -d -p 8888:80 dockersamples/static-site
136b4f354ddb97a7e14df58dd338f0dc4c73fcc6c848d0de1ed38a21107d90ce
char@CHARGLEN:~$ docker port static-site-2
80/tcp -> 0.0.0.0:8888
char@CHARGLEN:~$ |
```



## Hello Anishkumar - Part 2!

This is being served from a **docker** container running Nginx.

```
char@CHARGLEN:~$ docker ps -a
CONTAINER ID   IMAGE                                COMMAND                  CREATED        STATUS        PORTS
136b4f354ddb   dockersamples/static-site          "/bin/sh -c 'cd /usr..." About a minute ago Up About a minute 443/tcp, 0.0.0.0:8888->80/tc
p              static-site-2
53e179940330   dockersamples/static-site          "/bin/sh -c 'cd /usr..." 5 minutes ago   Up 5 minutes   0.0.0.0:32768->443/tcp, 0.0.0
.0:32768->443/tcp static-site
1af546753dae   alpine                             "/bin/sh"               12 minutes ago Exited (0) 12 minutes ago
quizzical_elion
de8c12519286   alpine                             "/bin/sh"               13 minutes ago Exited (0) 13 minutes ago
cool_bose
fbd58f545ee1   alpine                             "echo 'hello from al..." 14 minutes ago Exited (0) 14 minutes ago
strange_cray
ba22e63ac6ea   alpine                             "ls -l"                 15 minutes ago Exited (0) 15 minutes ago
funny_saha
329dc902e922   hello-world                        "/hello"                18 minutes ago Exited (0) 18 minutes ago
wizardly_borg

char@CHARGLEN:~$ docker stop static-site
static-site
char@CHARGLEN:~$ docker rm static-site
static-site
char@CHARGLEN:~$ docker rm -f static-site-2
static-site-2
char@CHARGLEN:~$ docker ps -a
CONTAINER ID   IMAGE                                COMMAND                  CREATED        STATUS        PORTS        NAMES
1af546753dae   alpine                             "/bin/sh"               13 minutes ago Exited (0) 13 minutes ago quizzical_elion
de8c12519286   alpine                             "/bin/sh"               13 minutes ago Exited (0) 13 minutes ago cool_bose
fbd58f545ee1   alpine                             "echo 'hello from al..." 14 minutes ago Exited (0) 14 minutes ago strange_cray
ba22e63ac6ea   alpine                             "ls -l"                 16 minutes ago Exited (0) 16 minutes ago funny_saha
329dc902e922   hello-world                        "/hello"                19 minutes ago Exited (0) 19 minutes ago wizardly_borg

char@CHARGLEN:~$ |
```

```

char@CHARGLEN: ~$ docker pull ubuntu:12.04
12.04: Pulling from library/ubuntu
d8868e50ac4c: Pull complete
83251ac64627: Pull complete
589bba2f1b36: Pull complete
d62ecaceda39: Pull complete
6d93b41cfc6b: Pull complete
Digest: sha256:18305429afa14ea462f810146ba44d4363ae76e4c8dfc38288cf73aa07485005
Status: Downloaded newer image for ubuntu:12.04
docker.io/library/ubuntu:12.04

What's Next?
  View a summary of image vulnerabilities and recommendations → docker scout quickview ubuntu:12.04
char@CHARGLEN: ~$ docker pull ubuntu
Using default tag: latest
latest: Pulling from library/ubuntu
a48641193673: Pull complete
Digest: sha256:6042500cf4b44023ea1894effe7890666b0c5c7871ed83a97c36c76ae560bb9b
Status: Downloaded newer image for ubuntu:latest
docker.io/library/ubuntu:latest

What's Next?
  View a summary of image vulnerabilities and recommendations → docker scout quickview ubuntu
char@CHARGLEN: ~$

