1. What is Docker?

Ans: Docker is an open platform for developing, shipping, and running application.

1. Benefits of Docker.

Ans: Docker enables you to separate your applications from your infrastructure so you can deliver software quickly. By taking advantages of Docker’s methodologies for shipping, testing, and deploying code, you can significantly reduce the delay between writing code and running it in production.

1. Explain installation process of Docker.

Ans:

1. Double-click **Docker Dextop installer.exe** to run the installer.
2. When prompted, ensure the **Use WSL 2 instead of Hyper-V** option on the Configuration page is selected or not depending on your choice of backend. If your system only supports one of the two options, you will not be able to select which backend to use.
3. Follow the instructions on the installation wizard to authorize the installer and proceed with the install.
4. When the installation is successful, select **Close** to complete the installation process.
5. If you admin account is different to your user account, you must add the user to the **docker-users** group. Run **Computer Management** as an **administrator** and navigate to **Local Users and Groups** > **Groups** > **docker-users**. Right-click to add the user to the group. Sign out and sign back in for the changes to take effect.

Step 1:

Step 2:

Command for installation:

docker pull nginx

Step 3: Run a Docker Container

Now that you have the Nginx image, you can create a container based on it. Run the following command to start an Nginx container:

Command:  
 docker run –d –p 8080:80 nginx

This command tells Docker to run the Nginx container in the background (-d), and it maps port 8080 of your host system to port 80 of the container (-p 8080:80).

Step 4: Acess the Container

You can acess the Nginx web server running inside the Docker container by opening your web browser and navigating to <https://localhost:8080>.

Step 5: View Running Containers

To see the list of running

Command:

docker ps

Step 6: Stop and Remove the Container

When you are done, you can stop the Nginx container by running:

Command:

docker stop <CONTAINER\_ID>

Replace <CONTAINER\_ID> with the actual ID of the running container (you can get the ID from the docker ps command).

To remove the container, run:

Command:

docker rm <CONTAINER\_ID>

Step 7: Clean Up

If you don’t plan to use the nginx image anymore, you can remove it:

Command:

Docker rmi nginx

These are the basic steps to demonstrate virtualization using Docker containers.