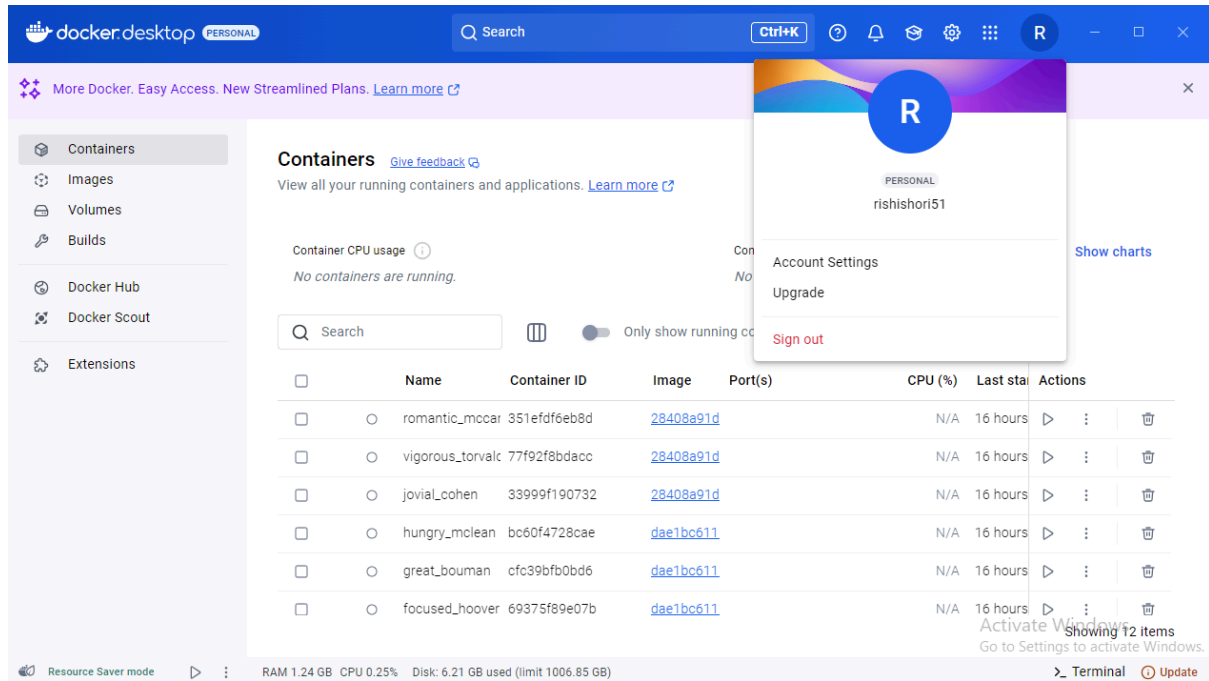
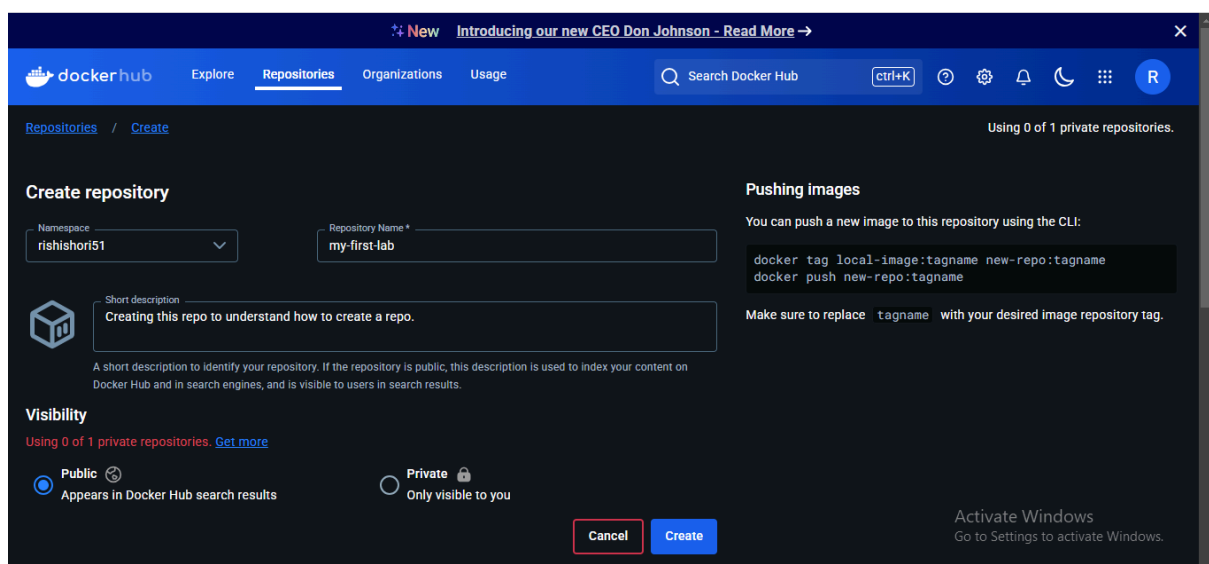


Aim: Understanding Basic Docker Operations:

Exercise 1: Sign in with your Docker account:




Exercise 2: Create an image repository:





[rishishori51](#) / [Repositories](#) / [my-first-lab](#) / [General](#)

rishishori51/my-first-lab

Created less than a minute ago

Creating this repo to understand how to create a repo. 

