Q soumya [SSH: 192.168.150.129]

EXPLORER   Dockerfile ✕   CHAT

SESSIONS

∨ SOUMYA [SSH: 192.168.150.129]

docker_sample › 🐳 Dockerfile › ⓣ FROM

> .cache
> .copilot
> .docker
> .dotnet
> .local
> .ssh
> .vscode-server
> devops
∨ docker_sample
  > .git
  > mynginx
  JS app.js
  🐳 Dockerfile
  {} package.json
  ⓘ README.md
> nginx-html-docker
≡ .bash_history
$ .bash_logout
$ .bashrc
.gitconfig
≡ .lesshst
$ .profile
≡ .sudo_as_admin_successful
≡ .wget-hsts

```dockerfile
1   FROM node:18-alpine
2
3   WORKDIR /app
4
5   COPY package*.json ./
6
7   RUN npm install
8
9   COPY . .
10
11  EXPOSE 3000
12
13  CMD ["npm", "start"]
```

PROBLEMS ④   OUTPUT   DEBUG CONSOLE   TERMINAL   PORTS   🗋 bash - devops
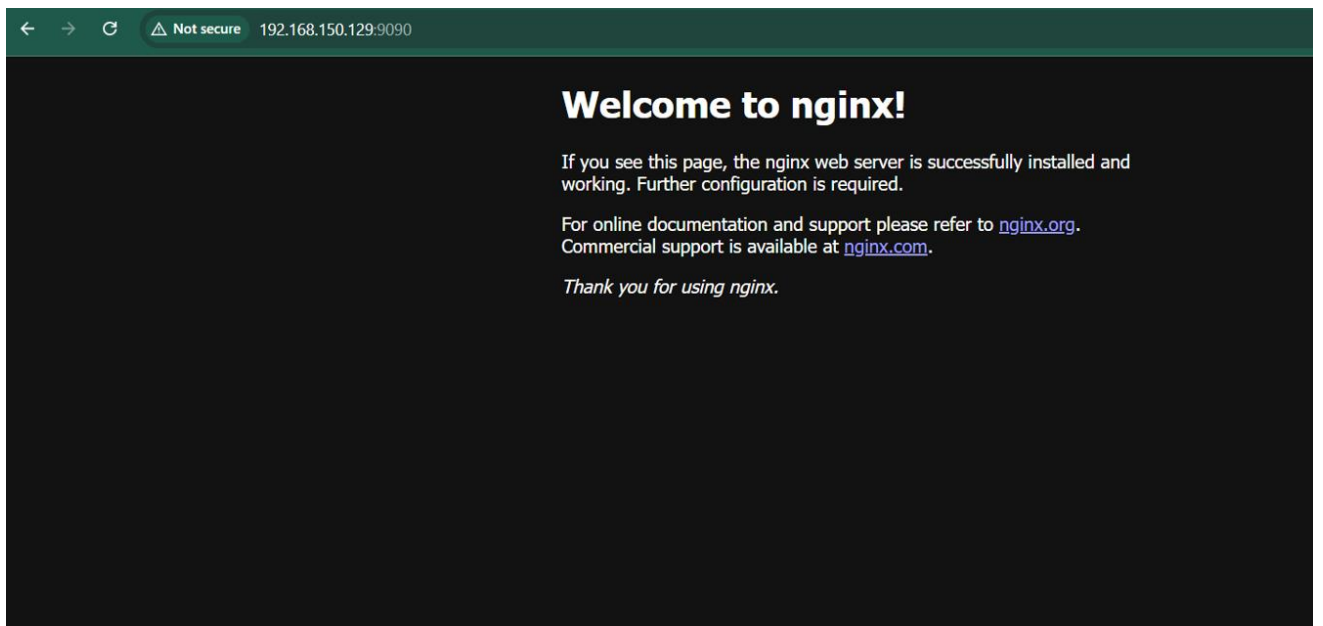
```
soumya@ubs2404vm:~$ docker --version
soumya@ubs2404vm:~$ docker ps
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS   PORTS     NAMES
soumya@ubs2404vm:~$ git clone https://github.com/jagadeeshkanna97/docker_sample.git
Cloning into 'docker_sample'...
remote: Enumerating objects: 10, done.
remote: Counting objects: 100% (10/10), done.
remote: Compressing objects: 100% (8/8), done.
remote: Total 10 (delta 1), reused 9 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (10/10), done.
Resolving deltas: 100% (1/1), done.
soumya@ubs2404vm:~$ cd docker_sample
```

