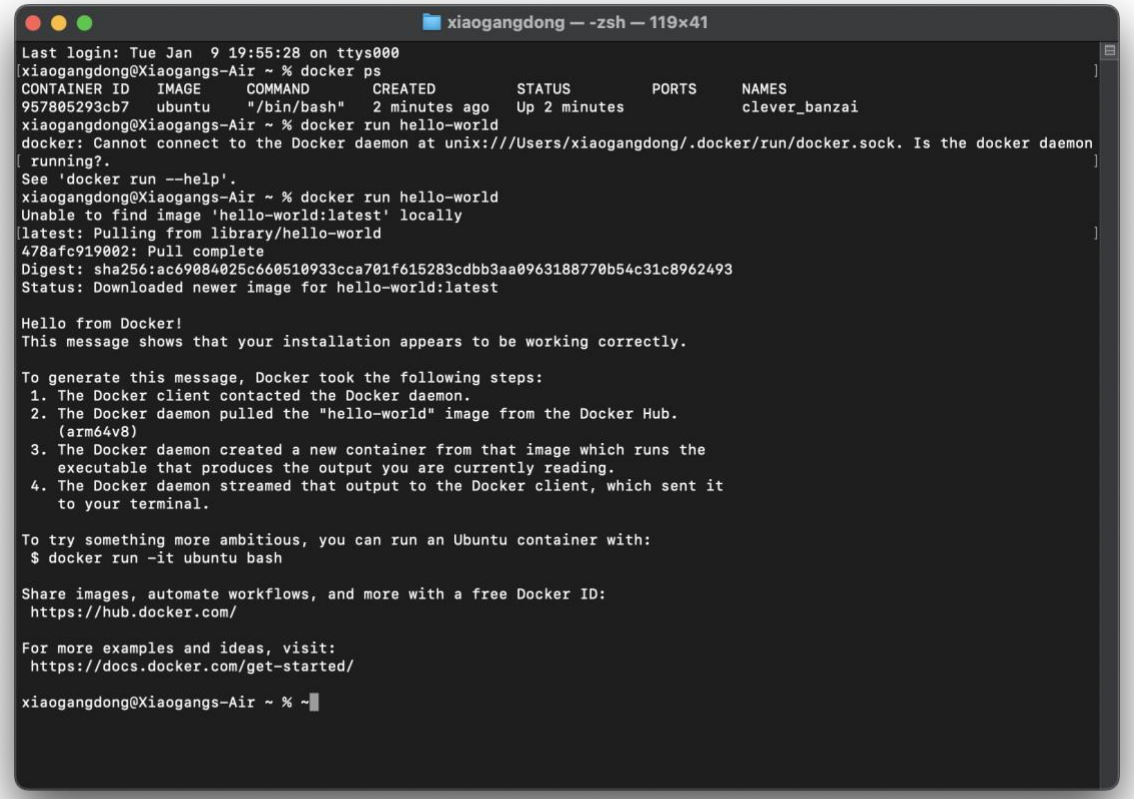
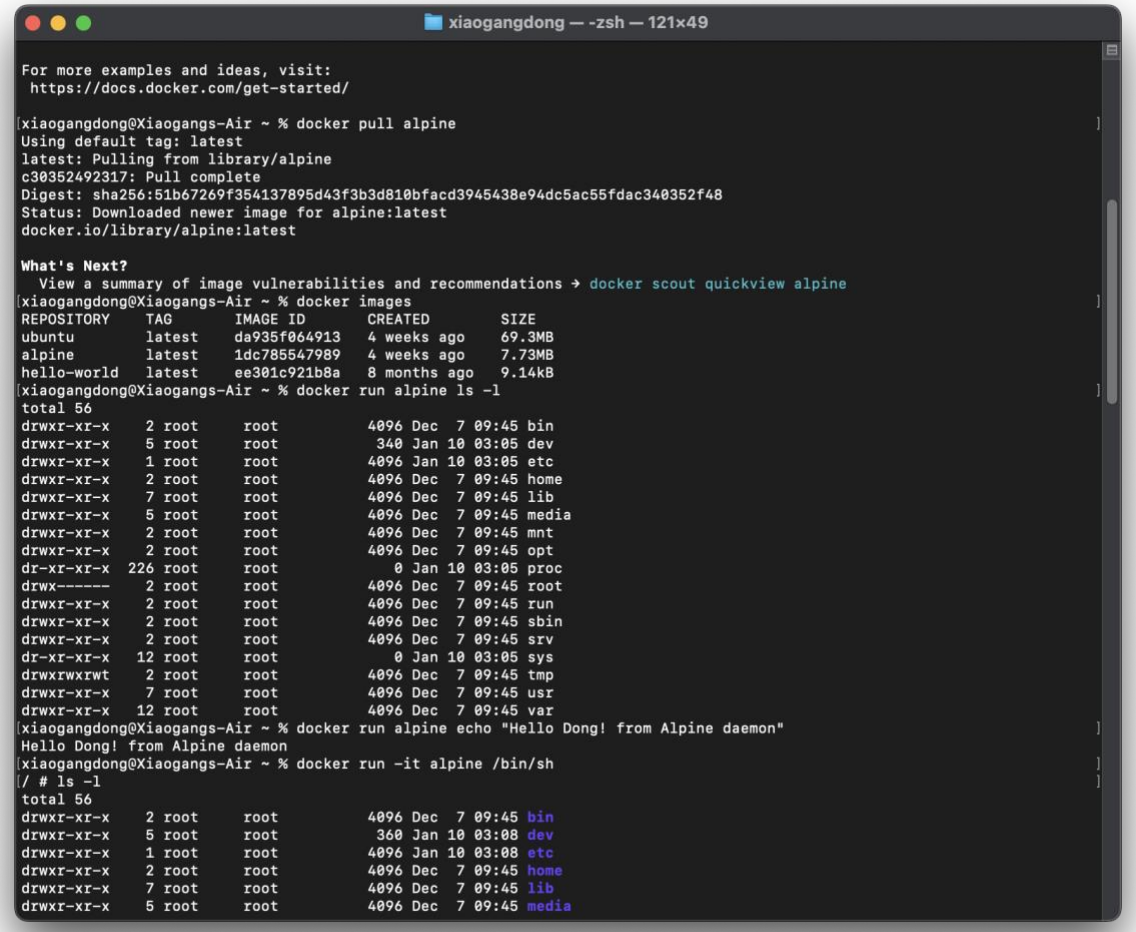
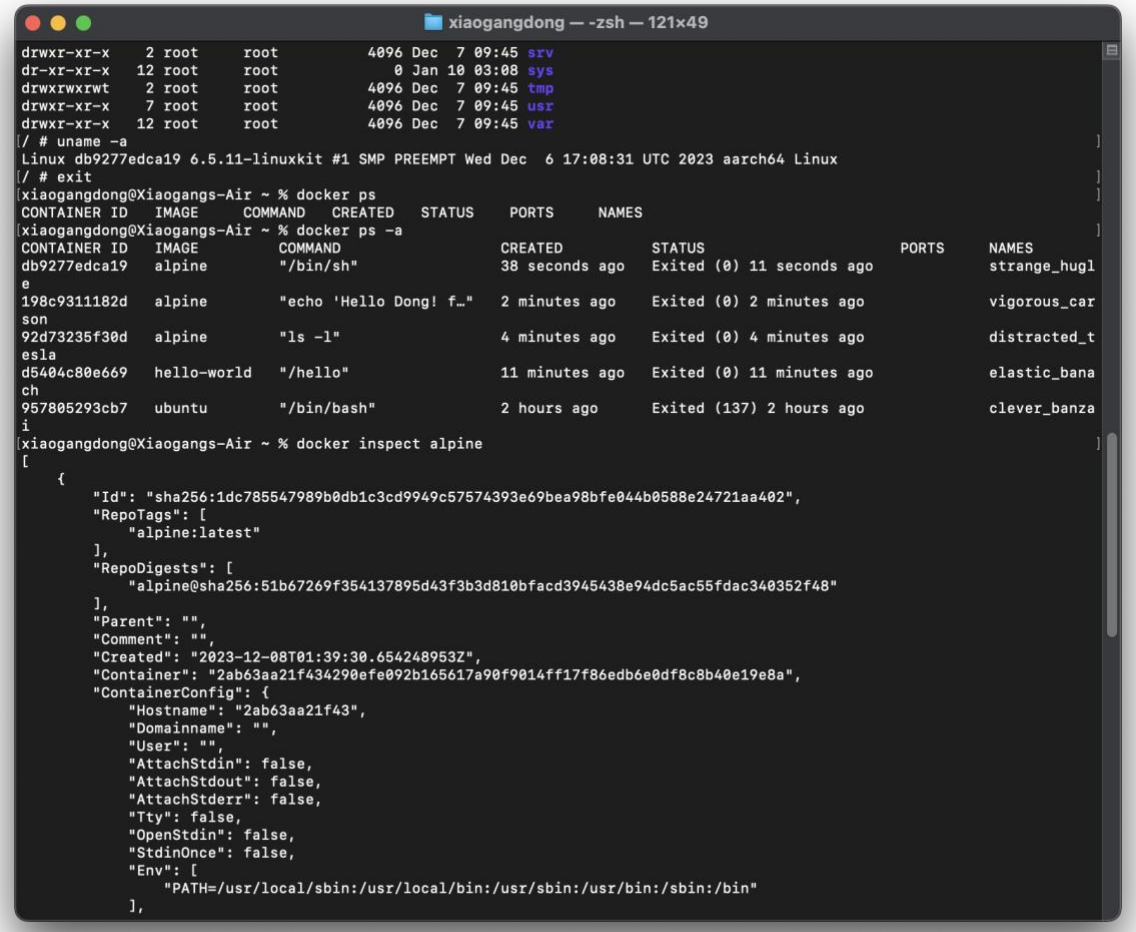
- Verify the installation of my Docker:

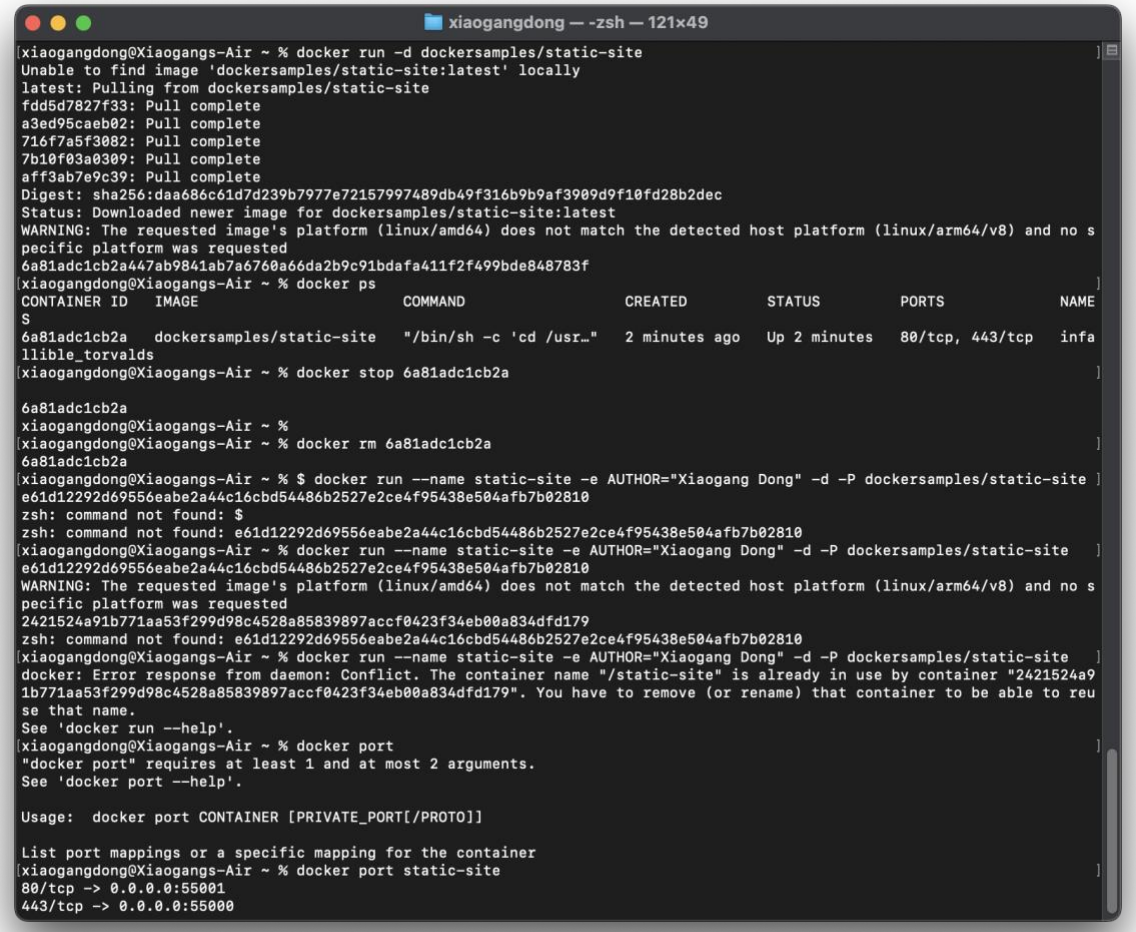


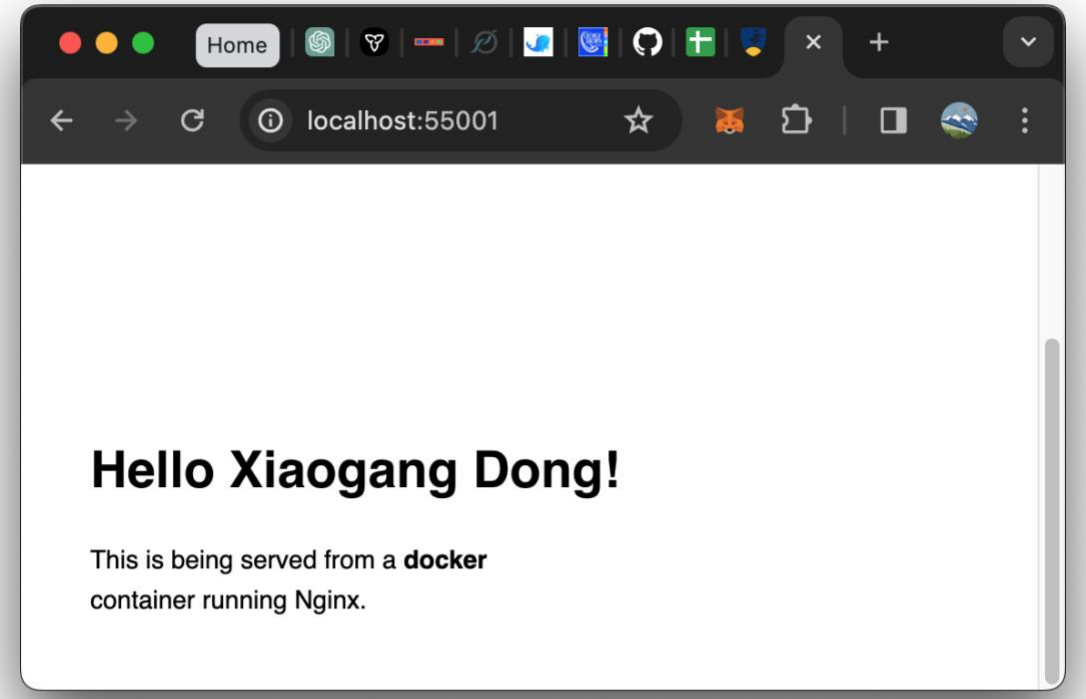

  - Running my first container:


xiaogangdong — -zsh — 121×49
For more examples and ideas, visit:
https://docs.docker.com/get-started/
xiaogangdong@Xiaogangs-Air ~ % docker pull alpine
Using default tag: latest
latest: Pulling from library/alpine
c30352492317: 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
xiaogangdong@Xiaogangs-Air ~ % docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
ubuntu latest da935f064913 4 weeks ago 69.3MB
alpine latest 1dc785547989 4 weeks ago 7.73MB
hello-world latest ee301c921b8a 8 months ago 9.14kB