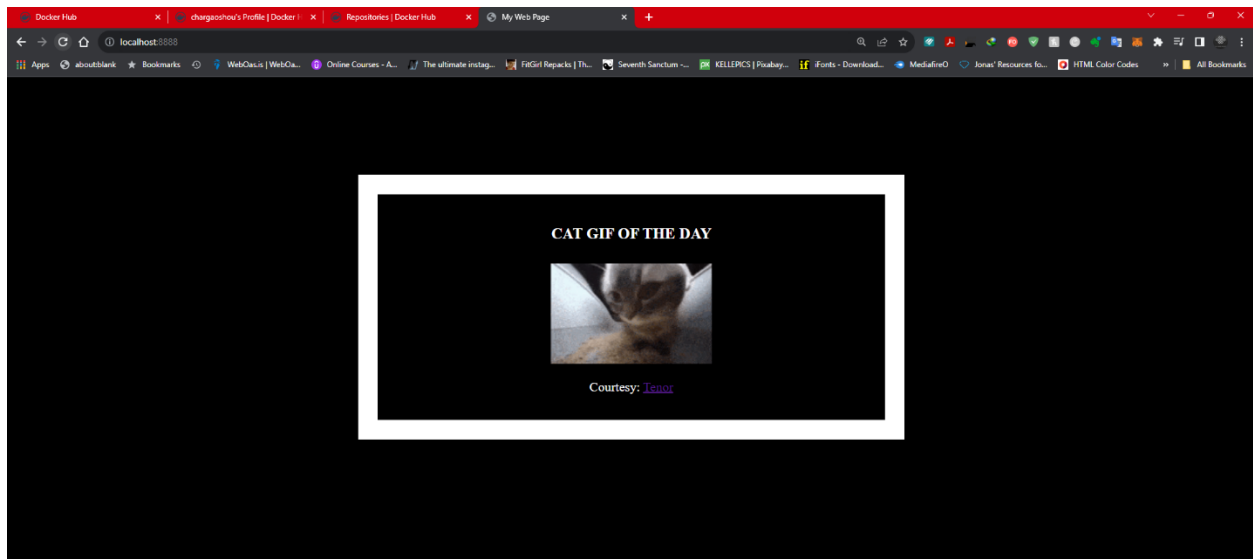
```

## 2.3

```

char@CHARGLEN: ~$ docker images
REPOSITORY          TAG         IMAGE ID      CREATED        SIZE
chargaoshou/myfirstaplab1  latest     e092331b9154  2 minutes ago  56.8MB
ubuntu              latest     174c8c134b2a  4 weeks ago   77.9MB
alpine              latest     f8c20f8bbcb6  5 weeks ago   7.38MB
hello-world         latest     d2c94e258dcb  8 months ago  13.3kB
ubuntu              12.04      5b117edd0b76  6 years ago   104MB
dockersamples/static-site latest     f589ccde7957  7 years ago   191MB
char@CHARGLEN: ~$ docker run -p 8888:5000 --name myfirstaplab1 chargaoshou/myfirstaplab1
* Running on http://0.0.0.0:5000/ (Press CTRL+C to quit)
172.17.0.1 - - [13/Jan/2024 06:00:46] "GET / HTTP/1.1" 200 -
172.17.0.1 - - [13/Jan/2024 06:00:55] "GET / HTTP/1.1" 200 -
172.17.0.1 - - [13/Jan/2024 06:00:56] "GET / HTTP/1.1" 200 -
172.17.0.1 - - [13/Jan/2024 06:00:57] "GET / HTTP/1.1" 200 -
172.17.0.1 - - [13/Jan/2024 06:00:59] "GET / HTTP/1.1" 200 -
172.17.0.1 - - [13/Jan/2024 06:01:00] "GET / HTTP/1.1" 200 -
172.17.0.1 - - [13/Jan/2024 06:01:01] "GET / HTTP/1.1" 200 -

```