OUTLINE
TIMELINE

← → C ⚠ Not secure   192.168.150.129:7070

Hello Soumya

```
soumya@ubs2404vm:~/docker_sample$ docker build -t docker-sample-app .
 => => exporting manifest list sha256:719d6551e0dc4c0af058bf06d3e5bd9a904581b9f5a1128f90b000f883c5d7f3    0.0s
 => => naming to docker.io/library/docker-sample-app:latest                                              0.0s
 => => unpacking to docker.io/library/docker-sample-app:latest                                           0.2s
soumya@ubs2404vm:~/docker_sample$ docker run -d -p 3000:3000 docker-sample-app
1bb7322c35c1fff195f87bf7c6ac1dd4e5d678c16157aa63c32275b55fa2003b
soumya@ubs2404vm:~/docker_sample$ docker ps
CONTAINER ID   IMAGE               COMMAND                CREATED          STATUS          PORTS
                                   NAMES
1bb7322c35c1   docker-sample-app   "docker-entrypoint.s…"  12 seconds ago   Up 11 seconds   0.0.0.0:3000->3000/
tcp, [::]:3000->3000/tcp   optimistic_swanson
soumya@ubs2404vm:~/docker_sample$ docker pull nginx
```

← → C ⚠ Not secure 192.168.150.129:9090

Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.

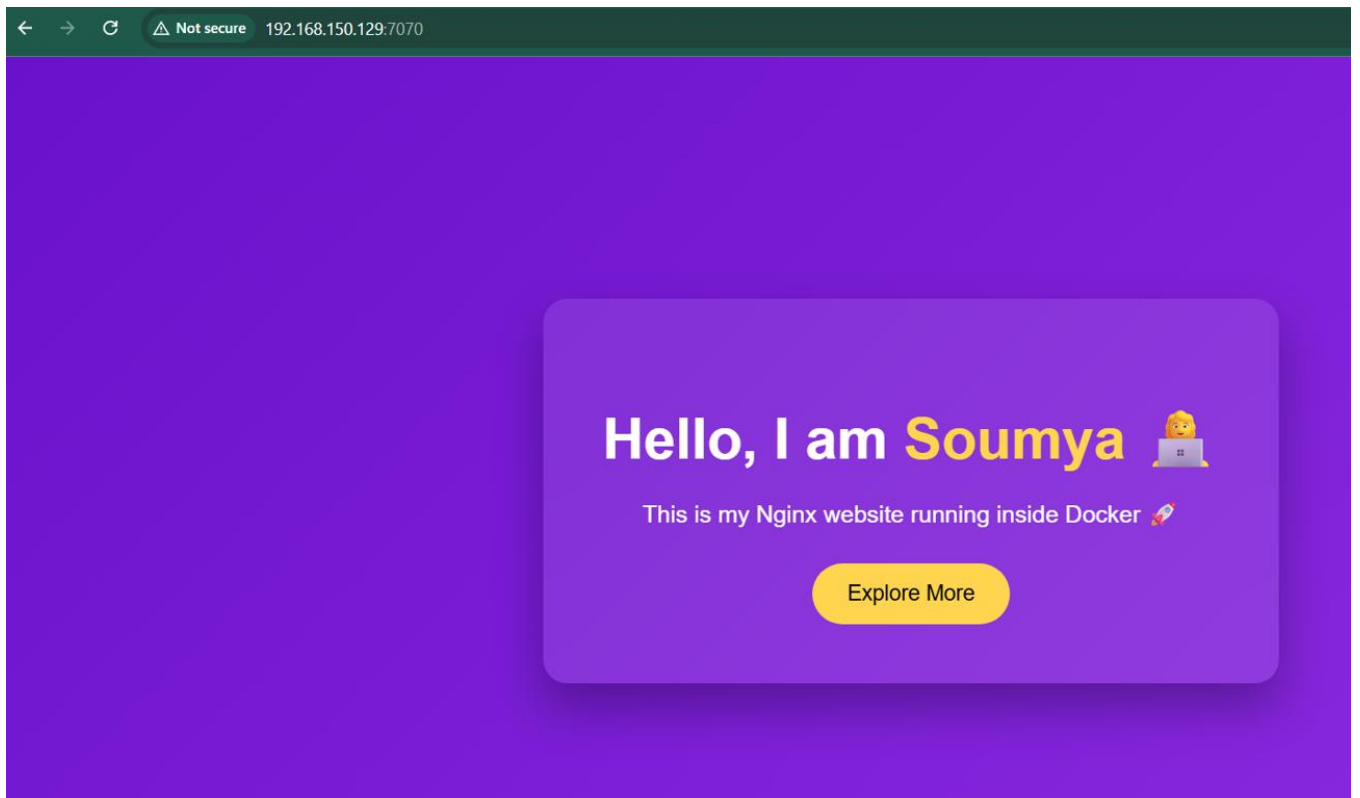*Thank you for using nginx.*

```
soumya@ubs2404vm:~/docker_sample$ docker run -d -p 3000:3000 docker-sample-app
soumya@ubs2404vm:~/docker_sample$ docker ps
CONTAINER ID   IMAGE               COMMAND                CREATED          STATUS          PORTS
                                   NAMES
1bb7322c35c1   docker-sample-app   "docker-entrypoint.s…"  12 seconds ago   Up 11 seconds   0.0.0.0:3000->3000
tcp, [::]:3000->3000/tcp   optimistic_swanson
soumya@ubs2404vm:~/docker_sample$ docker pull nginx
Using default tag: latest
latest: Pulling from library/nginx
Digest: sha256:341bf0f3ce6c5277d6002cf6e1fb0319fa4252add24ab6a0e262e0056d313208
Status: Downloaded newer image for nginx:latest
docker.io/library/nginx:latest
```

```
soumya@ubs2404vm:~/devops$ mkdir mynginx
soumya@ubs2404vm:~/devops$ cd mynginx
soumya@ubs2404vm:~/devops/mynginx$ nano index.html
soumya@ubs2404vm:~/devops/mynginx$ docker ps
CONTAINER ID    IMAGE                COMMAND              CREATED            STATUS              PORTS
                                     NAMES
deb3f1fa2890    nginx                "/docker-entrypoint…"   55 minutes ago     Up 55 minutes       0.0.0.0:7070-
>80/tcp, [::]:7070->80/tcp        ecstatic_elion
ea514153c88a    nginx                "/docker-entrypoint…"   About an hour ago  Up About an hour    0.0.0.0:9090-
>80/tcp, [::]:9090->80/tcp        gifted_cohen
1bb7322c35c1    docker-sample-app    "docker-entrypoint.s…"  About an hour ago  Up About an hour    0.0.0.0:3000-
>3000/tcp, [::]:3000->3000/tcp    optimistic_swanson
```


