

# DOCKER COMMANDS

## 1. Docker login to login to docker hub

```
C:\Users\admin\Desktop\Hello>docker login
Authenticating with existing credentials...
Login Succeeded

Logging in with your password grants your terminal complete access to your account.
For better security, log in with a limited-privilege personal access token. Learn more at https://docs.docker.com/go/access-tokens/

C:\Users\admin\Desktop\Hello>
```

## 2. Docker tag to tag username to image

```
C:\Users\admin\Desktop\Hello>docker tag helloapp Rohan91196/helloapp
Error parsing reference: "Rohan91196/helloapp" is not a valid repository/tag: invalid reference format: repository name must be lowercase

C:\Users\admin\Desktop\Hello>docker tag helloapp rohan91196/helloapp
```

## 3. Docker push

```
C:\Users\admin\Desktop\Hello>docker push rohan91196/helloapp:latest
The push refers to repository [docker.io/rohan91196/helloapp]
7eee057e930b: Pushed
6bbad9f171d7: Pushed
e10ce9a31c29: Pushed
0c5c99074fa8: Pushed
eb71c8b7b3b7: Pushed
76d682e14461: Pushed
d59c8eb8f9a4: Pushed
34d5ebaa5410: Pushed
latest: digest: sha256:26365b923b06daa18400982431e4f45b6299775616f6f98cbc9363bebd2c876d size: 1993

C:\Users\admin\Desktop\Hello>
```

## 4. Docker pull

```
C:\Users\admin\Desktop\Hello>docker pull rohan91196/helloapp:latest
latest: Pulling from rohan91196/helloapp
Digest: sha256:26365b923b06daa18400982431e4f45b6299775616f6f98cbc9363bebd2c876d
Status: Image is up to date for rohan91196/helloapp:latest
docker.io/rohan91196/helloapp:latest
```

## 5. Docker status

PROBLEMS		OUTPUT		DEBUG CONSOLE		TERMINAL	
CONTAINER ID	NAME	CPU %	MEM USAGE / LIMIT	MEM %	NET I/O	BLOCK I/O	PIDS
f0c24643012d	nifty_brattain	0.38%	39.34MiB / 6.117GiB	0.63%	876B / 0B	0B / 0B	3

## 6. Docker image build

```
PS C:\Users\admin\Desktop\Hello> docker build -t helloapp:latest .
[+] Building 25.1s (10/10) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 169B
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [internal] load metadata for docker.io/library/python:3-alpine3.15
=> [auth] library/python:pull token for registry-1.docker.io
=> [1/4] FROM docker.io/library/python:3-alpine3.15@sha256:1567c44f47c8136752ee4301be2e94130a5f8e1fb7a0e737ccac28fb8f6
=> => resolve docker.io/library/python:3-alpine3.15@sha256:1567c44f47c8136752ee4301be2e94130a5f8e1fb7a0e737ccac28fb8f6
=> => sha256:1567c44f47c8136752ee4301be2e94130a5f8e1fb7a0e737ccac28fb8f66fd0f 1.65kB / 1.65kB
=> => sha256:e28968291bb92c5950a0382aa3603e273855e8ccd6d73f402fb559566b1fe244 1.37kB / 1.37kB
=> => sha256:c692f3b79c36c5465dbc4b8ed4348a03cd4285fc9419e048bc8e324aaf1aebb 7.03kB / 7.03kB
=> => sha256:c202fc059ff2085bf2bc9f7aeb00c093fd3db159fcc1623a0898cec97ba21d5c 13.07MB / 13.07MB
=> => sha256:9621f1afde84053b2f9b6ff34fc7f7460712247c01cbab483c5fa7132cf782ca 2.82MB / 2.82MB
=> => sha256:029c086462bcc047737664d4f322a7e83d923bc049e40f799bc3629c623613c4 230B / 230B
=> => sha256:28eba1c740bb36c3d442bba4d3953cfcdf798b476facc3f7c67988cc5d61a6ad 3.06MB / 3.06MB
=> => extracting sha256:7dcbe358f5cfd2edd07d13dd99b2d780245d81b3917875ed3478dac69ae7fc70
=> => extracting sha256:c202fc059ff2085bf2bc9f7aeb00c093fd3db159fcc1623a0898cec97ba21d5c
=> => extracting sha256:029c086462bcc047737664d4f322a7e83d923bc049e40f799bc3629c623613c4
=> => extracting sha256:28eba1c740bb36c3d442bba4d3953cfcdf798b476facc3f7c67988cc5d61a6ad
=> [internal] load build context
=> => transferring context: 469B
=> [2/4] WORKDIR /app
=> [3/4] COPY . /app
```

## 7. Docker container run

```
PS C:\Users\admin\Desktop\Hello> docker container run -d -p 3000:3000 helloapp:latest
f0c24643012d08c3f4022ea99843dc3d4c54579be8461fa291fc172fb82bae6e
PS C:\Users\admin\Desktop\Hello>
```

