

Lab1 Screenshots

1.0 Basics & Running First Container

```
[sufiyanmemon@Sufiyans-Air ~ % docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
478afc919002: Pull complete
Digest: sha256:ac69084025c660510933cca701f615283cddb3aa0963188770b54c31c8962493
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.
   (arm64v8)
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/
```

```
[sufiyanmemon@Sufiyans-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
```

```
[sufiyanmemon@Sufiyans-Air ~ % docker images
```

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
alpine	latest	1dc785547989	4 weeks ago	7.73MB
busybox	latest	a6969cfac53d	5 weeks ago	4.04MB
couchdb	3.3.2	cb7b80ab6c0b	7 weeks ago	195MB
hyperledger/fabric-tools	latest	39bbbbb10cd	2 months ago	497MB
hyperledger/fabric-orderer	latest	0c9844fe2b86	2 months ago	97.7MB
hyperledger/fabric-peer	latest	8606f5146937	2 months ago	131MB
hyperledger/fabric-ca	latest	218e353aa96a	4 months ago	203MB
hyperledger/fabric-nodeenv	2.5	b6ed83de2e95	6 months ago	445MB
hello-world	latest	ee301c921b8a	8 months ago	9.14kB

```
sufiyanmemon@Sufiyans-Air ~ %
```

```
sufiyanmemon@Sufiyans-Air FlaskApp % 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 12 03:19 dev
drwxr-xr-x    1 root    root    4096 Jan 12 03:19 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   230 root    root      0 Jan 12 03:19 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 12 03:19 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
sufiyanmemon@Sufiyans-Air FlaskApp %
```

```
● sufiyanmemon@Sufiyans-Air FlaskApp % docker run alpine /bin/sh
○ sufiyanmemon@Sufiyans-Air FlaskApp %
```

```
sufiyanmemon@Sufiyans-Air ~ % docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED    STATUS    PORTS    NAMES
```

```
sufiyanmemon@Sufiyans-Air ~ % docker ps -a
CONTAINER ID   IMAGE     COMMAND                  CREATED          STATUS          PORTS    NAMES
ea0e4b6db89c   alpine    "/bin/sh"               42 seconds ago  Exited (0) 14 seconds ago           funny_satoshi
a7b77555c788   alpine    "/bin/sh"               About a minute ago Exited (0) About a minute ago           pensive_neumann
6f02b971eddf   alpine    "echo 'hello from al..." About a minute ago Exited (0) About a minute ago           wizardly_pascal
1296cd305336   alpine    "ls -l"                 2 minutes ago   Exited (0) 2 minutes ago           reverent_engelbart
0a41accdb5dc   hello-world "/hello"                8 minutes ago   Exited (0) 8 minutes ago           interesting_ellis
```

```
● sufiyanmemon@Sufiyans-Air FlaskApp % docker run -it alpine /bin/sh
/ # ls
bin  dev  etc  home  lib  media  mnt  opt  proc  root  run  sbin  srv  sys  tmp  usr  var
/ # uname -a
Linux 8a3049305e21 6.5.11-linuxkit #1 SMP PREEMPT Wed Dec  6 17:08:31 UTC 2023 aarch64 Linux
/ # exit
○ sufiyanmemon@Sufiyans-Air FlaskApp %
```