← → C ⚠ Not secure 192.168.150.129:7070

Hello, I am Soumya 👩‍💻

This is my Nginx website running inside Docker 🚀

Explore More

PROBLEMS   OUTPUT   DEBUG CONSOLE   **TERMINAL**   PORTS   📦 bash - soumya + ∨ ⊡ 🗑 ⋯

```
soumya@ubs2404vm:~$ docker images
                                                                              ℹ Info →  U  In Use
IMAGE                    ID              DISK USAGE    CONTENT SIZE    EXTRA
docker-sample-app:latest 719d6551e0dc        196MB        47.3MB        U
hello-world:latest       ef54e839ef54        25.9kB        9.52kB       U
my-nginx-html:latest     a67d8bc2f425        237MB        62.9MB        U
nginx:latest             341bf0f3ce6c        240MB        65.8MB        U
soumya@ubs2404vm:~$
```

To install Ubuntu Server in VMware, configure SSH, install Docker, integrate GitHub using SSH authentication, build Docker images, and deploy containerized applications.

REQUIREMENTS

- Windows System
- VMware Workstation Player
- Ubuntu Server ISO
- Internet Connection
- GitHub Account
- VS Code

VMWARE SETUP

1. Install VMware Workstation Player.
2. Create a new Virtual Machine.
3. Allocate 4GB RAM and 20GB Disk.
4. Select NAT Network.
5. Install Ubuntu Server and login.

UBUNTU INITIAL CONFIGURATION

```
sudo apt update
sudo apt upgrade -y
ip a

sudo apt install openssh-server -y
sudo systemctl start ssh
sudo systemctl enable ssh
sudo ufw allow ssh
sudo ufw reload
```

SSH CONNECTION

```
ssh username@VM_IP
hostname
```

DOCKER INSTALLATION

```
sudo apt install ca-certificates curl -y
sudo install -m 0755 -d /etc/apt/keyrings
sudo curl -fsSL https://download.docker.com/linux/ubuntu/gpg -o /etc/apt/keyrings/docker.asc
sudo chmod a+r /etc/apt/keyrings/docker.asc
sudo apt update
sudo apt install docker-ce docker-ce-cli containerd.io docker-buildx-plugin docker-compose-plugin -y
sudo systemctl start docker
sudo systemctl enable docker
sudo usermod -aG docker $USER
newgrp docker
```

```
docker --version
docker ps
```

