

Experiment 7:

Windows PowerShell
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Install the latest PowerShell for new features and improvements! <https://aka.ms/PSWindows>

PS C:\Users\tejah> mkdir myapp

Directory: C:\Users\tejah

Mode	LastWriteTime	Length	Name
----	-----	-----	-----
d----	24-09-2025	09:19	myapp

PS C:\Users\tejah> cd myapp
PS C:\Users\tejah\myapp> echo "hello world" > index.html
PS C:\Users\tejah\myapp> ls

Directory: C:\Users\tejah\myapp

Mode	LastWriteTime	Length	Name
----	-----	-----	-----
-a---	24-09-2025	09:20	28 index.html

PS C:\Users\tejah\myapp> New-Item -ItemType File -Name Dockerfile

Directory: C:\Users\tejah\myapp

Mode	LastWriteTime	Length	Name
----	-----	-----	-----
-a---	24-09-2025	09:33	0 Dockerfile

PS C:\Users\tejah\myapp> echo. > Dockerfile
echo. : The term 'echo.' 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
+ echo. > Dockerfile
+ ~~~~~
+ CategoryInfo : ObjectNotFound: (echo.:String) [], CommandNotFoundException

+ FullyQualifiedErrorCode : CommandNotFoundException

PS C:\Users\tejah\myapp> cat Dockerfile
PS C:\Users\tejah\myapp> notepad Dockerfile

PS C:\Users\tejah\myapp> cat Dockerfile

FROM nginx

COPY index.html /usr/share/nginx/html

PS C:\Users\tejah\myapp> docker info

Client:

Version: 28.4.0

Context: desktop-linux

Debug Mode: false

Plugins:

ai: Docker AI Agent - Ask Gordon (Docker Inc.)

 Version: v1.9.11

 Path: C:\Program Files\Docker\cli-plugins\docker-ai.exe

buildx: Docker Buildx (Docker Inc.)

 Version: v0.28.0-desktop.1

 Path: C:\Program Files\Docker\cli-plugins\docker-buildx.exe

cloud: Docker Cloud (Docker Inc.)

 Version: v0.4.27

 Path: C:\Program Files\Docker\cli-plugins\docker-cloud.exe

compose: Docker Compose (Docker Inc.)

 Version: v2.39.2-desktop.1

 Path: C:\Program Files\Docker\cli-plugins\docker-compose.exe

debug: Get a shell into any image or container (Docker Inc.)

 Version: 0.0.42

 Path: C:\Program Files\Docker\cli-plugins\docker-debug.exe

desktop: Docker Desktop commands (Docker Inc.)

 Version: v0.2.0

 Path: C:\Program Files\Docker\cli-plugins\docker-desktop.exe

extension: Manages Docker extensions (Docker Inc.)

 Version: v0.2.31

 Path: C:\Program Files\Docker\cli-plugins\docker-extension.exe

init: Creates Docker-related starter files for your project (Docker Inc.)

 Version: v1.4.0

 Path: C:\Program Files\Docker\cli-plugins\docker-init.exe

mcp: Docker MCP Plugin (Docker Inc.)

 Version: v0.18.0

 Path: C:\Program Files\Docker\cli-plugins\docker-mcp.exe

model: Docker Model Runner (Docker Inc.)

 Version: v0.1.40

 Path: C:\Program Files\Docker\cli-plugins\docker-model.exe

sbom: View the packaged-based Software Bill Of Materials (SBOM) for an image (Anchore Inc.)

 Version: 0.6.0

 Path: C:\Program Files\Docker\cli-plugins\docker-sbom.exe

scout: Docker Scout (Docker Inc.)

 Version: v1.18.3

 Path: C:\Program Files\Docker\cli-plugins\docker-scout.exe

Server:

Containers: 6
Running: 2
Paused: 0
Stopped: 4
Images: 3
Server Version: 28.4.0
Storage Driver: overlayfs
driver-type: io.containerd.snapshotter.v1
Logging Driver: json-file
Cgroup Driver: cgroupfs
Cgroup Version: 2
Plugins:
Volume: local
Network: bridge host ipvlan macvlan null overlay
Log: awslogs fluentd gcplogs gelf journald json-file local splunk syslog
CDI spec directories:
/etc/cdi
/var/run/cdi
Discovered Devices:
cdi: docker.com/gpu=webgpu
Swarm: inactive
Runtimes: io.containerd.runc.v2 nvidia runc
Default Runtime: runc
Init Binary: docker-init
containerd version: 05044ec0a9a75232cad458027ca83437aae3f4da
runc version: v1.2.5-0-g59923ef
init version: de40ad0
Security Options:
seccomp
Profile: builtin
cgroupns
Kernel Version: 6.6.87.2-microsoft-standard-WSL2
Operating System: Docker Desktop
OSType: linux
Architecture: x86_64
CPUs: 4
Total Memory: 2.798GiB
Name: docker-desktop
ID: 58a5d7ae-dfb3-4b0b-465facb7deba
Docker Root Dir: /var/lib/docker
Debug Mode: false
HTTP Proxy: http.docker.internal:3128
HTTPS Proxy: http.docker.internal:3128
No Proxy: hubproxy.docker.internal
Labels:
com.docker.desktop.address=npipe://\\.\pipe\docker_cli
Experimental: false
Insecure Registries:
hubproxy.docker.internal:5555
::1/128
127.0.0.0/8

Live Restore Enabled: false

PS C:\Users\tejah\myapp> sudo service docker start

Sudo is disabled on this machine. To enable it, go to the Developer Settings page in the Settings app

PS C:\Users\tejah\myapp> docker version

Client:

Version: 28.4.0
API version: 1.51
Go version: go1.24.7
Git commit: d8eb465
Built: Wed Sep 3 20:59:40 2025
OS/Arch: windows/amd64
Context: desktop-linux

Server: Docker Desktop 4.46.0 (204649)

Engine:

Version: 28.4.0
API version: 1.51 (minimum version 1.24)
Go version: go1.24.7
Git commit: 249d679
Built: Wed Sep 3 20:57:37 2025
OS/Arch: linux/amd64

Experimental: false

containerd:

Version: 1.7.27
GitCommit: 05044ec0a9a75232cad458027ca83437aae3f4da

runc:

Version: 1.2.5
GitCommit: v1.2.5-0-g59923ef

docker-init:

Version: 0.19.0
GitCommit: de40ad0

PS C:\Users\tejah\myapp> docker build -t myapp .

[+] Building 2.0s (7/7) FINISHED

docker:desktop-

linux

=> [internal] load build definition from Dockerfile

0.2s

=>=> transferring dockerfile: 86B 0.1s

=> [internal] load metadata for docker.io/library/nginx:latest

0.3s

=> [internal] load .dockerignore 0.1s

=>=> transferring context: 2B 0.0s

=> [internal] load build context 0.1s

=>=> transferring context: 65B 0.0s

=> [1/2] FROM

docker.io/library/nginx:latest@sha256:d5f28ef21aabddd098f3dbc21fe5b7a7d7a184720bc07da0b6c9b
9820e97f25e 0.4s

=>=> resolve

docker.io/library/nginx:latest@sha256:d5f28ef21aabddd098f3dbc21fe5b7a7d7a184720bc07da0b6c9b
9820e97f25e 0.1s