xiaogangdong@Xiaogangs-Air ~ % docker run alpine ls -l
total 56
drwxr-xr-x 2 root root 4096 Dec 7 09:45 bin
drwxr-xr-x 5 root root 340 Jan 10 03:05 dev
drwxr-xr-x 1 root root 4096 Jan 10 03:05 etc
drwxr-xr-x 2 root root 4096 Dec 7 09:45 home
drwxr-xr-x 7 root root 4096 Dec 7 09:45 lib
drwxr-xr-x 5 root root 4096 Dec 7 09:45 media
drwxr-xr-x 2 root root 4096 Dec 7 09:45 mnt
drwxr-xr-x 2 root root 4096 Dec 7 09:45 opt
dr-xr-xr-x 226 root root 0 Jan 10 03:05 proc
drwx------ 2 root root 4096 Dec 7 09:45 root
drwxr-xr-x 2 root root 4096 Dec 7 09:45 run
drwxr-xr-x 2 root root 4096 Dec 7 09:45 sbin
drwxr-xr-x 2 root root 4096 Dec 7 09:45 srv
dr-xr-xr-x 12 root root 0 Jan 10 03:05 sys
drwxrwxrwt 2 root root 4096 Dec 7 09:45 tmp
drwxr-xr-x 7 root root 4096 Dec 7 09:45 usr
drwxr-xr-x 12 root root 4096 Dec 7 09:45 var