2.0 Webapps with Docker

2.1 Run a static website in a container

```
sufiyanmemon@Sufiyans-Air StaticWebsite % docker build -t static-site
[+] Building 0.3s (8/8) FINISHED
=> [internal] load .dockerignore
=> => transferring context: 28B
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 259B
=> [internal] load metadata for docker.io/library/nginx:latest
=> [1/3] FROM docker.io/library/nginx@sha256:2bdc49f2f8ae8d8dc5ed00f2ee56d00385c6f8bc8a8b320da294d9e3b49026
=> [internal] load build context
=> => transferring context: 39B
=> CACHED [2/3] WORKDIR /usr/share/nginx/html
=> CACHED [3/3] COPY Hello_Docker.html /usr/share/nginx/html
=> exporting to image
=> => writing image sha256:9b4d55bd397c6525429231c92636b62a89ded878a69807e58b4a4bfb89cf9a7a
=> => naming to docker.io/library/static-site

View build details: docker-desktop://dashboard/build/desktop-linux/desktop-linux/kv903771oew2djej1324n1xw

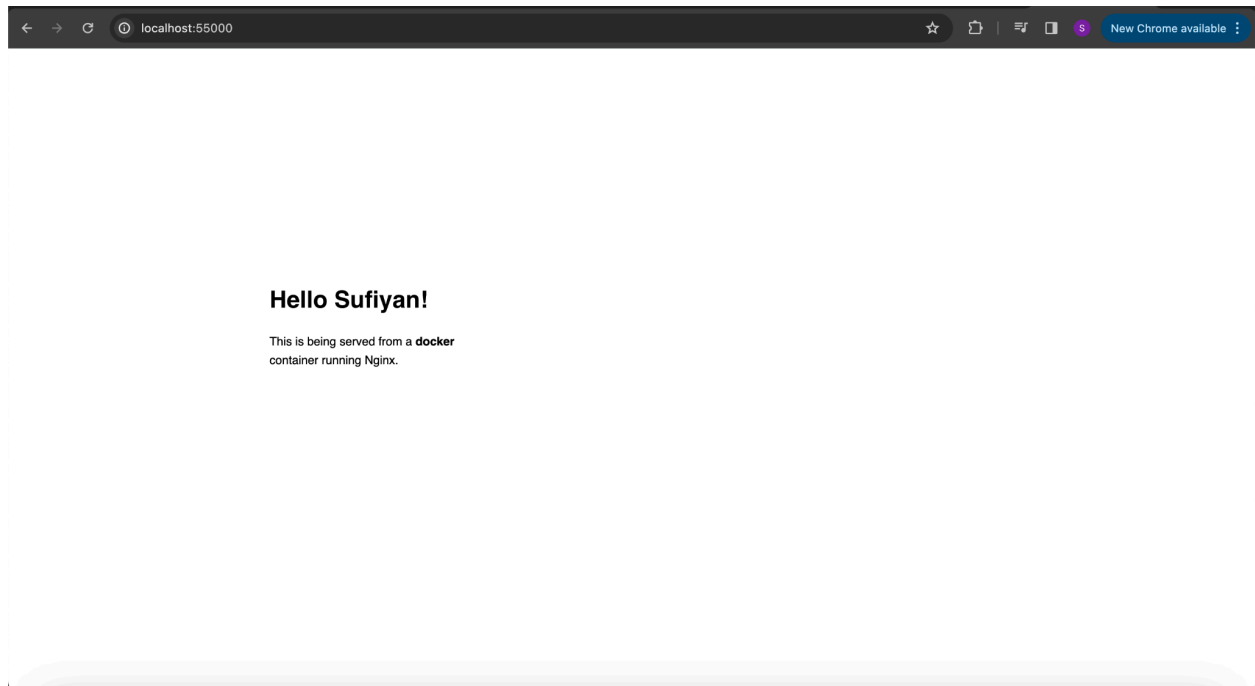
What's Next?
View a summary of image vulnerabilities and recommendations -> docker scout quickview
sufiyanmemon@Sufiyans-Air StaticWebsite % docker images
REPOSITORY          TAG         IMAGE ID      CREATED       SIZE
static-site         latest      9b4d55bd397c  21 minutes ago 192MB
alpine              latest      1dc785547989  4 weeks ago   7.73MB
busybox             latest      a6969c6ac53d  5 weeks ago   4.04MB
couchdb             3.3.2      cb7b80ab6c0b  7 weeks ago   195MB
hyperledger/fabric-tools latest      39bbbbb10cd   2 months ago 497MB
hyperledger/fabric-orderer latest      0c9844fe2b86  2 months ago 97.7MB
hyperledger/fabric-peer latest      8606f5146937  2 months ago 131MB
hyperledger/fabric-ca latest      218e353aa96a  4 months ago 203MB
hyperledger/fabric-nodeenv 2.5        b6ed83de2e95  6 months ago 445MB
hello-world         latest      ee301c921b8a  8 months ago  9.14kB
sufiyanmemon@Sufiyans-Air StaticWebsite %
```

```
● sufianmemon@Sufiyans-Air Class % docker run -d static-site
51e5276434725ba5d60de1be641691799ad9fb8037906b622bcdcfcab7a25dd7c
○ sufianmemon@Sufiyans-Air Class %
```