## 8. Docker top processes of container

UID	PID	PPID	C	STIME	TTY
TIME	CMD				
root	6190	6170	0	09:52	?
00:00:00	python ./hello.py				
root	6233	6190	0	09:52	?
00:00:02	/usr/local/bin/python /app/hello.py				

## 9. Docker modified files of container

```

PS C:\Users\admin\Desktop\Hello> docker diff f0c24643012d08c3f4022ea99843dc3d4c54579be8461fa291fc172fb82bae6e
C /usr
C /usr/local
C /usr/local/lib
C /usr/local/lib/python3.11
C /usr/local/lib/python3.11/__pycache__
A /usr/local/lib/python3.11/__pycache__/code.cpython-311.pyc
A /usr/local/lib/python3.11/__pycache__/codeop.cpython-311.pyc
A /usr/local/lib/python3.11/__pycache__/secrets.cpython-311.pyc
A /usr/local/lib/python3.11/__pycache__/difflib.cpython-311.pyc
C /usr/local/lib/python3.11/http
C /usr/local/lib/python3.11/http/__pycache__
A /usr/local/lib/python3.11/http/__pycache__/server.cpython-311.pyc
PS C:\Users\admin\Desktop\Hello>

```

## 10. To get mapped port of container

```

PS C:\Users\admin\Desktop\Hello> docker port f0c24643012d08c3f4022ea99843dc3d4c54579be8461fa291fc172fb82bae6e
3000/tcp -> 0.0.0.0:3000
PS C:\Users\admin\Desktop\Hello>

```

## 11. To get logs of container

```

See 'docker --help'
PS C:\Users\admin\Desktop\Hello> docker logs f0c24643012d08c3f4022ea99843dc3d4c54579be8461fa291fc172fb82bae6e
* Serving Flask app 'hello'
* Debug mode: on
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://127.0.0.1:3000
* Running on http://172.17.0.2:3000
Press CTRL+C to quit
* Restarting with stat
* Debugger is active!
* Debugger PIN: 138-533-364
172.17.0.1 - - [24/Apr/2023 08:52:08] "GET / HTTP/1.1" 200 -
172.17.0.1 - - [24/Apr/2023 08:52:08] "GET /favicon.ico HTTP/1.1" 404 -
* Serving Flask app 'hello'
* Debug mode: on
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://127.0.0.1:3000
* Running on http://172.17.0.2:3000
Press CTRL+C to quit
* Restarting with stat
* Debugger is active!
* Debugger PIN: 138-533-364
PS C:\Users\admin\Desktop\Hello>

```

## 12. To pause the container

```

PS C:\Users\admin\Desktop\Hello> docker pause f0c24643012d08c3f4022ea99843dc3d4c54579be8461fa291fc172fb82bae6e
f0c24643012d08c3f4022ea99843dc3d4c54579be8461fa291fc172fb82bae6e
PS C:\Users\admin\Desktop\Hello>

```

Containers
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Only show running containers

	Name	Image	Status	Port(s)	Last started	Actions
<input type="checkbox"/>	<div>nifty_brattain</div> <div>f0c24643012d</div>	helloapp:latest	Paused	3000:3000	20 minutes ago	<div></div> <div></div> <div></div>

13. To resume the container

```
f0c24643012d08c3f4022ea99843dc3d4c54579be8461fa291fc172fb82bae6e
PS C:\Users\admin\Desktop\Hello> docker unpause f0c24643012d08c3f4022ea99843dc3d4c54579be8461fa291fc172fb82bae6e
f0c24643012d08c3f4022ea99843dc3d4c54579be8461fa291fc172fb82bae6e
PS C:\Users\admin\Desktop\Hello>
```

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Only show running containers

	Name	Image	Status	Port(s)	Last started	Actions
<input type="checkbox"/>	<div>nifty_brattain</div> <div>f0c24643012d</div>	helloapp:latest	Running	3000:3000	21 minutes ago	<div></div> <div></div> <div></div>

14.Rename container

a. Before remane

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Only show running containers

	Name	Image	Status	Port(s)	Last started	Actions
<input type="checkbox"/>	<div>nifty_brattain</div> <div>f0c24643012d</div>	helloapp:latest	Running	3000:3000	21 minutes ago	<div></div> <div></div> <div></div>

b. After rename

```

Press CTRL+C to quit
* Restarting with stat
* Debugger is active!
* Debugger PIN: 138-533-364
PS C:\Users\admin\Desktop\Hello> docker pause f0c24643012d08c3f4022ea99843dc3d4c54579be8461fa291fc172fb82bae6e
f0c24643012d08c3f4022ea99843dc3d4c54579be8461fa291fc172fb82bae6e
PS C:\Users\admin\Desktop\Hello> docker unpause f0c24643012d08c3f4022ea99843dc3d4c54579be8461fa291fc172fb82bae6e
f0c24643012d08c3f4022ea99843dc3d4c54579be8461fa291fc172fb82bae6e
PS C:\Users\admin\Desktop\Hello> docker rename nifty_brattain rohans_container
PS C:\Users\admin\Desktop\Hello> 