xiaogangdong@Xiaogangs-Air ~ % docker run alpine echo "Hello Dong! from Alpine daemon"
Hello Dong! from Alpine daemon
xiaogangdong@Xiaogangs-Air ~ % docker run -it alpine /bin/sh
/ # ls -l
total 56
drwxr-xr-x 2 root root 4096 Dec 7 09:45 bin
drwxr-xr-x 5 root root 360 Jan 10 03:08 dev
drwxr-xr-x 1 root root 4096 Jan 10 03:08 etc
drwxr-xr-x 2 root root 4096 Dec 7 09:45 home
drwxr-xr-x 7 root root 4096 Dec 7 09:45 lib
drwxr-xr-x 5 root root 4096 Dec 7 09:45 media




- Webapps with docker:


xiaogangdong — -zsh — 121×49
xiaogangdong@Xiaogangs-Air ~ % 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
WARNING: The requested image's platform (linux/amd64) does not match the detected host platform (linux/arm64/v8) and no specific platform was requested
6a81adc1cb2a447ab9841ab7a6760a66da2b9c91bdafa411f2f499bde848783f
xiaogangdong@Xiaogangs-Air ~ % docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
6a81adc1cb2a dockersamples/static-site "/bin/sh -c 'cd /usr…" 2 minutes ago Up 2 minutes 80/tcp, 443/tcp infallible_torvalds
xiaogangdong@Xiaogangs-Air ~ % docker stop 6a81adc1cb2a
6a81adc1cb2a
xiaogangdong@Xiaogangs-Air ~ %
xiaogangdong@Xiaogangs-Air ~ % docker rm 6a81adc1cb2a
6a81adc1cb2a
xiaogangdong@Xiaogangs-Air ~ % $ docker run --name static-site -e AUTHOR="Xiaogang Dong" -d -P dockersamples/static-site
e61d12292d69556eabe2a44c16cbd54486b2527e2ce4f95438e504afb7b02810
zsh: command not found: $
zsh: command not found: e61d12292d69556eabe2a44c16cbd54486b2527e2ce4f95438e504afb7b02810
xiaogangdong@Xiaogangs-Air ~ % docker run --name static-site -e AUTHOR="Xiaogang Dong" -d -P dockersamples/static-site
e61d12292d69556eabe2a44c16cbd54486b2527e2ce4f95438e504afb7b02810
WARNING: The requested image's platform (linux/amd64) does not match the detected host platform (linux/arm64/v8) and no specific platform was requested
2421524a91b771aa53f299d98c4528a85839897accf0423f34eb00a834dfd179
zsh: command not found: e61d12292d69556eabe2a44c16cbd54486b2527e2ce4f95438e504afb7b02810
xiaogangdong@Xiaogangs-Air ~ % docker run --name static-site -e AUTHOR="Xiaogang Dong" -d -P dockersamples/static-site
docker: Error response from daemon: Conflict. The container name "/static-site" is already in use by container "2421524a91b771aa53f299d98c4528a85839897accf0423f34eb00a834dfd179". You have to remove (or rename) that container to be able to reuse that name.
