Docker Learning Journey – LinkedIn Carousel

Error: Running Docker Without sudo

Success: Running Docker With sudo

```
Run 'docker run --help' for more information
shiva@DESKTOP-7ONVSH5:~$ docker run hello-world
docker: permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.sock: Head "http://%2Fvar%2Fr
un%2Fdocker.sock/_ping": dial unix /var/run/docker.sock: connect: permission denied

Run 'docker run --help' for more information
shiva@DESKTOP-7ONVSH5:~$ sudo docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
17eec7bbc9d7: Pull complete
Digest: sha256:f7931603f70e13dbd844253370742c4fc4202d290c80442b2e68706d8f33ce26
Status: Downloaded newer image for hello-world:latest

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
 1. The Docker client contacted the Docker daemon.
 2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
    (amd64)
 3. The Docker daemon created a new container from that image which runs the
    executable that produces the output you are currently reading.
 4. The Docker daemon streamed that output to the Docker client, which sent it
    to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
 $ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
 https://hub.docker.com/

For more examples and ideas, visit:
```
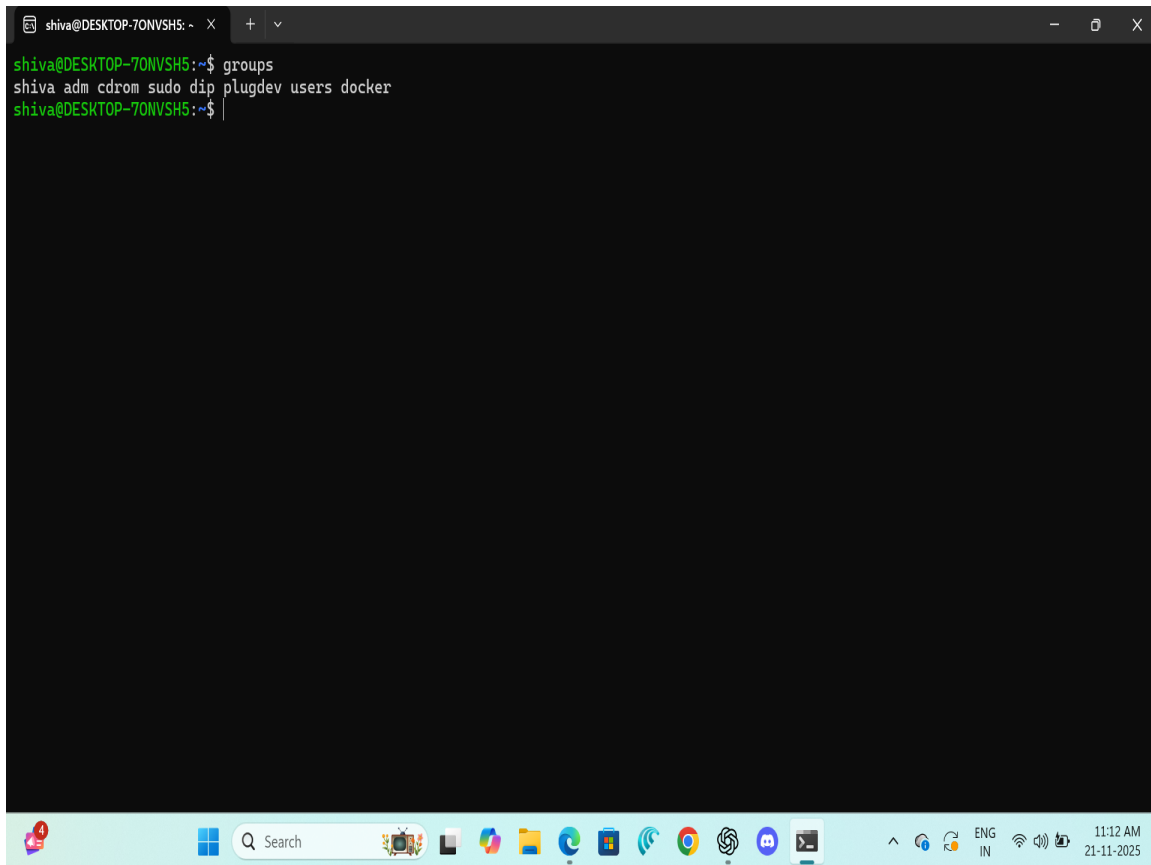
Permission Denied Explanation

```
shiva@DESKTOP-7ONVSH5:~$ docker run hello-world
docker: permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.sock: Head "http://%2Fvar%2Fr
un%2Fdocker.sock/_ping": dial unix /var/run/docker.sock: connect: permission denied

Run 'docker run --help' for more information
shiva@DESKTOP-7ONVSH5:~$ sudo usermod -aG docker $shiva
Usage: usermod [options] LOGIN

Options:
  -a, --append                append the user to the supplemental GROUPS
                              mentioned by the -G option without removing
                              the user from other groups
  -b, --badname               allow bad names
  -c, --comment COMMENT       new value of the GECOS field
  -d, --home HOME_DIR         new home directory for the user account
  -e, --expiredate EXPIRE_DATE  set account expiration date to EXPIRE_DATE
  -f, --inactive INACTIVE     set password inactive after expiration
                              to INACTIVE
  -g, --gid GROUP             force use GROUP as new primary group
  -G, --groups GROUPS         new list of supplementary GROUPS
  -h, --help                  display this help message and exit
  -l, --login NEW_LOGIN       new value of the login name
  -L, --lock                  lock the user account
  -m, --move-home             move contents of the home directory to the
                              new location (use only with -d)
  -o, --non-unique            allow using duplicate (non-unique) UID
  -p, --password PASSWORD     use encrypted password for the new password
  -P, --prefix PREFIX_DIR     prefix directory where are located the /etc/* files
  -r, --remove                remove the user from only the supplemental GROUPS
                              mentioned by the -G option without removing
                              the user from other groups
  -R, --root CHROOT_DIR       directory to chroot into
  -s, --shell SHELL           new login shell for the user account
```