Add a category  

[General](#)

[Tags](#)

[Image Management](#) **BETA**

[Builds](#)

[Collaborators](#)

[Webhooks](#)

[Settings](#)

Tags INCOMPLETE

Pushed images appear here.

Exercise 3: Pulling an Image from Docker Hub:

```
Command Prompt
Microsoft Windows [Version 10.0.22621.4317]
(c) Microsoft Corporation. All rights reserved.

C:\Users\admin>docker pull nginx
Using default tag: latest
latest: Pulling from library/nginx
Digest: sha256:9d6b58feebd2dbd3c56ab585333d627cc6e281011cfd6050fa4bcf2072c9496
Status: Image is up to date for nginx:latest
docker.io/library/nginx:latest

C:\Users\admin>docker image ls
REPOSITORY          TAG          IMAGE ID      CREATED      SIZE
imagetoexternalworld 02           28408a91d54f  17 hours ago 1.46GB
imagetoexternalworld latest       dae1bc6111bc  17 hours ago 1.47GB
<none>              <none>      0fb635ed78b7  18 hours ago 1.47GB
<none>              <none>      f3d781d2ec1e  20 hours ago 1.47GB
webapp              02          c2f0ce3fa57b  20 hours ago 2.09GB
rishishori51/dockerbasicslearning 01          419b627bcf61  20 hours ago 2.09GB
<none>              <none>      f77ff08205a0  22 hours ago 2.09GB
nginx               latest       9d6b58feebd2  3 weeks ago 279MB

C:\Users\admin>
```

Exercise 4: Tagging the Docker Image:

```
C:\Users\admin>docker tag nginx:latest rishishori51/my-first-lab:latest

C:\Users\admin>docker image ls
REPOSITORY          TAG          IMAGE ID      CREATED      SIZE
imagetoexternalworld 02           28408a91d54f  17 hours ago 1.46GB
imagetoexternalworld latest       dae1bc6111bc  17 hours ago 1.47GB
<none>              <none>      0fb635ed78b7  18 hours ago 1.47GB
<none>              <none>      f3d781d2ec1e  20 hours ago 1.47GB
rishishori51/dockerbasicslearning 01          419b627bcf61  21 hours ago 2.09GB
webapp              02          c2f0ce3fa57b  21 hours ago 2.09GB
<none>              <none>      f77ff08205a0  22 hours ago 2.09GB
nginx               latest       9d6b58feebd2  3 weeks ago 279MB
rishishori51/my-first-lab latest       9d6b58feebd2  3 weeks ago 279MB

C:\Users\admin>
```

Exercise 5: Pushing the Image:

```
C:\Users\admin>docker push rishishori51/my-first-lab:latest
The push refers to repository [docker.io/rishishori51/my-first-lab]
7cf63256a31a: Mounted from library/nginx
103f50cb3e9f: Mounted from library/nginx
513c3649bb14: Mounted from library/nginx
9dd21ad5a4a6: Mounted from library/nginx
bf9acace214a: Mounted from library/nginx
d014f92d532d: Mounted from library/nginx
943ea0f0c2e4: Mounted from library/nginx
latest: digest: sha256:28edb1806e63847a8d6f77a7c312045e1bd91d5e3c944c8a0012f0b14c830c44 size: 2295
```

Info → Not all multiplatform-content is present and only the available single-platform image was pushed
sha256:9d6b58feeba2abd3c56ab5853333d627cc6e281011cfd6050fa4bcf2072c9496 → sha256:28edb1806e63847a8d6f77a7c312045e1bd91d5e3c944c8a0012f0b14c830c44

Activate Windows
Go to Settings to activate Windows.

```
C:\Users\admin>
```

rishishori51/my-first-lab

Last pushed 1 minute ago · Repository size: 68.8 MB

Creating this repo to understand how to create a repo.

Add a category

General

Tags

Image Management BETA

Builds



Collaborators

Webhooks

Settings

Tags

This repository contains 1 tag(s).