```
char@CHARGLEN:~$ docker login
Authenticating with existing credentials...
Login Succeeded
char@CHARGLEN:~$ docker pus chargaoshou/myfirstapplab1
docker: 'pus' is not a docker command.
See 'docker --help'
char@CHARGLEN:~$ docker push chargaoshou/myfirstapplab1
Using default tag: latest
The push refers to repository [docker.io/chargaoshou/myfirstapplab1]
90f8f6ad2de7: Pushed
71754d87e676: Pushed
df5ffdc12aa4: Pushed
6bdf4dd94db6: Pushed
eeafe6b64271: Pushed
f566c57e6f2d: Mounted from library/alpine
latest: digest: sha256:35d781acdc2d66638d05cb65531091f5ab5d860abb71c6823cbf913ea049a2f4 size: 1571
char@CHARGLEN:~$ docker rm -f myfirstapplab1
myfirstapplab1
char@CHARGLEN:~$ docker ps -a
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS        PORTS          NAMES
1af546753dae   alpine    "/bin/sh"               47 minutes ago Exited (0)    47 minutes ago quizzical_elion
de8c12519286   alpine    "/bin/sh"               48 minutes ago Exited (0)    48 minutes ago cool_bose
fbd58f545ee1   alpine    "echo 'hello from al..." 49 minutes ago Exited (0)    49 minutes ago strange_cray
ba22e63ac6ea   alpine    "ls -l"                 50 minutes ago Exited (0)    50 minutes ago funny_saha
329dc902e922   hello-world "/hello"                53 minutes ago Exited (0)    53 minutes ago wizardly_borg
char@CHARGLEN:~$
```

Docker Hub

chargaoshou's Profile | Docker

chargaoshou/myfirstaplab1

hub.docker.com/repository/docker/chargaoshou/myfirstaplab1/general

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Settings

Add a short description for this repository

The short description is used to index your content on Docker Hub and in search engines. It's visible to users in search results.

Update

chargaoshou / myfirstaplab1

Description

This repository does not have a description [✎](#)

Last pushed: less than a minute ago

Docker commands

To push a new tag to this repository:

Public View

docker push chargaoshou/myfirstaplab1:tagname

Tags

This repository contains 1 tag(s).

Tag	OS	Type	Pulled	Pushed
latest		Image	—	2 minutes ago

[See all](#)

Automated Builds

Manually pushing images to Hub? Connect your account to GitHub or Bitbucket to automatically build and tag new images whenever your code is updated, so you can focus your time on creating.

Available with Pro, Team and Business subscriptions. [Read more about automated builds](#) [↗](#).

Upgrade

Repository overview

An overview describes what your image does and how to run it. It displays in [the public view of your repository](#)



## Section 3

```
char@CHARGLEN:~$ docker swarm init
Swarm initialized: current node (x6cydfa6wnvon9uehqt9kcqbe) is now a manager.

To add a worker to this swarm, run the following command:

    docker swarm join --token SWMTKN-1-2y5d17m8325eew445mkhzmw4srz8mg6wrc6fb5nfjzvko2ysk6-d5v5hjjw4l4wc6w0xvkjzv5ew 192.168.65.3:2377

To add a manager to this swarm, run 'docker swarm join-token manager' and follow the instructions.
```

```
anish@CHARGLEN MINGW64 ~/Downloads/GBC_Blockchain_Development/Semester_02/BCDV_4032_Building_Scalable_Blockchain_Apps/Github/Lab_01/example-voting-app (main)
$ docker stack deploy --compose-file docker-stack.yml vote
Creating network vote_default
Creating network vote_frontend
Creating network vote_backend
Creating service vote_worker
Creating service vote_visualizer
Creating service vote_redis
Creating service vote_db
Creating service vote_vote
Creating service vote_result

anish@CHARGLEN MINGW64 ~/Downloads/GBC_Blockchain_Development/Semester_02/BCDV_4032_Building_Scalable_Blockchain_Apps/Github/Lab_01/example-voting-app (main)
$ docker stack services vote
ID                NAME                MODE                REPLICAS            IMAGE                                  PORTS
k25paqmy0w1v      vote_db              replicated           1/1                  postgres:15-alpine                  *
tdia0f86u2n2      vote_redis            replicated           2/2                  redis:alpine                         *:5001->80/tcp
7nfgzrl66rx2      vote_result           replicated           1/1                  dockersamples/examplevotingapp_result:before *:5001->80/tcp
wsqbz242cg7       vote_visualizer       replicated           0/1                  dockersamples/visualizer:latest      *:8080->8080/tcp
1ikf0cupe56d      vote_vote             replicated           2/2                  dockersamples/examplevotingapp_vote:before *:5000->80/tcp
xl1myr8cpupj       vote_worker           replicated           1/1                  dockersamples/examplevotingapp_worker:latest

anish@CHARGLEN MINGW64 ~/Downloads/GBC_Blockchain_Development/Semester_02/BCDV_4032_Building_Scalable_Blockchain_Apps/Github/Lab_01/example-voting-app (main)
$ docker stack services vote
ID                NAME                MODE                REPLICAS            IMAGE                                  PORTS
k25paqmy0w1v      vote_db              replicated           1/1                  postgres:15-alpine                  *
tdia0f86u2n2      vote_redis            replicated           2/2                  redis:alpine                         *:5001->80/tcp
7nfgzrl66rx2      vote_result           replicated           1/1                  dockersamples/examplevotingapp_result:before *:5001->80/tcp
wsqbz242cg7       vote_visualizer       replicated           0/1                  dockersamples/visualizer:latest      *:8080->8080/tcp
1ikf0cupe56d      vote_vote             replicated           2/2                  dockersamples/examplevotingapp_vote:before *:5000->80/tcp
xl1myr8cpupj       vote_worker           replicated           1/1                  dockersamples/examplevotingapp_worker:latest