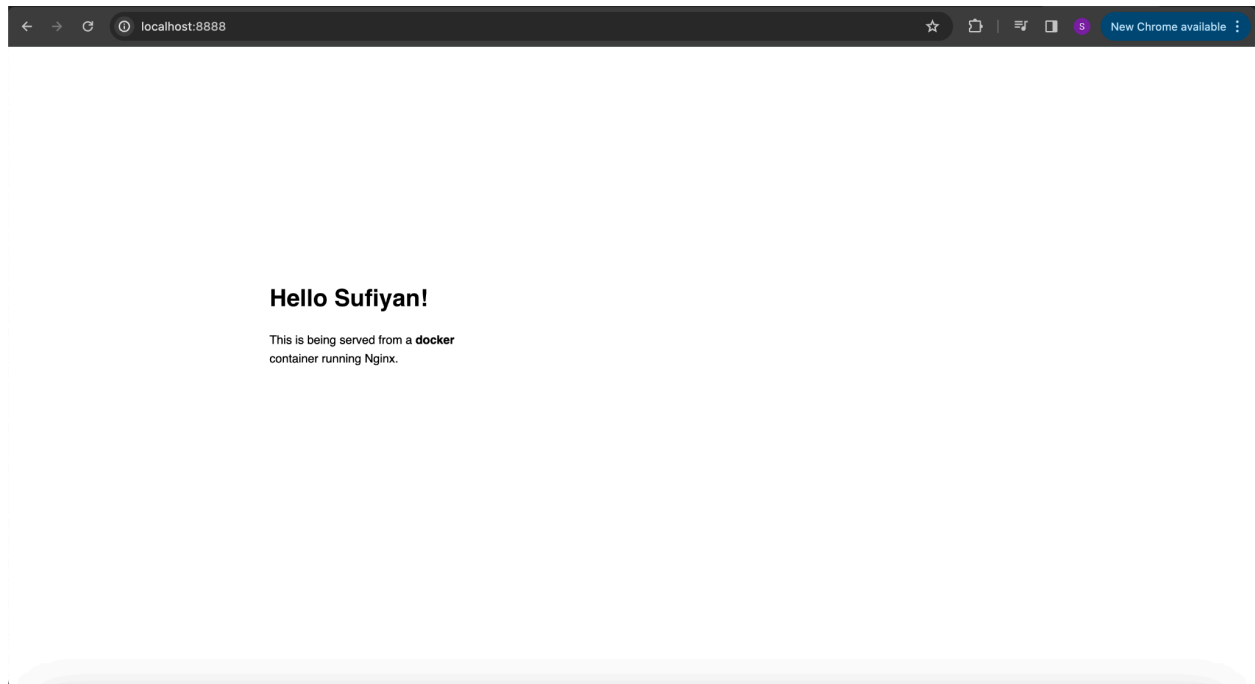
```
sufiyanmemon@Sufiyans-Air ~ % docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED    STATUS    PORTS    NAMES
51e527643472   static-site "/docker-entrypoint..." 7 minutes ago Up 7 minutes 80/tcp    focused_tu
sufiyanmemon@Sufiyans-Air ~ %
```

```
[sufiyanmemon@Sufiyans-Air ~ % docker stop 51e527643472
51e527643472
[sufiyanmemon@Sufiyans-Air ~ % docker rm 51e527643472
51e527643472
sufiyanmemon@Sufiyans-Air ~ %
```

