

## 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
```

+ FullyQualifiedErrorId : 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-dfbb-4b73-ab0b-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:d5f28ef21aabddd098f3dbc21fe5b7a7d7a184720bc07da0b6c9b9820e97f25e 0.4s

=> => resolve

docker.io/library/nginx:latest@sha256:d5f28ef21aabddd098f3dbc21fe5b7a7d7a184720bc07da0b6c9b9820e97f25e 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", referer: "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" "-"