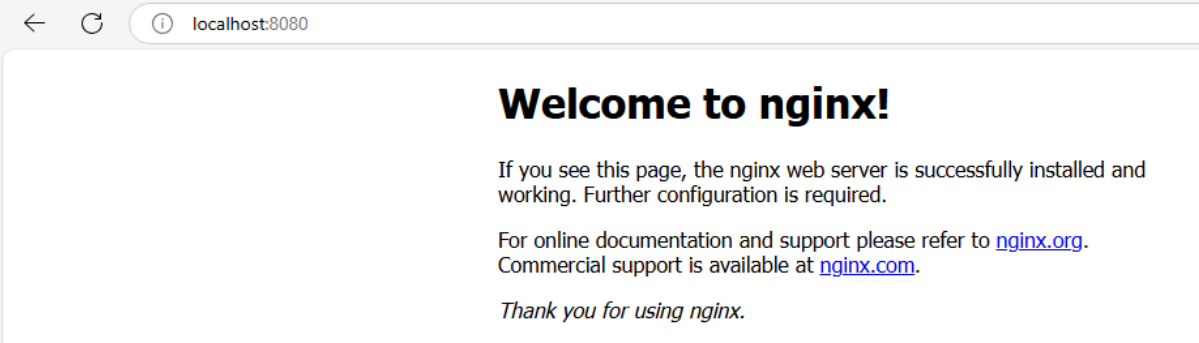
Tag	OS	Type	Pulled	Pushed
 latest		Image	less than 1 day	1 minute

[See all](#)

Exercise 6: Running Containers:

```
C:\Users\admin>docker run --name my-nginx -d -p 8080:80 9d6b58feebd2  
df3519baf0c6c5fa232daaf36e87382e015ddc990a18d7aee311e0b92aa88e98
```

```
C:\Users\admin>
```



-List all the running containers:

```
C:\Users\admin>docker ps
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
df3519baf0c6	9d6b58feebd2	"/docker-entrypoint..."	14 minutes ago	Up 14 minutes	0.0.0.0:8080->80/tcp	my-nginx

```
C:\Users\admin>
```

Activate Windows
Go to Settings to activate Windows.

-Stop the container:

```
C:\Users\admin>docker stop f77ff08205a0
```

-Delete a container:

```
C:\Users\admin>docker rm condescending_lehmann  
condescending_lehmann
```

```
C:\Users\admin>
```

Exercise 7: Inspecting Images:

```
C:\Users\admin>docker inspect rishishori51/my-first-lab
[
  {
    "Id": "sha256:9d6b58feebd2dbd3c56ab5853333d627cc6e281011cfd6050fa4bcf2072c9496",
    "RepoTags": [
      "nginx:latest",
      "rishishori51/my-first-lab:latest"
    ],
    "RepoDigests": [
      "nginx@sha256:9d6b58feebd2dbd3c56ab5853333d627cc6e281011cfd6050fa4bcf2072c9496",
      "rishishori51/my-first-lab@sha256:9d6b58feebd2dbd3c56ab5853333d627cc6e281011cfd6050fa4b
    ],
    "Parent": "",
    "Comment": "buildkit.dockerfile.v0",
    "Created": "2025-02-05T21:27:16Z",
    "DockerVersion": "27.5.1",
    "Author": "",
    "Config": {
      "Hostname": "",
      "Domainname": "",
      "User": "",
      "AttachStdin": false,
      "AttachStdout": false,
      "AttachStderr": false,
      "ExposedPorts": {
        "80/tcp": {}
      },
      "Tty": false,
      "OpenStdin": false,
      "StdinOnce": false,

```

Exercise 8: Viewing Container Logs:

