Praveen J– 22CSR152 III CSE C

DAY -1 NGINX, DOCKER IMAGES PUSH AND RUN THE CONTAINER

Docker

Docker is an open-source platform that allows developers to build, package, and run applications in isolated environments called **containers**. It enables applications to run consistently across different systems by bundling all dependencies, libraries, and configurations into a standardized unit.

Docker simplifies software deployment, improves scalability, and ensures applications work the same way across development, testing, and production environments

A **Docker image** is a lightweight, standalone, and executable software package that includes everything needed to run an application: the code, runtime, libraries, environment variables, and dependencies. It serves as a blueprint for creating **Docker containers**.

A **Docker container** is a running instance of a Docker image. It is an isolated environment that runs applications consistently across different systems. Containers are lightweight, fast, and portable, making them ideal for deployment in various environments without compatibility issues

OUTPUT:

```
# Pull the Nginx Docker image
docker pull nginx

# Create a directory for the HTML file
mkdir -p ~/nginx-html

# Create a simple "Hello World" HTML file
echo "<h1>Hello, World!</h1>" > ~/nginx-html/index.html

# Run the Nginx container and mount the HTML file
docker run -d -p 8080:80 -v ~/nginx-html:/usr/share/nginx/html --name my-nginx nginx
```

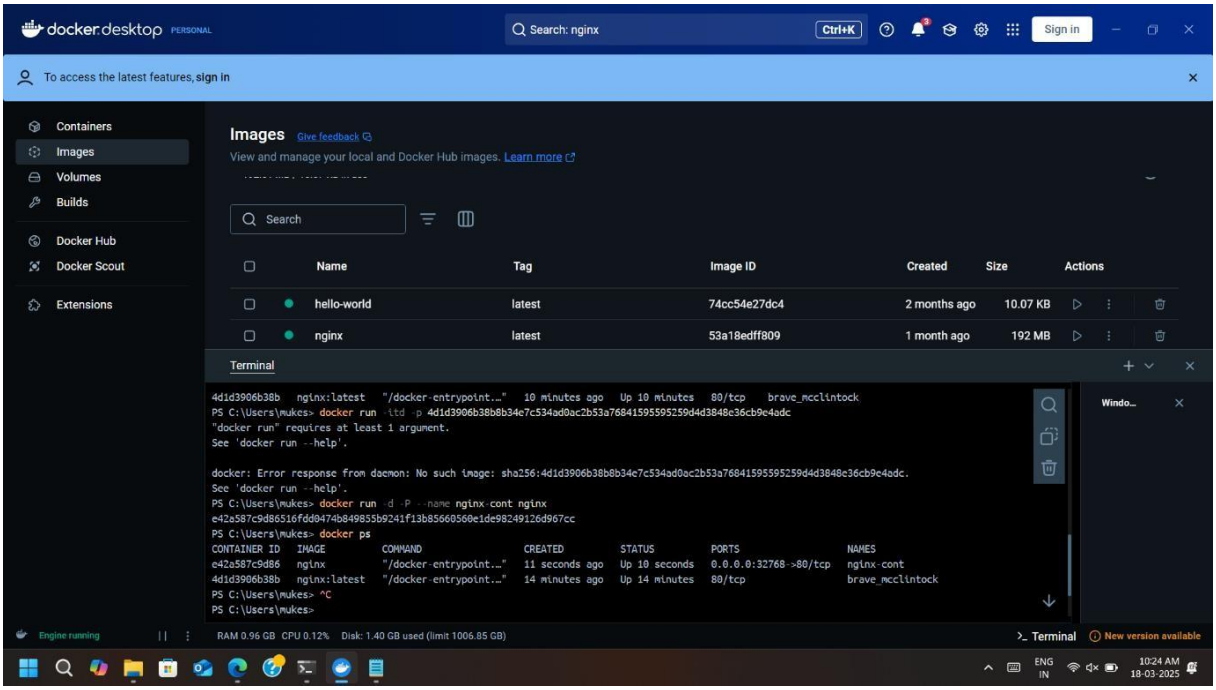
Docker initial commands:

