EXP NO: 09	RUNNING MULTIPLE DOCKER CONTAINERS USING DOCKER COMPOSE.
DATE:	

AIM:

To run multiple Docker containers using Docker Compose, enabling efficient management, networking, and deployment of containerized applications.

PROCEDURE:

Step 1: Create a project folder named html-cluster and navigate to it.

Step 2: Inside the folder, create three files: index.html, nginx.conf, and docker-compose.yml.

Step 3: Write an index.html file with basic HTML content to be served.

Step4: Configure nginx.conf to serve index.html from the root directory.

Step 5: Define a docker-compose.yml file to run three Nginx containers on different ports and connect them via a network.

Step 6: Run **docker-compose up -d** to start the cluster and verify it by visiting http://localhost:8081, http://localhost:8082, and http://localhost:8083.

Step 7: Use docker ps to check running containers and docker-compose down to stop and remove them when needed.

index.html:

```
<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <title>Simple Page</title>
</head>
<body>
   <h1>Welcome to My Simple Page</h1>
   <p>This is a very basic webpage.</p>
</body>
</html>
```

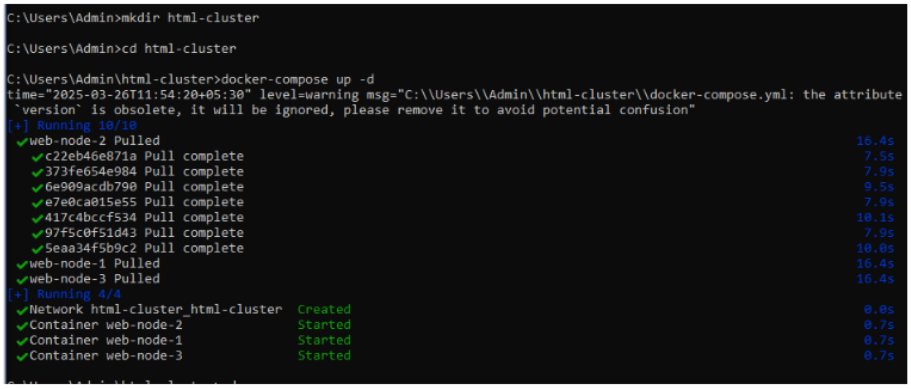
ngnix.conf:

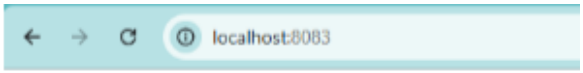
```
 server {
    listen 80;
    server_name localhost;
     location / {
      root /usr/share/nginx/html;
     index index.html;
    }
}
```

Docker-compose-yml:

```
version: '3.9'
services:
  web-node-1:
    image: nginx:latest
    container_name: web-node-1
    volumes:
      - ./index.html:/usr/share/nginx/html/index.html
      - ./nginx.conf:/etc/nginx/conf.d/default.conf
    ports:
      - "8081:80"
    networks:
      - html-cluster
web-node-2:
    image: nginx:latest
    container_name: web-node-2
    volumes:
      - ./index.html:/usr/share/nginx/html/index.html
      - ./nginx.conf:/etc/nginx/conf.d/default.conf
    ports:
      - "8082:80"
    networks:
      - html-cluster
web-node-3:
    image: nginx:latest
    container_name: web-node-3
    volumes:
      - ./index.html:/usr/share/nginx/html/index.html
      - ./nginx.conf:/etc/nginx/conf.d/default.conf
    ports:
      - "8083:80"
    networks:
      - html-cluster
networks:
  html-cluster:
    driver: bridge
```

OUTPUT:





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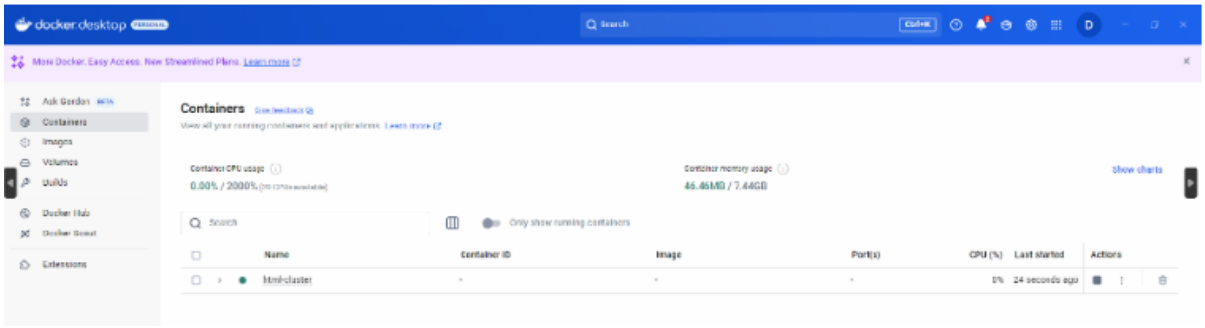

RESULT:

Thus the ,running multiple Docker containers using Docker Compose was executed successfully.