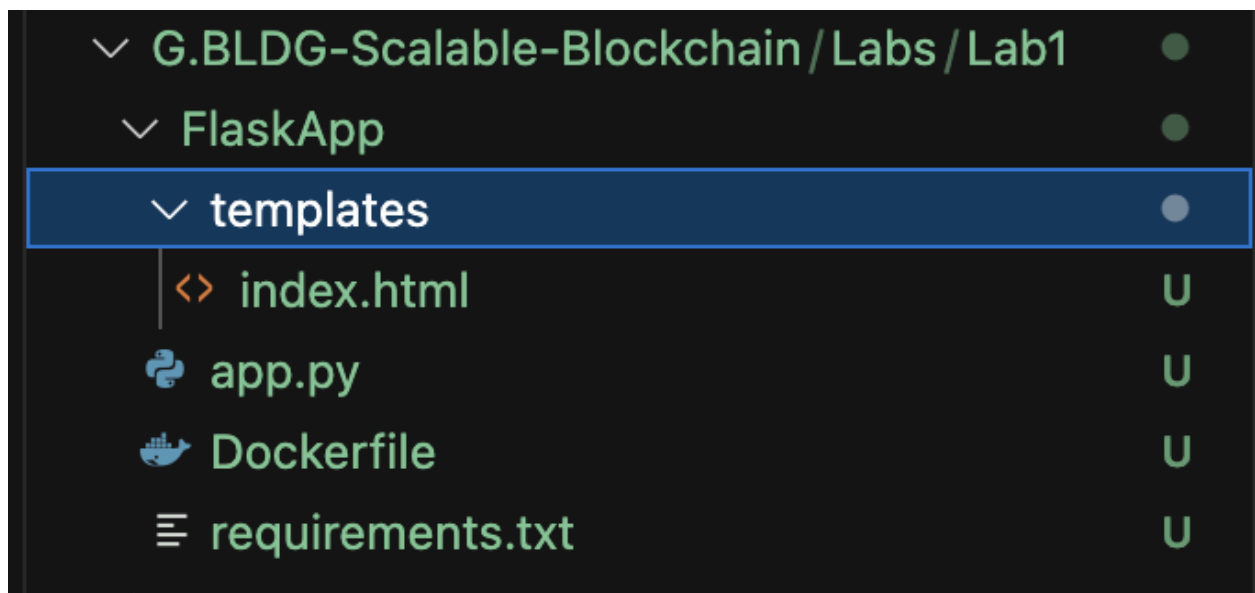
```
● sufianmemon@Sufiyans-Air StaticWebsite % docker run --name static-site -e AUTHOR="Sufiyan" -d -P 9b4d55bd397c
21541b8dfac6d417a223589a132869a23093865cbf58dffd0bfcc461f425eeef
● sufianmemon@Sufiyans-Air StaticWebsite % docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED    STATUS    PORTS    NAMES
21541b8dfac6   9b4d55bd397c "/docker-entrypoint..." 17 seconds ago Up 16 seconds 0.0.0.0:55000->80/tcp    static-site
sufiyanmemon@Sufiyans-Air StaticWebsite % docker port static-port
Error response from daemon: No such container: static-port
sufiyanmemon@Sufiyans-Air StaticWebsite % docker port static-site
80/tcp -> 0.0.0.0:55000
```



```
sufiyanmemon@Sufiyans-Air StaticWebsite % docker run --name static-site2 -e AUTHOR="Sufiyan" -d -p 8888:80 9b4d55bd397c
024e74488a8afa975bf2a050c3fa86977555e699667d901883f75524c0eac290
sufiyanmemon@Sufiyans-Air StaticWebsite % docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS                NAMES
024e74488a8a   9b4d55bd397c   "/docker-entrypoint...." 6 seconds ago  Up 6 seconds  0.0.0.0:8888->80/tcp  static-site2
21541b8dfac6   9b4d55bd397c   "/docker-entrypoint...." 4 minutes ago  Up 4 minutes  0.0.0.0:55000->80/tcp  static-site
sufiyanmemon@Sufiyans-Air StaticWebsite % docker port static-site2
80/tcp -> 0.0.0.0:8888
sufiyanmemon@Sufiyans-Air StaticWebsite % docker stop static-site
static-site
sufiyanmemon@Sufiyans-Air StaticWebsite % docker rm static-site
static-site
sufiyanmemon@Sufiyans-Air StaticWebsite % docker stop static-site2
static-site2
sufiyanmemon@Sufiyans-Air StaticWebsite % docker rm static-site2
static-site2
sufiyanmemon@Sufiyans-Air StaticWebsite % docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS                NAMES
sufiyanmemon@Sufiyans-Air StaticWebsite % docker ps -a
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS                NAMES
ea0e4b6db89c   alpine         "/bin/sh"               40 minutes ago  Exited (0)    39 minutes ago      funny_satoshi
a7b77555c788   alpine         "/bin/sh"               41 minutes ago  Exited (0)    41 minutes ago      pensive_neumann
6f02b971eddf   alpine         "echo 'hello from al..." 41 minutes ago  Exited (0)    41 minutes ago      wizardly_pascal
1296cd305336   alpine         "ls -l"                 42 minutes ago  Exited (0)    42 minutes ago      reverent_engelbart
0a41accdb5dc   hello-world    "/hello"                47 minutes ago  Exited (0)    47 minutes ago      interesting_ellis
sufiyanmemon@Sufiyans-Air StaticWebsite %
```



