Docker Assignment

Task1

Run and Inspect a Docker Container

Topic: Basic Docker Operations and Container Lifecycle Management

Description: Use Docker CLI to run a container from an existing image and inspect its details.

Steps:

Open the terminal on your system.

Pull a simple Docker image like hello-world or nginx using docker pull.

Run the container using docker run command.

List all running containers using docker ps.

Inspect the running container by using docker inspect followed by the container ID or name to retrieve its metadata.

1. Open your terminal or command prompt.

2. Pull a simple Docker image like hello-world or nginx using the following command:

```
docker pull hello-world
```

3. Run the container using the docker run command:

```
docker run hello-world
```

This command will start a container from the `hello-world` image, which will simply print a message and then exit.

4. To list all running containers, use the `docker ps` command:

```
docker ps
```

If the hello-world container has already exited, you may not see it in the list. To see all containers, including those that have exited, you can add the -a flag:

```
docker ps -a
```

5. To inspect the running container, you can use the `docker inspect` command followed by the container ID or name. First, you need to find out the ID or name of the container. You can use the container ID or the first few characters of it shown in the output of the `docker ps` command. For example:

```
docker inspect <container_id_or_name>
```

Replace <container_id_or_name> with the actual ID or name of your container.

This command will display detailed information about the container, including its configuration, network settings, volumes, etc.

Task 2

Tag and Push an Image to Docker Hub Topic: Docker Images and Registry Operations Description: Tag a local Docker image with a version and push it to Docker Hub (assuming the fresher has a Docker Hub account). Steps: Open the terminal on your system. List the available Docker images using docker images. Choose an image and tag it using docker tag with a new tag name, following the format: username/repository:tag. Log in to Docker Hub using docker login. Push the tagged image to Docker Hub using docker push.

Here are the steps to tag and push a local Docker image to Docker Hub:

1. Open your terminal or command prompt.
2. List the available Docker images using the `docker images` command:

   ```
   docker images
   ```

   This command will display a list of all locally available Docker images.

3. Choose the image you want to push to Docker Hub and tag it using the docker tag command. Replace <image_name> with the name of your image, <username> with your Docker Hub username, <repository> with the repository name you want to push the image to, and <tag> with the version tag you want to assign to the image. For example:

   ```
   docker tag <image_name> <username>/<repository>:<tag>
   ```

   Here's an example:

   ```
   docker tag my_image myusername/myrepository:latest
   ```

4. Log in to Docker Hub using the `docker login` command:

   ```
   docker login
   ```

   Enter your Docker Hub username and password when prompted.

5. Finally, push the tagged image to Docker Hub using the `docker push` command:

   ```
   docker push <username>/<repository>:<tag>
   ```

   For example:

   ```
   docker push myusername/myrepository:latest
   ```

   This command will push the tagged image to Docker Hub, making it available for others to pull from Docker Hub using the specified tag.