Docker on IaaS VM
Ubuntu 18.04

A. Create VM

1. Create IaaS VM using Ubuntu 18.04
2. Open Port 22 & 80

B. Configure Ubuntu environment
1. Set Root Password
sudo passwd root

2. Login with Root
su -

3. Update your existing list of packages
apt update

4. Enable "Auto-Completion"
apt install bash-completion

C. Install Docker Community Edition (CE) from the Official Docker Repository

1. Install prerequisite packages which let apt use packages over HTTPS
apt install apt-transport-https ca-certificates curl software-properties-common

2. Add the GPG key for the official Docker repository to your system
curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo apt-key add

3. Add the Docker repository to APT sources
add-apt-repository "deb [arch=amd64] https://download.docker.com/linux/ubuntu bionic stable"

4. Update the package database with the Docker packages from the newly added repository instead of the default Ubuntu repo
apt update
apt-cache policy docker-ce

5. Install Docker
apt install docker-ce

6. Check the Docker services
systemctl status docker

7. Check the Docker version
docker –version

D. Installing NGINX Container

1. Show list of Images
docker images

1. Pull latest NGINX image from Docker hub repository
docker pull nginx:latest

2. Show list of Images
docker images

3. Run Container on port 80
docker run –p 80:80 -d nginx

4. Show running containers
docker ps

5. View Container
curl localhost

6. View Container from local desktop browser
<Ubuntu-VM-Public-IP-Address>

E. Installing PHP with Apache Container

1. Pull Apache image from Docker hub repository
docker pull php:5.6-apache

2. Show list of Images
docker images

3. Run Container on Anonymous port
docker run –P -d php:5.6-apache

4. Show running containers
docker ps

5. Open Apache using curl
curl localhost:<PHP-Container-Port-No.>

6. Login in Container interactively
docker exec –it <Container-Name> bash

7. Create html file in <var\www\html>
cat > index.html <<eof
Welcome to Docker Demo on Azure IaaS VM using PHP with Apache!
[Press Enter]
eof

8. Exit from Container
exit

9. Open Apache
curl localhost:<PHP-Container-Port-No.>

10. Open <PHP-Container-Port-No.> from IaaS of Ubuntu VM

11. Open Apache
<Azure-VM-Public-IP-Address>:<PHP-Container-Port-No.>