anish@CHARGLEN MINGW64 ~/Downloads/GBC_Blockchain_Development/Semester_02/BCDV_4032_Building_Scalable_Blockchain_Apps/Github/Lab_01/example-voting-app (main)
$ docker stack services vote
ID                NAME                MODE                REPLICAS            IMAGE                                  PORTS
k25paqmy0w1v      vote_db              replicated           1/1                  postgres:15-alpine                  *
tdia0f86u2n2      vote_redis            replicated           2/2                  redis:alpine                         *:5001->80/tcp
7nfgzrl66rx2      vote_result           replicated           1/1                  dockersamples/examplevotingapp_result:before *:5001->80/tcp
wsqbz242cg7       vote_visualizer       replicated           0/1                  dockersamples/visualizer:latest      *:8080->8080/tcp
1ikf0cupe56d      vote_vote             replicated           2/2                  dockersamples/examplevotingapp_vote:before *:5000->80/tcp
xl1myr8cpupj       vote_worker           replicated           1/1                  dockersamples/examplevotingapp_worker:latest
```



Cats vs Dogs!

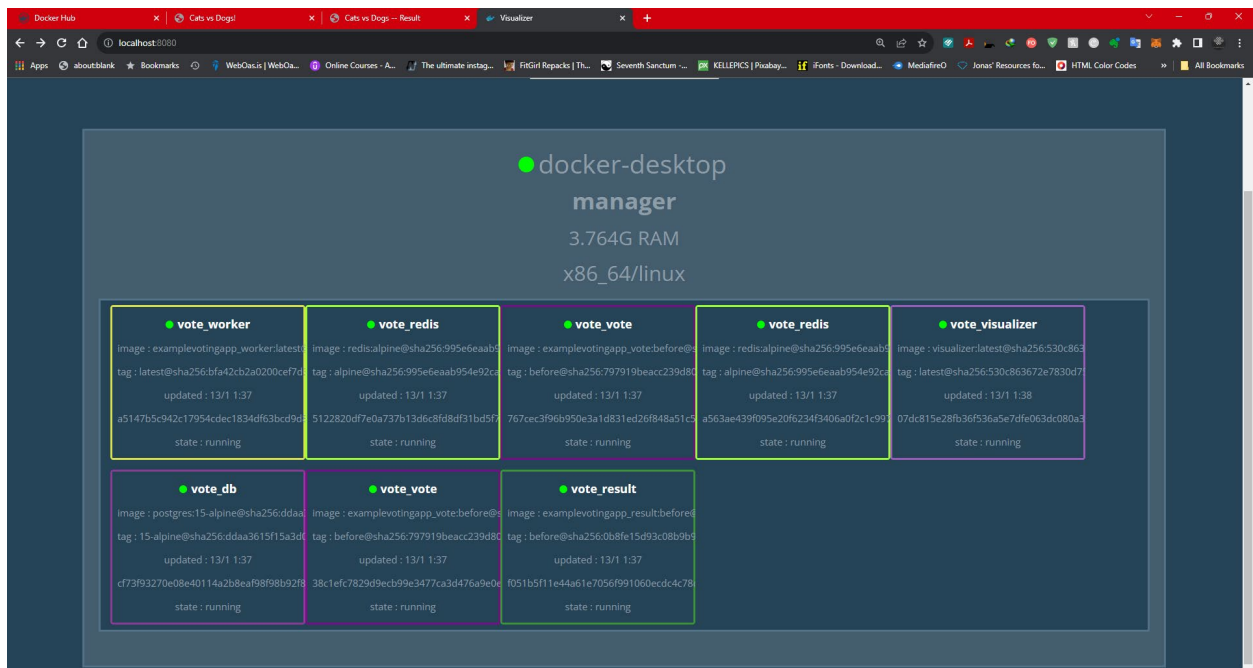
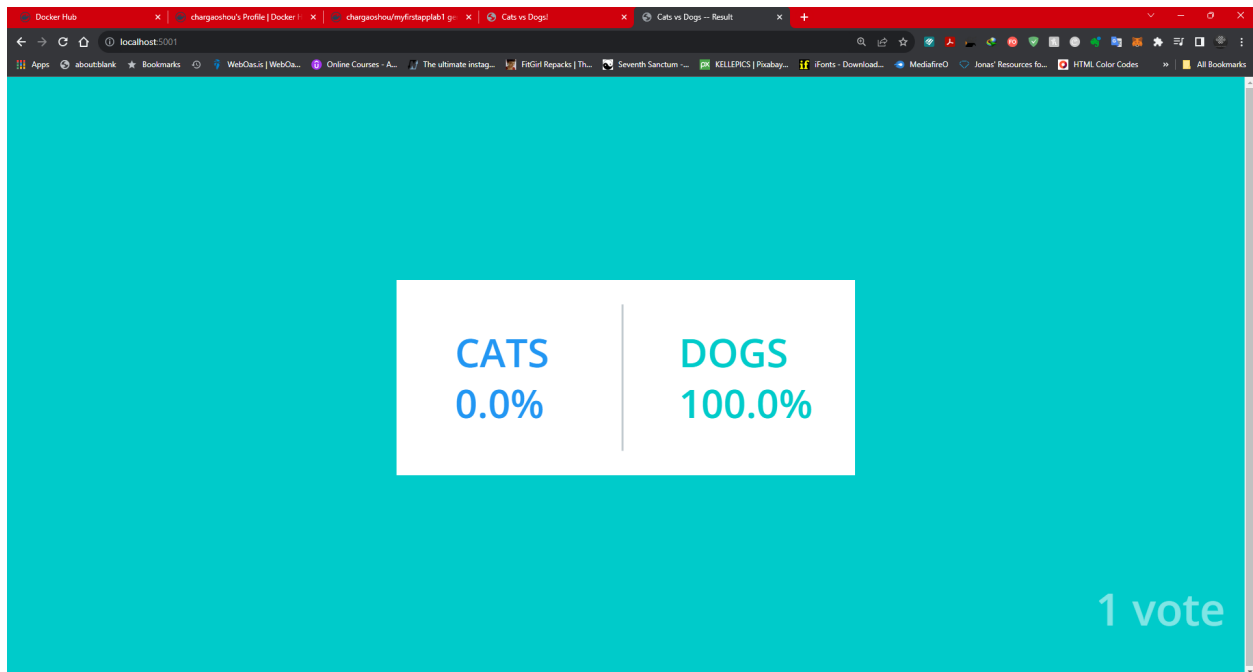
CATS

DOGS



(Tip: you can change your vote)

Processed by container ID  
767cec3f96b9



