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Class: LY IT Core

Assignment No. 1: Create Hyperledger Fabric Network

Create a file name Hyperledger.sh and write following code in it

```
sudo apt-get update
sudo apt-get install ca-certificates curl gnupg

sudo install -m 0755 -d /etc/apt/keyrings curl -fsSL
https://download.docker.com/linux/ubuntu/gpg | sudo gpg -- dearmor -o
/etc/apt/keyrings/docker.gpg sudo chmod a+r
/etc/apt/keyrings/docker.gpg

echo \
  "deb [arch="$(dpkg --print-architecture)" signed-
by=/etc/apt/keyrings/docker.gpg]
https://download.docker.com/linux/ubuntu \
  "$(. /etc/os-release && echo "$VERSION_CODENAME")" stable" | \
  sudo tee /etc/apt/sources.list.d/docker.list > /dev/null

sudo apt-get update

sudo apt-get install docker-ce docker-ce-cli containerd.io docker-
buildx-plugin docker-compose-plugin

sudo curl -L
"https://github.com/docker/compose/releases/download/1.29.2/docker-
compose-$(uname -s)-$(uname -m)" -o /usr/local/bin/docker-compose

sudo chmod +x /usr/local/bin/docker-compose

sudo docker-compose --version

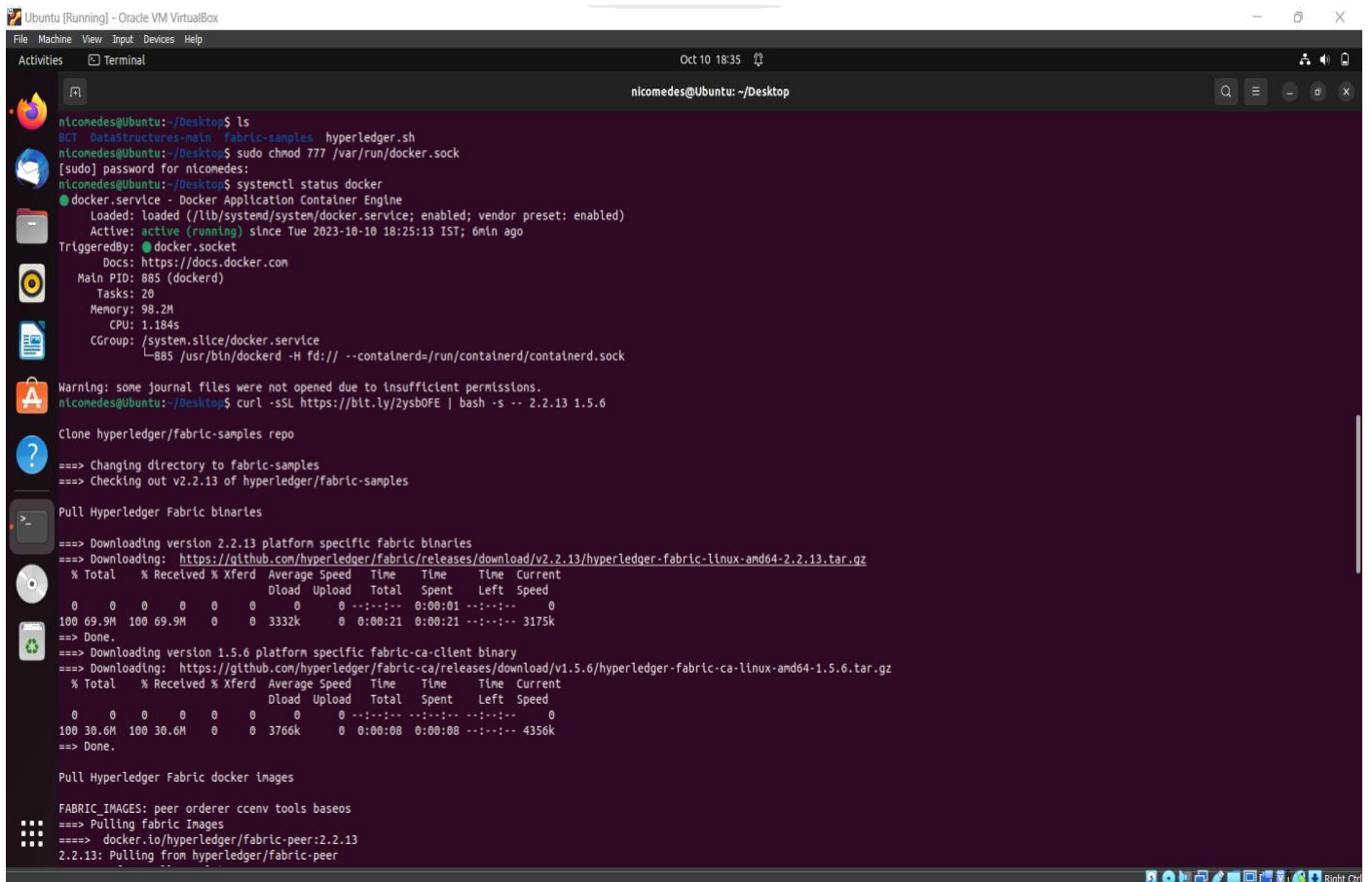
sudo chmod 777 /var/run/docker.sock

curl -sSL https://bit.ly/2ysbOFE | bash -s -- 2.2.13 1.5.6
```