DOCKER PRACTICAL EXECUTION

```
git clone https://github.com/jagadeeshkanna97/docker_sample.git
cd docker_sample
touch Dockerfile
docker build -t docker-sample-app .
docker run -d -p 3000:3000 docker-sample-app
docker pull nginx
docker run -d -p 8080:80 nginx
```

Custom Nginx:

```
mkdir mynginx
cd mynginx nano
index.html
 docker run -d -p 7070:80 -v $(pwd)/index.html:/usr/share/nginx/html/index.html nginx
```

GIT & GITHUB CONFIGURATION

```
git --version
git config --global user.name "soumi04"
git config --global user.email "soumyakathiravan@gmail.com"
git config --list
ssh-keygen -t ed25519 -C "soumyakathiravan@gmail.com" cat
~/.ssh/id_ed25519.pub
ssh -T git@github.com
```

BRANCH MANAGEMENT

```
git clone git@github.com:soumi04/devops.git

cd devops
git branch
git checkout -b day3
touch day3.txt
git add .
git commit -m "Added day3 file"
git push -u origin day3
```

MERGE PROCESS

```
git checkout main
git pull origin main
```

git merge day3
git push

ADD DOCKER PROJECT TO REPOSITORY

cp -r ~/docker_sample .
rm -rf docker_sample/.git
git add .
git commit -m "Added docker_sample project"
git push

soumya@ubs2404vm:~$ history

```
 1  hostname

 2  ssh soumya@192.168.150.129

 3  ifconfig

 4  docker ps

 5  git clone https://github.com/jagadeeshkanna97/docker_sample.git

 6  ls

 7  cd newdock/

 8  cd docker_sample

 9  ls

10  touch Dockerfile

11  docker build -t docker-sample-app .

12  docker ps

13  docker stop <container_id>

14  docker ps

15  docker run -d -p 3000:3000 docker-sample-app

16  docker ps

17  docker pull nginx

18  docker run -d -p 8080:80 nginx

19  mkdir mynginx

20  cd mynginx

21  nano index.html

22  docker run -d -p 8080:80 -v $(pwd)/index.html:/usr/share/nginx/html/index.html nginx

23  docker run -d -p 7070:80 -v $(pwd)/index.html:/usr/share/nginx/html/index.html nginx

24  git --version

25  history
```

soumya@ubs2404vm:~/devops$ history

```
    1  hostname
    2  ssh soumya@192.168.150.129
    3  ifconfig
    4  docker ps
    5  git clone https://github.com/jagadeeshkanna97/docker_sample.git
    6  ls
    7  cd newdock/
    8  cd docker_sample
    9  ls
   10     touch Dockerfile
   11     docker build -t docker-sample-app .
   12     docker ps
   13     docker stop <container_id>
   14     docker ps
   15     docker run -d -p 3000:3000 docker-sample-app
   16     docker ps
   17     docker pull nginx
   18     docker run -d -p 8080:80 nginx
   19     mkdir mynginx
   20     cd mynginx
   21     nano index.html
   22     docker run -d -p 8080:80 -v $(pwd)/index.html:/usr/share/nginx/html/index.html nginx
   23     docker run -d -p 7070:80 -v $(pwd)/index.html:/usr/share/nginx/html/index.html nginx
   24     git --version
   25     history
   26     git config --global user.name "soumi04"
   27     git config --global user.email "soumyakathiravan@gmail.com"
   28     git config --list
   29     ssh-keygen -t ed25519 -C "soumyakathiravan@gmail.com"
   30     cat ~/.ssh/id_ed25519.pub
   31     ssh -T git@github.com
```

```
32   git clone git@github.com:soumi04/devops.git
33   cd devops
34   ls
35   ls -a
36   git branch
37   git checkout -b day3
38   git branch
39   touch day3.txt
40   nano day3.txt
41   history
42   git add .
43   git status
44   git pull origin main
45   git push
46   git push -u origin day3
47   git checkout main
48   git pull origin main
49   git merge day3
50   git push
51   cd ~/devops
52   cp -r ~/docker_sample .
53   ls
54   git status
55   git add .
56   rm -rf docker_sample/.git
57   git add .
58   git status
59   git commit -m "Added docker_sample project"
60   git push
61   history
```