See 'docker run --help'.
xiaogangdong@Xiaogangs-Air ~ % 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
xiaogangdong@Xiaogangs-Air ~ % docker port static-site
80/tcp -> 0.0.0.0:55001
443/tcp -> 0.0.0.0:55000



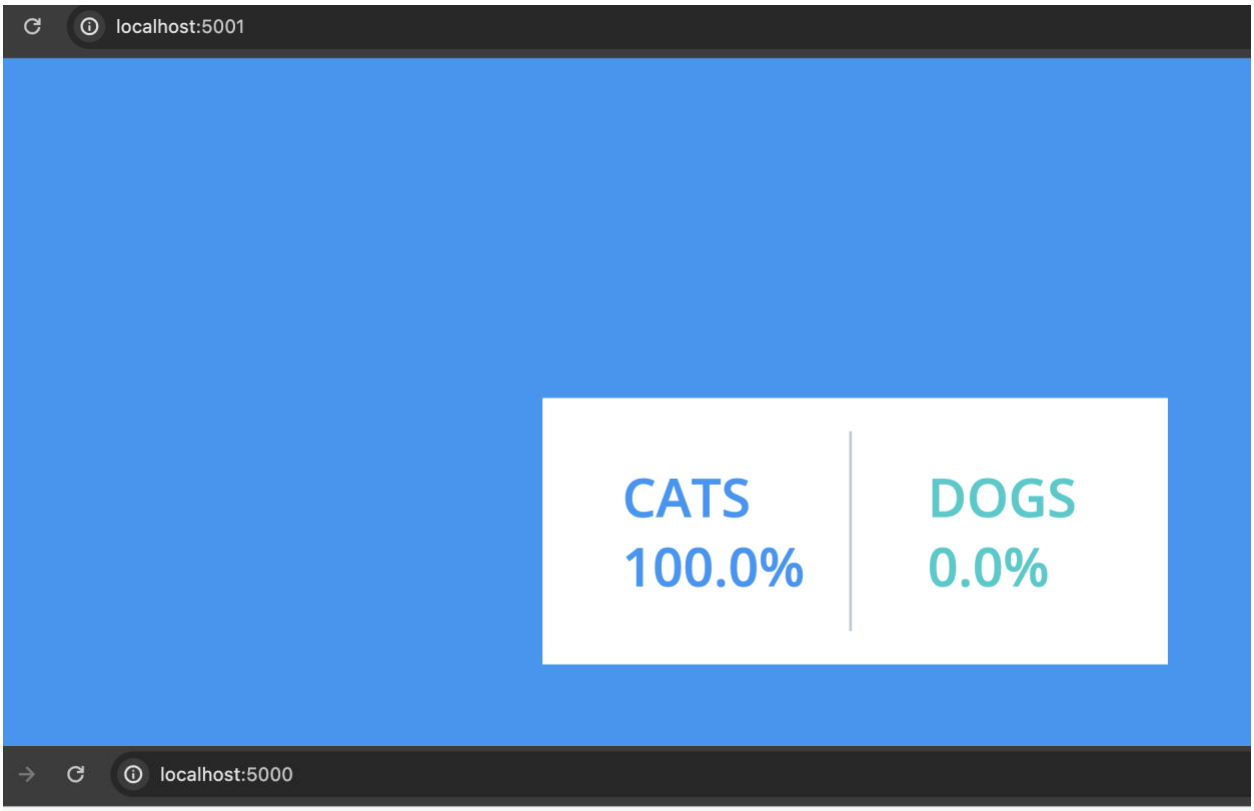

### 3.0 Deploying an app to a Swarm

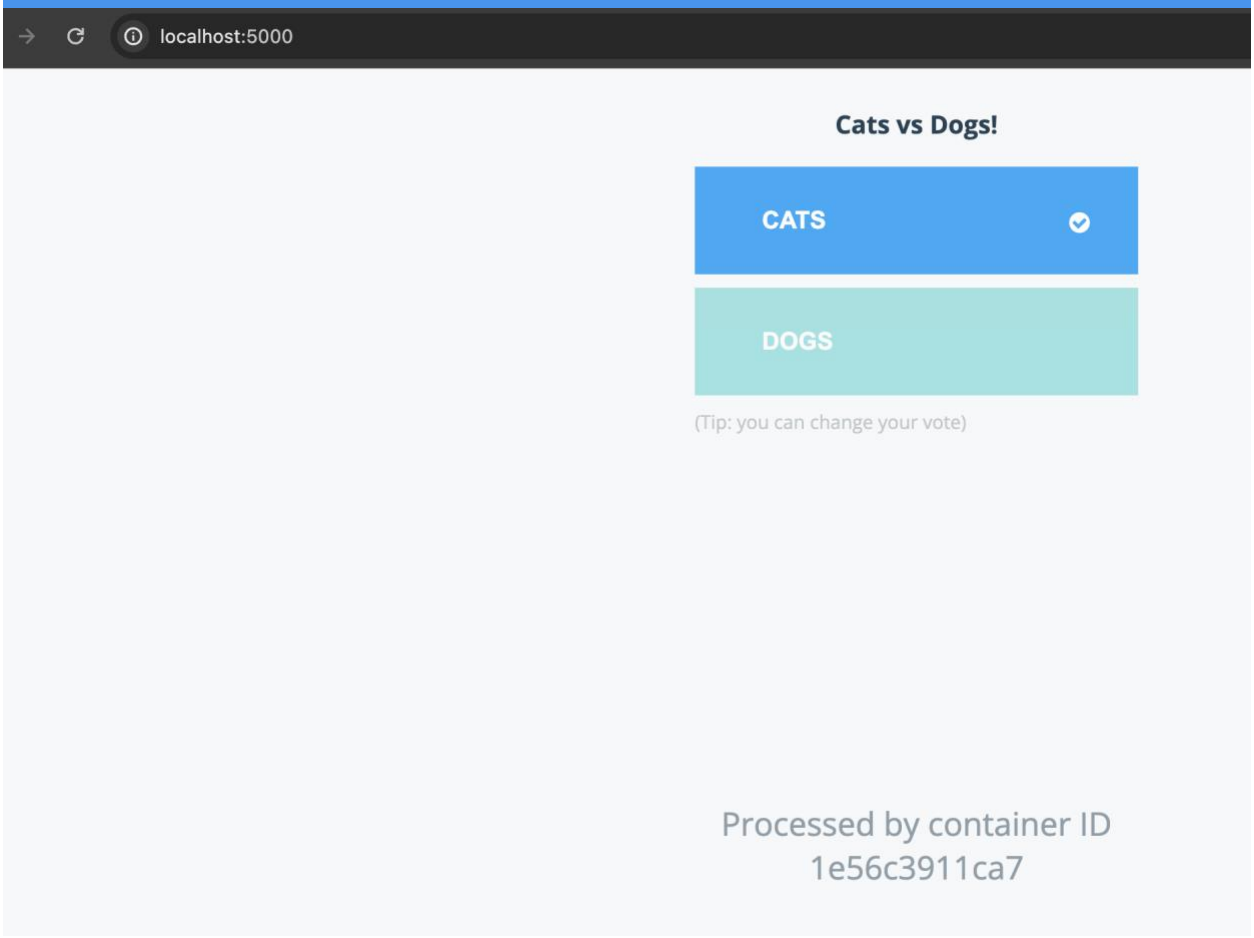
Deployment (swarm enabled earlier)

```
xiaogangdong@Xiaogangs-MacBook-Air Lab 1 % git clone https://github.com/docker/example-voting-app.git
fatal: destination path 'example-voting-app' already exists and is not an empty directory.
xiaogangdong@Xiaogangs-MacBook-Air Lab 1 % cd example-voting-app
xiaogangdong@Xiaogangs-MacBook-Air example-voting-app % docker swarm init

Error response from daemon: This node is already part of a swarm. Use "docker swarm leave" to leave this swarm and join another one.