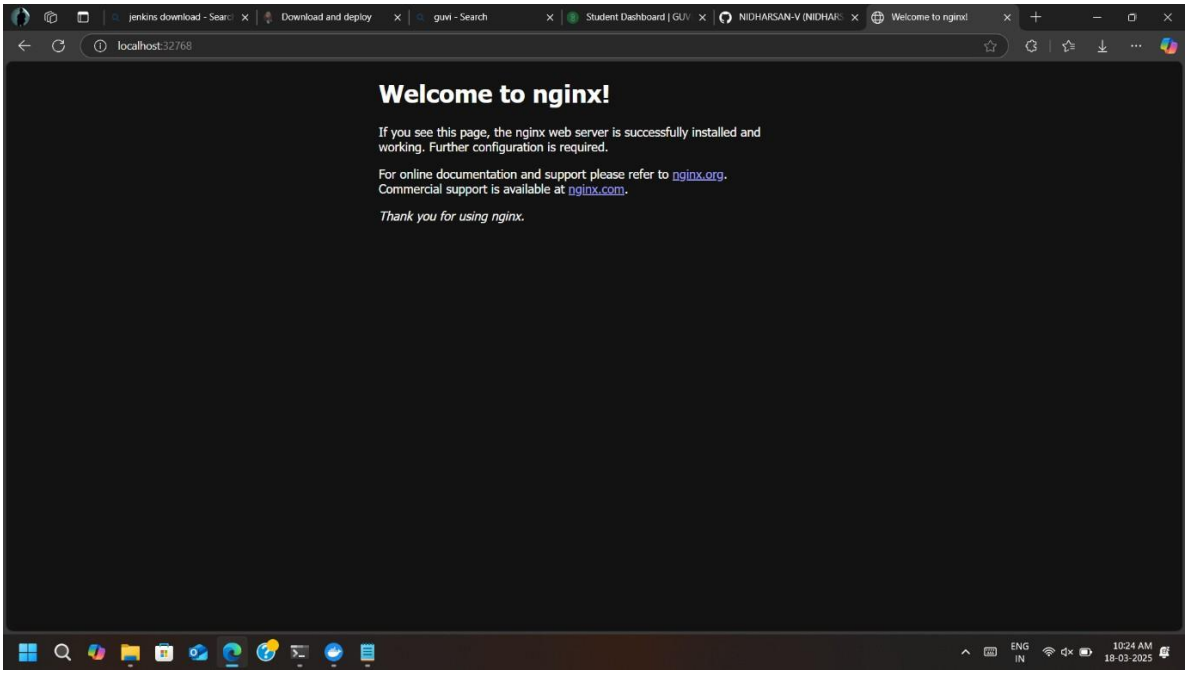
Docker login

Docker login -u <username> -p <password>

Docker build -t my-web-app .

Docker push my-web-app


docker desktop PERSONAL
Search: nginx
Ctrl+K
Sign in
To access the latest features, sign in
Containers
Images
Volumes
Builds
Docker Hub
Docker Scout
Extensions
Images
Give feedback
View and manage your local and Docker Hub images. Learn more
Search
Name
Tag
Image ID
Created
Size
Actions
hello-world
latest
74cc54e27dc4
2 months ago
10.07 KB
nginx
latest
53a18edff809
1 month ago
192 MB
Terminal
4d1d3906b38b nginx:latest "/docker-entrypoint..." 10 minutes ago Up 10 minutes 80/tcp brave_mcclintock
PS C:\Users\mukes> docker run -itd -p 4d1d3906b38b8b34e7c534ad0ac2b53a768415955959259d4d3848e36cb9e4adc
"docker run" requires at least 1 argument.
See 'docker run --help'.
docker: Error response from daemon: No such image: sha256:4d1d3906b38b8b34e7c534ad0ac2b53a768415955959259d4d3848e36cb9e4adc.
See 'docker run --help'.
PS C:\Users\mukes> docker run -d -P --name nginx-cont nginx
e42a587c9d86516fdd0474b849855b9241f13b85660560e1de98249126d967cc
PS C:\Users\mukes> docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
e42a587c9d86 nginx "/docker-entrypoint..." 11 seconds ago Up 10 seconds 0.0.0.0:32768->80/tcp nginx-cont
4d1d3906b38b nginx:latest "/docker-entrypoint..." 14 minutes ago Up 14 minutes 80/tcp brave_mcclintock
PS C:\Users\mukes> ^C
PS C:\Users\mukes>
Engine running
RAM 0.96 GB CPU 0.12% Disk: 1.40 GB used (limit 1006.85 GB)
Terminal
New version available
ENG IN
10:24 AM 18-03-2025


localhost:32768
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.
ENG IN
10:24 AM 18-03-2025