Inspecting docker.sock Permissions

User Added to Docker Group

(Image missing: /mnt/data/c2ba46ae-8593-4c54-9c12-0f9aec479018.png)

Docker Working Without sudo

```
de57a609c9d5: Pull complete
Digest: sha256:553f64aecdc31b5bf944521731cd70e35da4faed96b2b7548a3d8e2598c52a42
Status: Downloaded newer image for nginx:latest
2bbace19dd820022dbecc3056c35909df71a0f7368554fbd66080b8c660f7b77
shiva@DESKTOP-7ONVSH5:~$ docker ps
CONTAINER ID   IMAGE     COMMAND                CREATED        STATUS         PORTS                                         NAMES
2bbace19dd82   nginx     "/docker-entrypoint.…"  8 seconds ago  Up 7 seconds   0.0.0.0:8080->80/tcp, [::]:8080->80/tcp   web
shiva@DESKTOP-7ONVSH5:~$ mkdir docker-custom-nginx
shiva@DESKTOP-7ONVSH5:~$ cd docker-custom-nginx
shiva@DESKTOP-7ONVSH5:~/docker-custom-nginx$ echo "<h1> shiva this my first docker image </h1> > index.html
> ^C
shiva@DESKTOP-7ONVSH5:~/docker-custom-nginx$ echo "<h1> Hello shiva! This is your first custom docker image </h1>" > index.html
shiva@DESKTOP-7ONVSH5:~/docker-custom-nginx$ vim Dockerfile
shiva@DESKTOP-7ONVSH5:~/docker-custom-nginx$ docker build -t shiva-custom-nginx
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
            Install the buildx component to build images with BuildKit:
            https://docs.docker.com/go/buildx/

docker: 'docker build' requires 1 argument

Usage:  docker build [OPTIONS] PATH | URL | -

Run 'docker build --help' for more information
shiva@DESKTOP-7ONVSH5:~/docker-custom-nginx$
```