```
C:\Users\admin>docker logs my-nginx -ft
2025-03-04T06:46:48.158061778Z /docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration
2025-03-04T06:46:48.158097988Z /docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
2025-03-04T06:46:48.165861469Z /docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh
2025-03-04T06:46:48.180314965Z 10-listen-on-ipv6-by-default.sh: info: Getting the checksum of /etc/nginx/conf.d/default.conf
2025-03-04T06:46:48.200173170Z 10-listen-on-ipv6-by-default.sh: info: Enabled listen on IPv6 in /etc/nginx/conf.d/default.conf
2025-03-04T06:46:48.200427490Z /docker-entrypoint.sh: Sourcing /docker-entrypoint.d/15-local-resolvers.envsh
2025-03-04T06:46:48.201023435Z /docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh
2025-03-04T06:46:48.207101996Z /docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh
2025-03-04T06:46:48.209548881Z /docker-entrypoint.sh: Configuration complete; ready for start up
2025-03-04T06:46:48.263725189Z 2025/03/04 06:46:48 [notice] 1#1: using the "epoll" event method
2025-03-04T06:46:48.263748591Z 2025/03/04 06:46:48 [notice] 1#1: nginx/1.27.4
2025-03-04T06:46:48.263752491Z 2025/03/04 06:46:48 [notice] 1#1: built by gcc 12.2.0 (Debian 12.2.0-14)
2025-03-04T06:46:48.263755591Z 2025/03/04 06:46:48 [notice] 1#1: OS: Linux 5.15.167.4-microsoft-standard-WSL2
2025-03-04T06:46:48.263758591Z 2025/03/04 06:46:48 [notice] 1#1: getrlimit(RLIMIT_NOFILE): 1048576:1048576
2025-03-04T06:46:48.264286931Z 2025/03/04 06:46:48 [notice] 1#1: start worker processes
2025-03-04T06:46:48.264362037Z 2025/03/04 06:46:48 [notice] 1#1: start worker process 29
2025-03-04T06:46:48.264671260Z 2025/03/04 06:46:48 [notice] 1#1: start worker process 30
2025-03-04T06:46:48.265101693Z 2025/03/04 06:46:48 [notice] 1#1: start worker process 31
2025-03-04T06:46:48.265307809Z 2025/03/04 06:46:48 [notice] 1#1: start worker process 32
2025-03-04T06:47:41.152011751Z 2025/03/04 06:47:41 [error] 29#29: *1 open() "/usr/share/nginx/html/favicon.ico" failed (2: No such file or directory
), client: 172.17.0.1, server: localhost, request: "GET /favicon.ico HTTP/1.1", host: "localhost:8080", referer: "http://localhost:8080/"
2025-03-04T06:47:41.152031253Z 172.17.0.1 -- [04/Mar/2025:06:47:41 +0000] "GET /favicon.ico HTTP/1.1" 404 555 "http://localhost:8080/" "Mozilla/5.0
(Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/133.0.0.0 Safari/537.36 Edg/133.0.0.0" "-"
2025-03-04T10:03:57.571499298Z 172.17.0.1 -- [04/Mar/2025:10:03:57 +0000] "GET / HTTP/1.1" 304 0 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) App
leWebKit/537.36 (KHTML, like Gecko) Chrome/133.0.0.0 Safari/537.36 Edg/133.0.0.0" "-"
context canceled

C:\Users\admin>^X
'^' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\admin>
```

Activate Windows
Go to Settings to activate Windows.

Exercise 9: Executing Commands in Containers:

```
C:\Users\admin>docker exec -it my-nginx /bin/bash
root@df3519baf0c6:/# exit
exit

C:\Users\admin>
```

Exercise 10: Docker Volumes:

```
C:\Users\admin>docker volume create my-vol
my-vol
```

```
C:\Users\admin>docker run -d --name my-nginx1 -v my-vol:/app nginx:latest
dd81eaf3f1d02a93ca71b946585139f975697cfbce183d4efa8e8551895105a0

C:\Users\admin>
```

Exercise 11: Docker Networks:

Create a network:

```
C:\Users\admin>docker network create my-net
19712041b8f7168a049c9eb26f61ba47bc98d4aa74dd5429fcbfd53f6d2e4426
```

Create container1 using this network:

```
C:\Users\admin>docker run --network my-net --name my-nginx2 -d nginx
2cd4dc38e20c2a8cf9d15e3de5e97559ae0e19c59f773b9f88674e82a5ce626c
```

Create container2 using the same network and try to access container1:

```

C:\Users\admin>docker run --network my-net --rm curlimages/curl curl http://my-nginx2
% Total    % Received % Xferd  Average Speed   Time    Time     Time
           Dload  Upload   Total     Spent    Left     Speed
100    615    100    615     0     0  51451      0 --:--:-- --:--:-- --:--:-- 55909
<!DOCTYPE html>
<html>
<head>
<title>Welcome to nginx!</title>
<style>
html { color-scheme: light dark; }
body { width: 35em; margin: 0 auto;
font-family: Tahoma, Verdana, Arial, sans-serif; }
</style>
</head>
<body>
<h1>Welcome to nginx!</h1>
<p>If you see this page, the nginx web server is successfully installed and
working. Further configuration is required.</p>

<p>For online documentation and support please refer to
<a href="http://nginx.org/">nginx.org</a>.<br/>
Commercial support is available at
<a href="http://nginx.com/">nginx.com</a>.</p>

<p><em>Thank you for using nginx.</em></p>
</body>
</html>

C:\Users\admin>

```

Exercise 12: Cleanup:

Removing Image:

```

C:\Users\admin>docker rmi rishishori51/my-first-lab
Untagged: rishishori51/my-first-lab:latest
Deleted: sha256:9d6b58feebd2dbd3c56ab5853333d627cc6e281011cfd6050fa4bcf2072c9496

```

Removing Volume:

```

C:\Users\admin>docker volume rm my-vol
my-vol

C:\Users\admin>

```

Removing network:


```
C:\Users\admin>docker network rm my-net  
my-net
```

```
C:\Users\admin>
```