```

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Only show running containers

	Name	Image	Status	Port(s)	Last started	Actions
<input type="checkbox"/>	<div> <div></div> <div>rohans_container</div> <div>f0c24643012d</div> </div>	<a href="#">helloapp:latest</a>	Running	<a href="#">3000:3000</a>	23 minutes ago	<div></div> <div></div> <div></div>

## 15.To create image out of container

```

PS C:\Users\admin\Desktop\Hello> docker pause f0c24643012d08c3f4022ea99843dc3d4c54579be8461fa291fc172fb82bae6e
f0c24643012d08c3f4022ea99843dc3d4c54579be8461fa291fc172fb82bae6e
PS C:\Users\admin\Desktop\Hello> docker unpause f0c24643012d08c3f4022ea99843dc3d4c54579be8461fa291fc172fb82bae6e
f0c24643012d08c3f4022ea99843dc3d4c54579be8461fa291fc172fb82bae6e
PS C:\Users\admin\Desktop\Hello> docker rename nifty_brattain rohans_container
PS C:\Users\admin\Desktop\Hello> docker commit rohans_container
sha256:ab252e0da9a6228423f69eb514db19666365ca953056b9430325191f448ea980
PS C:\Users\admin\Desktop\Hello> 

```

## 16.To delete running container

### a. Before delete

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Only show running containers

	Name	Image	Status	Port(s)	Last started	Actions
<input type="checkbox"/>	<div> <div></div> <div>rohans_container</div> <div>f0c24643012d</div> </div>	<a href="#">helloapp:latest</a>	Running	<a href="#">3000:3000</a>	24 minutes ago	<div></div> <div></div> <div></div>

### b. After command

```

PS C:\Users\admin\Desktop\Hello> docker rm rohans_container
Error response from daemon: You cannot remove a running container f0c24643012d08c3f4022ea99843dc3d4c54579be8461fa291fc172fb82bae6e. Stop the container before attempting removal or force remove
PS C:\Users\admin\Desktop\Hello> docker rm -f rohans_container
rohans_container
PS C:\Users\admin\Desktop\Hello> 

```

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### Your running containers show up here

A container is an isolated environment for your code, run a container to see it here

## 17. Deleting unused images

### a. Before delete

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<input type="checkbox"/>	Name	Tag	Status	Created	Size	Actions
<input type="checkbox"/>	<a href="#">&lt;none&gt;</a> ab252e0da9a6	<none>	Unused (dangl	4 minutes ago	67.58 MB	
<input type="checkbox"/>	<a href="#">helloapp</a> ba217ee227de	latest	Unused	about 1 hour ago	67.41 MB	
<input type="checkbox"/>	<a href="#">rohan91196/helloapp</a> ba217ee227de	latest	Unused	about 1 hour ago	67.41 MB	
<input type="checkbox"/>	<a href="#">&lt;none&gt;</a> 8fab6fe80fb5	<none>	Unused (dangl	about 2 hours ago	67.41 MB	

### b. After delete

```

ronans_container
PS C:\Users\admin\Desktop\Hello> docker images prune -a
REPOSITORY TAG IMAGE ID CREATED SIZE
PS C:\Users\admin\Desktop\Hello> delete rmi ba217ee227de4bd95d33ff6b5c88da009b7ea736d2989c3b202261fd7cb93037
delete : The term 'delete' is not recognized as the name of a cmdlet, function, script file, or operable program.
Check the spelling of the name, or if a path was included, verify that the path is correct and try again.
At line:1 char:1
+ delete rmi ba217ee227de4bd95d33ff6b5c88da009b7ea736d2989c3b202261fd7c ...
+ ~~~~~
+ CategoryInfo          : ObjectNotFound: (delete:String) [], CommandNotFoundException
+ FullyQualifiedErrorId : CommandNotFoundException

PS C:\Users\admin\Desktop\Hello> docker delete rmi ba217ee227de4bd95d33ff6b5c88da009b7ea736d2989c3b202261fd7cb93037
docker: 'delete' is not a docker command.
See 'docker --help'
PS C:\Users\admin\Desktop\Hello> docker rmi ba217ee227de4bd95d33ff6b5c88da009b7ea736d2989c3b202261fd7cb93037
Error response from daemon: conflict: unable to delete ba217ee227de (cannot be forced) - image has dependent child images
PS C:\Users\admin\Desktop\Hello> docker rmi ba217ee227de4bd95d33ff6b5c88da009b7ea736d2989c3b202261fd7cb93037
Error response from daemon: conflict: unable to delete ba217ee227de (cannot be forced) - image has dependent child images
PS C:\Users\admin\Desktop\Hello> docker rmi ba217ee227de4bd95d33ff6b5c88da009b7ea736d2989c3b202261fd7cb93037
Error response from daemon: conflict: unable to delete ba217ee227de (must be forced) - image is referenced in multiple repositories
PS C:\Users\admin\Desktop\Hello>

```

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<input type="checkbox"/>	Name	Tag	Status	Created	Size	Actions
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