2.3 Create your first image

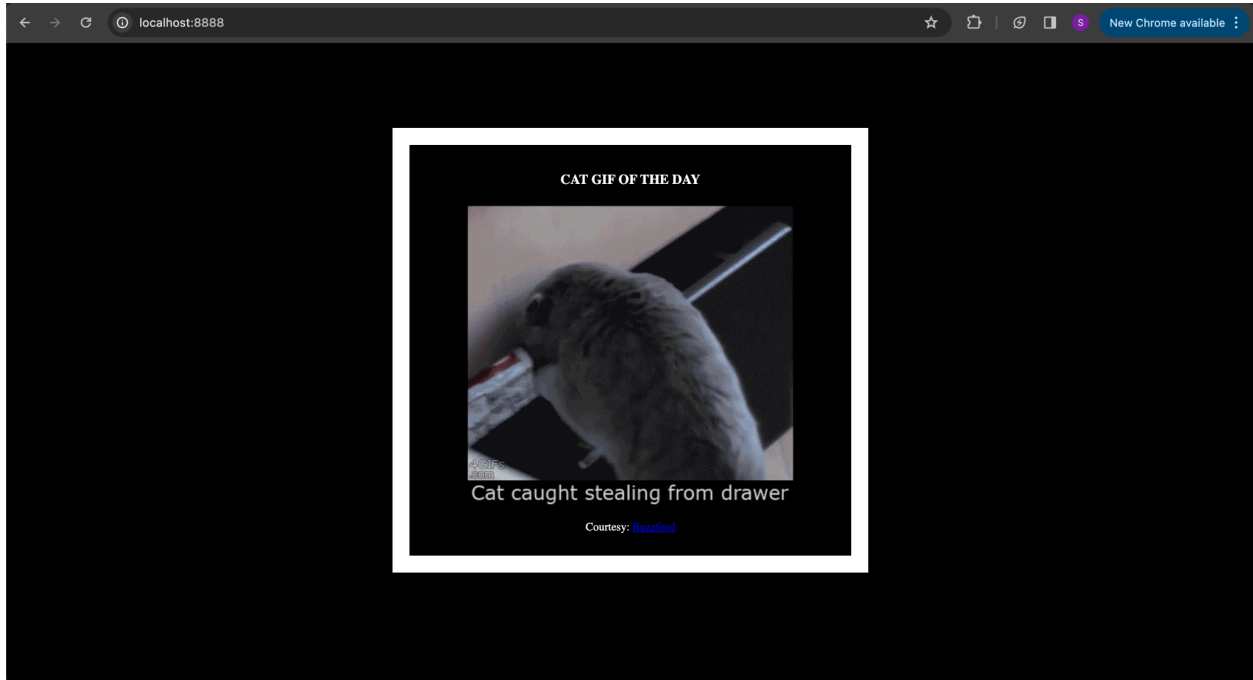


```
sufiyanmemon@Sufiyans-Air FlaskApp % docker build -t sufiyanmemon/flaskapp .
[*] Building 14.8s (10/10) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 360B
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [internal] load metadata for docker.io/library/python:3.8
=> [auth] library/python:pull token for registry-1.docker.io
=> [1/4] FROM docker.io/library/python:3.8sha256:1171e345190f644eb5e3eea60904155f39225feae5e5c4e704c08776c0219b9e
=> => resolve docker.io/library/python:3.8sha256:1171e345190f644eb5e3eea60904155f39225feae5e5c4e704c08776c0219b9e
=> => sha256:1171e345190f644eb5e3eea60904155f39225feae5e5c4e704c08776c0219b9e 1.86kB / 1.86kB
=> => sha256:be485f5ca515d83c55c897ed90041f5f870736055b0d73878bccccd318419b0e 2.01kB / 2.01kB
=> => sha256:5665c1f9a9e17ac068ae05b2839df402eac34afdd095f8c115f09886d757840c 49.59MB / 49.59MB
=> => sha256:c5383f06853344270625ee683511c06768099e432496989077378a2ee04cf82f 7.58kB / 7.58kB
=> => sha256:f419b1a62fc83850ab3cb43274970bb20a18ae6e674535478a48f5bee11559b6 23.58MB / 23.58MB
=> => sha256:069a35492a4c5b1727f36b1184c413a96ce816d65578adaf3bce2023a1765c0a 63.99MB / 63.99MB
=> => sha256:599ff0dd2e5531872126111c843bb09b42ae90ff2d37c73e897d9e2e86c995a9 202.50MB / 202.50MB
=> => extracting sha256:5665c1f9a9e17ac068ae05b2839df402eac34afdd095f8c115f09886d757840c
=> => sha256:31d3b805674f8d47296118446b5849cbe2fe32784dccb7261e02d8a2a222936 6.47MB / 6.47MB
=> => sha256:18131374a05655eb378879919682b100bc14a81028004801ebc091081185 17.04MB / 17.04MB
=> => sha256:372a511cb25b49e2b324010ba2725697a598899038896ed9d51f9c9c01a4add 242B / 242B
=> => sha256:fd42abc3919ba5e9a62c5a641a727fbc1e14192fc3fcd0582e51b34bb853a42 2.85MB / 2.85MB
=> => extracting sha256:f419b1a62fc83850ab3cb43274970bb20a18ae6e674535478a48f5bee11559b6
=> => extracting sha256:069a35492a4c5b1727f36b1184c413a96ce816d65578adaf3bce2023a1765c0a
=> => extracting sha256:599ff0dd2e5531872126111c843bb09b42ae90ff2d37c73e897d9e2e86c995a9
=> => extracting sha256:31d3b805674f8d47296118446b5849cbe2fe32784dccb7261e02d8a2a222936
=> => extracting sha256:18131374a05655eb378879919682b100bc14a81028004801ebc091081185
=> => extracting sha256:372a511cb25b49e2b324010ba2725697a598899038896ed9d51f9c9c01a4add
=> => extracting sha256:fd42abc3919ba5e9a62c5a641a727fbc1e14192fc3fcd0582e51b34bb853a42