```
terminal Help
docker-stack.yml M x
Lab_01 > example-voting-app > docker-stack.yml > {} services > {} vote
27     networks:
28     - backend
29     deploy:
30     placement:
31     constraints: [node.role == manager]
32
33     vote:
34     image: dockersamples/examplevotingapp_vote:after

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS GITLENS

anish@CHARGLEN MINGW64 ~/Downloads/GBC_Blockchain_Development/Semester_02/BCDV_4032_Building_Scalable_Blockchain_Apps/Github/Lab_01/example-voting-app (main)
$ docker stack deploy --compose-file docker-stack.yml vote
Updating service vote_worker (id: xl1myr8cpupjm1cohvkmz893e)
Updating service vote_visualizer (id: wsoqbz242cg775f9e1fcg54h1)
Updating service vote_redis (id: tdia0f86u2n2i0mgbm1zrtr6t)
Updating service vote_db (id: k25paqmy0w1vz8i67m7gn4gq5)
Updating service vote_vote (id: 1ikf0cupe56dknay18c0etciz)
Updating service vote_result (id: 7nfgzrl66rx2tgbumw8bvc5lk)

anish@CHARGLEN MINGW64 ~/Downloads/GBC_Blockchain_Development/Semester_02/BCDV_4032_Building_Scalable_Blockchain_Apps/Github/Lab_01/example-voting-app (main)
$ docker stack services vote
ID NAME MODE REPLICAS IMAGE PORTS
k25paqmy0w1v vote_db replicated 1/1 postgres:15-alpine
tdia0f86u2n2 vote_redis replicated 2/2 redis:alpine
7nfgzrl66rx2 vote_result replicated 2/2 dockersamples/examplevotingapp_result:after *:5001->80/tcp
wsoqbz242cg7 vote_visualizer replicated 1/1 dockersamples/visualizer:latest *:8080->8080/tcp
1ikf0cupe56d vote_vote replicated 2/2 dockersamples/examplevotingapp_vote:after *:5000->80/tcp
xl1myr8cpupj vote_worker replicated 1/1 dockersamples/examplevotingapp_worker:latest

anish@CHARGLEN MINGW64 ~/Downloads/GBC_Blockchain_Development/Semester_02/BCDV_4032_Building_Scalable_Blockchain_Apps/Github/Lab_01/example-voting-app (main)
$
```



## Cats vs Dogs!

CATS



DOGS

(Tip: you can change your vote)

Processed by container ID  
e44370581e0e