```
=> [2/2] COPY index.html /usr/share/nginx/html
0.1s
=> exporting to image 0.5s
=>=> exporting layers 0.2s
=>=> exporting manifest
sha256:8762ce7a94870498308ef6c32a227a0f7a3f99a4ed7a532d896f2d4ea4ed6e04
0.0s
=>=> exporting config
sha256:ad38680537c5c5c34b66ba6a8863a0a4a54d0a732e8c762929098a991fbe3f64
0.0s
=>=> exporting attestation manifest
sha256:bc210ed6f10e1f9c9401ec91306356be03e4e4600535f25ffc520d2fffeeb38a 0.0s
=>=> exporting manifest list
sha256:cf0d63dfb320eaddad790c85f01d0301955357c599f8046ed25bb550df9e7479
0.0s
=>=> naming to docker.io/library/myapp:latest
0.0s
=>=> unpacking to docker.io/library/myapp:latest
0.1s
PS C:\Users\tejah\myapp> docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
myapp latest cf0d63dfb320 24 seconds ago 279MB
nginx latest d5f28ef21aab 5 weeks ago 279MB
hello-world latest 54e66cc1dd1f 6 weeks ago 20.3kB
alpine latest 4bcff63911fc 2 months ago 12.8MB
PS C:\Users\tejah\myapp> docker run -p 8080:80 myapp
/docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration
/docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
/docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh
10-listen-on-ipv6-by-default.sh: info: Getting the checksum of /etc/nginx/conf.d/default.conf
10-listen-on-ipv6-by-default.sh: info: Enabled listen on IPv6 in /etc/nginx/conf.d/default.conf
/docker-entrypoint.sh: Sourcing /docker-entrypoint.d/15-local-resolvers.envsh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh
/docker-entrypoint.sh: Configuration complete; ready for start up
2025/09/24 04:08:41 [notice] 1#1: using the "epoll" event method
2025/09/24 04:08:41 [notice] 1#1: nginx/1.29.1
2025/09/24 04:08:41 [notice] 1#1: built by gcc 12.2.0 (Debian 12.2.0-14+deb12u1)
2025/09/24 04:08:41 [notice] 1#1: OS: Linux 6.6.87.2-microsoft-standard-WSL2
2025/09/24 04:08:41 [notice] 1#1: getrlimit(RLIMIT_NOFILE): 1048576:1048576
2025/09/24 04:08:41 [notice] 1#1: start worker processes
2025/09/24 04:08:41 [notice] 1#1: start worker process 29
2025/09/24 04:08:41 [notice] 1#1: start worker process 30
2025/09/24 04:08:41 [notice] 1#1: start worker process 31
2025/09/24 04:08:41 [notice] 1#1: start worker process 32
172.17.0.1 - - [24/Sep/2025:04:09:13 +0000] "GET / HTTP/1.1" 200 28 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/140.0.0.0 Safari/537.36 Edg/140.0.0.0" "-"
2025/09/24 04:09:13 [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", referrer: "http://localhost:8080/"
```

172.17.0.1 - - [24/Sep/2025:04:09:13 +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/140.0.0.0 Safari/537.36 Edg/140.0.0.0" "-"