=> [internal] load build context
=> => transferring context: 490B
=> [2/4] WORKDIR /usr/src/app
=> [3/4] COPY . .
=> [4/4] RUN pip install --no-cache-dir -r requirements.txt
=> => exporting to image
=> => exporting layers
=> => writing image sha256:90b15819a49ca686962d91ce68b089e8b05e67fe887bc883e97156f7891a3025
=> => naming to docker.io/sufiyanmemon/flaskapp

View build details: docker-desktop://dashboard/build/desktop-linux/desktop-linux/x3o7k9lh2z4qjch61rqgrrf0

What's Next?
View a summary of image vulnerabilities and recommendations - docker scout quickview
sufiyanmemon@Sufiyans-Air FlaskApp %
```

```
sufiyanmemon@Sufiyans-Air FlaskApp % docker run -p 8888:5000 sufiyanmemon/flaskapp
* Serving Flask app 'app' (lazy loading)
* Environment: production
  WARNING: This is a development server. Do not use it in a production deployment.
  Use a production WSGI server instead.
* Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on all addresses (0.0.0.0)
* Running on http://127.0.0.1:5000
* Running on http://172.17.0.2:5000
Press CTRL+C to quit
192.168.65.1 -- [12/Jan/2024 00:08:39] "GET / HTTP/1.1" 200 -
```



```
sufiyanmemon@Sufiyans-Air FlaskApp % docker login
Authenticating with existing credentials...
Login Succeeded
```




```
sufiyanmemon@Sufiyans-Air FlaskApp % docker push sufiyanmemon/flaskapp
Using default tag: latest
The push refers to repository [docker.io/sufiyanmemon/flaskapp]
a7c058dc1342: Pushed
476725d8e6ce: Pushed
efccc20ed1d2: Pushed
581f3ffb6852: Mounted from library/python
3612c2a02cdd: Mounted from library/python
08dc7fb71a8d: Mounted from library/python
c3eee5e5d189: Mounted from library/python
fe73b738a2e6: Mounted from library/python
0b2b4a6885de: Mounted from library/python
369d2341f368: Mounted from library/python
77ad615d04d4: Mounted from library/python
latest: digest: sha256:3ad8944ac652b88562c1c4e436bc38d7738f60879e350db7b212a6bbb53f2f3d size: 2633
sufiyanmemon@Sufiyans-Air FlaskApp %
```

hub.docker.com/r/sufiyanmemon/flaskapp/tags

docker hub Explore Repositories Organizations Search Docker Hub

Explore / sufiyanmemon/flaskapp

 **sufiyanmemon/flaskapp** ☆
By [sufiyanmemon](#) • Updated 2 days ago [Manage Repository](#)
Pulls 3

Overview **Tags**

Sort by Newest Filter Tags

TAG	DIGEST	OS/ARCH	LAST PULL	COMPRESSED SIZE
latest	3ad8944ac652	linux/arm64/v8	2 days ago	352.64 MB

docker pull sufiyanmemon/flaskapp