```

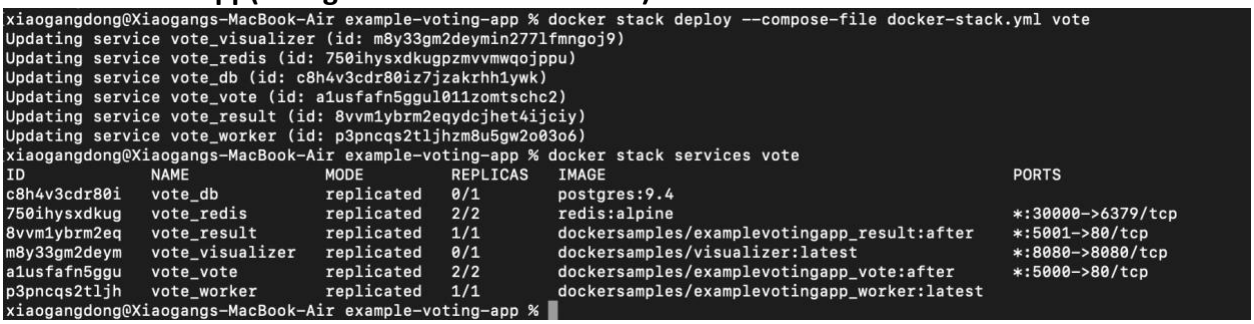
```
xiaogangdong@Xiaogangs-MacBook-Air example-voting-app % docker stack deploy --compose-file docker-stack.yml vote

Creating network vote_frontend
Creating network vote_backend
Creating service vote_redis
Creating service vote_db
Creating service vote_vote
Creating service vote_result
Creating service vote_worker
xiaogangdong@Xiaogangs-MacBook-Air example-voting-app % docker stack services vote
ID             NAME          MODE         REPLICAS   IMAGE                                          PORTS
c8h4v3cdr80i   vote_db       replicated   1/1        postgres:15-alpine
750ihysxdkug   vote_redis    replicated   1/1        redis:alpine
8vvm1ybrm2eq   vote_result   replicated   1/1        dockersamples/examplevotingapp_result:latest   *:5001->80/tcp
a1usfafn5ggu   vote_vote     replicated   2/2        dockersamples/examplevotingapp_vote:latest     *:5000->80/tcp
p3pncqs2tljh   vote_worker   replicated   1/2        dockersamples/examplevotingapp_worker:latest
xiaogangdong@Xiaogangs-MacBook-Air example-voting-app %
```

UI: Cat vs Dog


localhost:5001
CATS
100.0%
DOGS
0.0%


localhost:5000
Cats vs Dogs!
CATS
DOGS
(Tip: you can change your vote)
Processed by container ID
1e56c3911ca7

## Customize the app(changed from before to after)



```
xiaogangdong@Xiaogangs-MacBook-Air example-voting-app % docker stack deploy --compose-file docker-stack.yml vote
Updating service vote_visualizer (id: m8y33gm2deymin277lfmngoj9)
Updating service vote_redis (id: 750ihysxdkugpzmvvmwqojppu)
Updating service vote_db (id: c8h4v3cdr80iz7jzakrhh1ywk)
Updating service vote_vote (id: a1usfafn5ggul011zomtschc2)
Updating service vote_result (id: 8vvm1ybrm2eqydcjhet4ijciy)
Updating service vote_worker (id: p3pncqs2tljhzm8u5gw2o03o6)
xiaogangdong@Xiaogangs-MacBook-Air example-voting-app % docker stack services vote
ID             NAME              MODE         REPLICAS   IMAGE                                          PORTS
c8h4v3cdr80i   vote_db           replicated   0/1        postgres:9.4
750ihysxdkug   vote_redis        replicated   2/2        redis:alpine                                   *:30000->6379/tcp
8vvm1ybrm2eq   vote_result       replicated   1/1        dockersamples/examplevotingapp_result:after    *:5001->80/tcp
m8y33gm2deym   vote_visualizer   replicated   0/1        dockersamples/visualizer:latest                *:8080->8080/tcp
a1usfafn5ggu   vote_vote         replicated   2/2        dockersamples/examplevotingapp_vote:after      *:5000->80/tcp
p3pncqs2tljh   vote_worker       replicated   1/1        dockersamples/examplevotingapp_worker:latest
xiaogangdong@Xiaogangs-MacBook-Air example-voting-app %
```