Building Custom Dockerfile

```
de57a609c9d5: Pull complete
Digest: sha256:553f64aecdc31b5bf944521731cd70e35da4faed96b2b7548a3d8e2598c52a42
Status: Downloaded newer image for nginx:latest
2bbace19dd820022dbecc3056c35909df71a0f7368554fbd66080b8c660f7b77
shiva@DESKTOP-7ONVSH5:~$ docker ps
CONTAINER ID   IMAGE    COMMAND             CREATED        STATUS        PORTS                                         NAMES
2bbace19dd82   nginx    "/docker-entrypoint.…"  8 seconds ago   Up 7 seconds   0.0.0.0:8080->80/tcp, [::]:8080->80/tcp   web
shiva@DESKTOP-7ONVSH5:~$ mkdir docker-custom-nginx
shiva@DESKTOP-7ONVSH5:~$ cd docker-custom-nginx
shiva@DESKTOP-7ONVSH5:~/docker-custom-nginx$ echo "<h1> shiva this my first docker image </h1> > index.html
> ^C
shiva@DESKTOP-7ONVSH5:~/docker-custom-nginx$ echo "<h1> Hello shiva! This is your first custom docker image </h1>" > index.html
shiva@DESKTOP-7ONVSH5:~/docker-custom-nginx$ vim Dockerfile
shiva@DESKTOP-7ONVSH5:~/docker-custom-nginx$ docker build -t shiva-custom-nginx
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
            Install the buildx component to build images with BuildKit:
            https://docs.docker.com/go/buildx/


docker: 'docker build' requires 1 argument

Usage:  docker build [OPTIONS] PATH | URL | -

Run 'docker build --help' for more information
shiva@DESKTOP-7ONVSH5:~/docker-custom-nginx$ docker build -t shiva-custom-nginx .
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
            Install the buildx component to build images with BuildKit:
            https://docs.docker.com/go/buildx/


Sending build context to Docker daemon  3.072kB
Error response from daemon: dockerfile parse error on line 1: FROM requires either one or three arguments
shiva@DESKTOP-7ONVSH5:~/docker-custom-nginx$
```
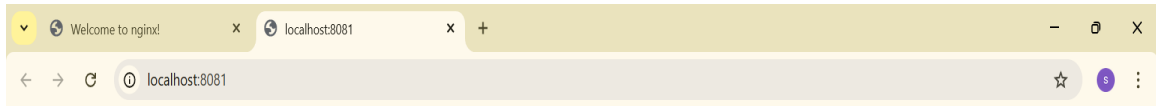
Fixing Dockerfile Issues

```
              Install the buildx component to build images with BuildKit:
              https://docs.docker.com/go/buildx/

Sending build context to Docker daemon  3.072kB
Error response from daemon: dockerfile parse error on line 1: FROM requires either one or three arguments
shiva@DESKTOP-7ONVSH5:~/docker-custom-nginx$ cat index.html
<h1> Hello shiva! This is your first custom docker image </h1>
shiva@DESKTOP-7ONVSH5:~/docker-custom-nginx$ vi index.html
shiva@DESKTOP-7ONVSH5:~/docker-custom-nginx$ cat Dockerfile
FROM nginx: latest
COPY index.html /usr/share/nginx/html/index.html
shiva@DESKTOP-7ONVSH5:~/docker-custom-nginx$ vi Dockerfile
shiva@DESKTOP-7ONVSH5:~/docker-custom-nginx$ cat Dockerfile
FROM nginx:latest
COPY index.html /usr/share/nginx/html/index.html
shiva@DESKTOP-7ONVSH5:~/docker-custom-nginx$ docker build -t shi
va-custom-nginx .
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
              Install the buildx component to build images with BuildKit:
              https://docs.docker.com/go/buildx/

Sending build context to Docker daemon  3.072kB
Step 1/2 : FROM nginx:latest
 ---> 60adc2e137e7
Step 2/2 : COPY index.html /usr/share/nginx/html/index.html
 ---> ca3fb7dd6750
Successfully built ca3fb7dd6750
Successfully tagged shiva-custom-nginx:latest
shiva@DESKTOP-7ONVSH5:~/docker-custom-nginx$
```

Running Custom Nginx Image Successfully

Hello shiva! This is your first custom docker image