**Installing and enabling docker inside ubuntu terminal**

1)sudo apt update && sudo apt upgrade -y

2)sudo apt install -y ca-certificates curl gnupg lsb-release

3)sudo mkdir -p /etc/apt/keyrings

4)curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo tee /etc/apt/keyrings/docker.asc > /dev/null

5)sudo chmod a+r /etc/apt/keyrings/docker.asc

6)echo "deb [arch=$(dpkg --print-architecture) signed-by=/etc/apt/keyrings/docker.asc] https://download.docker.com/linux/ubuntu $(lsb\_release -cs) stable" | sudo tee /etc/apt/sources.list.d/docker.list > /dev/null

7)sudo apt update

8)sudo apt install -y docker-ce docker-ce-cli containerd.io docker-buildx-plugin docker-compose-plugin

9)sudo systemctl start docker

10)sudo systemctl enable docker

11)sudo docker --version

12)sudo usermod -aG docker $USER

13)newgrp docker

Connecting ubuntu terminal with GUI based portainer

1)sudo docker pull portainer/portainer-ce

2)sudo docker run -d -p 9000:9000 --name=portainer --restart=always \

-v /var/run/docker.sock:/var/run/docker.sock \

-v portainer\_data:/data \

portainer/portainer-ce

3) go to http://localhost:9000 and enter password

**Project 2: Deploy an Nginx Web Server with Docker**

**Goal: Run an Nginx server using Docker.**

**Prerequisites: Install Docker**

**Step 1: Pull the Nginx Image**

Run the following command to pull the official Nginx image:

bash

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docker pull nginx

**Step 2: Run an Nginx Container**

Start a container and map port 80 to access it from your browser:

bash

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docker run -d -p 8080:80 --name my-nginx nginx

Now, open http://localhost:8080 in your browser, and you should see the Nginx welcome page.

**Step 3: Customize Nginx with Your Own HTML Page**

1. Create a directory for your Nginx files:

bash

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mkdir nginx\_project && cd nginx\_project

1. Create an index.html file inside this directory:

html

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<!DOCTYPE html>

<html>

<head>

<title>My Dockerized Nginx</title>

</head>

<body>

<h1>Hello, this is a custom Nginx page inside Docker!</h1>

</body>

</html>

1. Run a new Nginx container with your custom HTML page:

docker run -d -p 8081:80 --name custom-nginx -v $(pwd):/usr/share/nginx/html nginx

1. Refresh http://localhost:8081, and you should see your custom page.

OUTPUT