```

anishq@CHARGLEN MINGW64 ~/Downloads/GBC_Blockchain_Development/Semester_02/BCDV_4032_Building_Scalable_Blockchain_Apps/Github/Lab_01/example-voting-app (main)
$ docker stack rm vote
Removing service vote_db
Removing service vote_redis
Removing service vote_result
Removing service vote_visualizer
Removing service vote_vote
Removing service vote_worker
Removing network vote_frontend
Removing network vote_backend
Removing network vote_default

anishq@CHARGLEN MINGW64 ~/Downloads/GBC_Blockchain_Development/Semester_02/BCDV_4032_Building_Scalable_Blockchain_Apps/Github/Lab_01/example-voting-app (main)
$ docker ps -a
CONTAINER ID   IMAGE                                COMMAND                  CREATED        STATUS        PORTS                               NAMES
c467b3558468   dockersamples/examplevotingapp_result:after   "/usr/bin/tini -- no-"  3 minutes ago  Up 3 minutes  80/tcp                             vote_result.1.hiaqca1nmo0a9obnfzz2u3uoy
03a4f3737f93   dockersamples/examplevotingapp_result:after   "/usr/bin/tini -- no-"  3 minutes ago  Up 3 minutes  80/tcp                             vote_result.2.v18cqrh5fx7l7nyja9apyad8r
e44378581e9e   dockersamples/examplevotingapp_vote:after     "gunicorn app:app -b-"  3 minutes ago  Up 3 minutes  80/tcp                             vote_vote.2.o8havt0hpr3xdpse8gm9o1z
5da3984f0edc   dockersamples/examplevotingapp_vote:after     "gunicorn app:app -b-"  3 minutes ago  Up 3 minutes  80/tcp                             vote_vote.1.r6ymciquewdo0o3ug9k9otinh8
07dc815e28fb   dockersamples/visualizer:latest              "/sbin/tini -- node -"  7 minutes ago  Up 7 minutes  8080/tcp                           vote_visualizer.1.ljg42xcmlea6pmabl1rxcyozg
cf73f93270e0   postgres:15-alpine                          "docker-entrypoint.s-"  7 minutes ago  Up 7 minutes  5432/tcp                           vote_db.1.skmgryco9l8nphs8rmw6a7d73
a5147b5c942c   dockersamples/examplevotingapp_worker:latest  "dotnet Worker.dll"     7 minutes ago  Up 7 minutes  6379/tcp                           vote_worker.1.0xf12bquffmsxg5cx59lyhyvp
a563ae439f09   redis:alpine                                 "docker-entrypoint.s-"  7 minutes ago  Up 7 minutes  6379/tcp                           vote_redis.2.kbl0rwlka6rgedhcsia22xurj
5122820d7f60   redis:alpine                                 "docker-entrypoint.s-"  7 minutes ago  Up 7 minutes  6379/tcp                           vote_redis.1.44zt0b0w4lnxrp18uibqjx0iy
1af546753dae   alpine                                         "/bin/sh"               About an hour ago  Exited (0) About an hour ago  quizzical_elion
de8c12519286   alpine                                         "/bin/sh"               About an hour ago  Exited (0) About an hour ago  cool_bose
fdb58f545ee1   alpine                                         "echo 'hello from al-"  2 hours ago      Exited (0) 2 hours ago      strange_cray
ba22e63ac6ea   alpine                                         "ls -l"                 2 hours ago      Exited (0) 2 hours ago      funny_saha
329dc902e922   hello-world                                   "/hello"                2 hours ago      Exited (0) 2 hours ago      wizardly_borg

anishq@CHARGLEN MINGW64 ~/Downloads/GBC_Blockchain_Development/Semester_02/BCDV_4032_Building_Scalable_Blockchain_Apps/Github/Lab_01/example-voting-app (main)
$ docker ps
CONTAINER ID   IMAGE    COMMAND                  CREATED        STATUS        PORTS   NAMES
anishq@CHARGLEN MINGW64 ~/Downloads/GBC_Blockchain_Development/Semester_02/BCDV_4032_Building_Scalable_Blockchain_Apps/Github/Lab_01/example-voting-app (main)
$

```

Note – All of these are screenshots for Lab 01. The code can be found in the same Github Link in the Readme.