Open terminal in ubuntu and execute following commands

```
sudo chmod 777 /var/run/docker.sock
```

```
curl -sSL https://bit.ly/2ysb0FE | bash -s -- 2.2.13 1.5.6
```



```
Ubuntu [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal
Oct 10 18:35
nicomedes@Ubuntu: ~/Desktop

nicomedes@Ubuntu:~/Desktop$ ls
BCT DataStructures-main fabric-samples hyperledger.sh
nicomedes@Ubuntu:~/Desktop$ sudo chmod 777 /var/run/docker.sock
[sudo] password for nicomedes:
nicomedes@Ubuntu:~/Desktop$ systemctl status docker
● docker.service - Docker Application Container Engine
   Loaded: loaded (/lib/systemd/system/docker.service; enabled; vendor preset: enabled)
   Active: active (running) since Tue 2023-10-10 18:25:13 IST; 6min ago
     TriggeredBy: ● docker.socket
    Docs: https://docs.docker.com
   Main PID: 885 (dockerd)
    Tasks: 20
   Memory: 98.2M
    CPU: 1.184s
   CGroup: /system.slice/docker.service
           └─885 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock

Warning: some journal files were not opened due to insufficient permissions.
nicomedes@Ubuntu:~/Desktop$ curl -sSL https://bit.ly/2ysb0FE | bash -s -- 2.2.13 1.5.6

Clone hyperledger/fabric-samples repo
====> Changing directory to fabric-samples
====> Checking out v2.2.13 of hyperledger/fabric-samples

Pull Hyperledger Fabric binaries
====> Downloading version 2.2.13 platform specific fabric binaries
====> Downloading: https://github.com/hyperledger/fabric/releases/download/v2.2.13/hyperledger-fabric-linux-amd64-2.2.13.tar.gz
% Total % Received % Xferd Average Speed Time Time Time Current
Dload Upload Total Spent Left Speed
0 0 0 0 0 0 0 0 0:00:01 0:00:01 0:00:00 0
100 69.9M 100 69.9M 0 0 3332k 0 0:00:21 0:00:21 0:00:00 3175k
====> Done.
====> Downloading version 1.5.6 platform specific fabric-ca-client binary
====> Downloading: https://github.com/hyperledger/fabric-ca/releases/download/v1.5.6/hyperledger-fabric-ca-linux-amd64-1.5.6.tar.gz
% Total % Received % Xferd Average Speed Time Time Time Current
Dload Upload Total Spent Left Speed
0 0 0 0 0 0 0 0 0:00:01 0:00:01 0:00:00 0
100 30.6M 100 30.6M 0 0 3766k 0 0:00:08 0:00:08 0:00:00 4356k
====> Done.

Pull Hyperledger Fabric docker images
FABRIC IMAGES: peer orderer ccenv tools baseos
====> Pulling Fabric Images
====> docker.io/hyperledger/fabric-peer:2.2.13
2.2.13: Pulling from hyperledger/fabric-peer
```

```
Ubuntu [Running] - Oracle VM VirtualBox
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7f9bcbf943fa5: Already exists
9fd371df0be: Already exists
add974993529: Already exists
f834ffec37bc: Pull complete
51e80c1924a0: Pull complete
477df71212cd: Pull complete
Digest: sha256:a7919958b1012e0cb160dfca0951e961e3f80dbda7930cd834cdccf800a3a2
Status: Downloaded newer image for hyperledger/fabric-tools:2.2.13
docker.io/hyperledger/fabric-tools:2.2.13
====> docker.io/hyperledger/fabric-baseos:2.2.13
2.2.13: Pulling from hyperledger/fabric-baseos
31e352740f53: Already exists
0789e237b8e1: Already exists
9997e45580b: Pull complete
Digest: sha256:a7919958b1012e0cb160dfca0951e961e3f80dbda7930cd834cdccf800a3a2
Status: Downloaded newer image for hyperledger/fabric-baseos:2.2.13
docker.io/hyperledger/fabric-baseos:2.2.13
====> Pulling fabric ca image
====> docker.io/hyperledger/fabric-ca:1.5.6
1.5.6: Pulling from hyperledger/fabric-ca
Digest: sha256:c5c6dfa2d1d4cdee4d22dbfd928506a9504931e53f60468e0efbad3773f9d30
Status: Image is up to date for hyperledger/fabric-ca:1.5.6
docker.io/hyperledger/fabric-ca:1.5.6
====> List out hyperledger docker images
hyperledger/fabric-tools 2.2 878e8666fcfc 2 months ago 385MB
hyperledger/fabric-tools 2.2.13 878e8666fcfc 2 months ago 385MB
hyperledger/fabric-tools latest 878e8666fcfc 2 months ago 385MB
hyperledger/fabric-peer 2.2 addc52b52407 2 months ago 55.7MB
hyperledger/fabric-peer 2.2.13 addc52b52407 2 months ago 55.7MB
hyperledger/fabric-peer latest addc52b52407 2 months ago 55.7MB
hyperledger/fabric-orderer 2.2 71805c71c4fb 2 months ago 36.9MB
hyperledger/fabric-orderer 2.2.13 71805c71c4fb 2 months ago 36.9MB
hyperledger/fabric-orderer latest 71805c71c4fb 2 months ago 36.9MB
hyperledger/fabric-ccenv 2.2 149cc8353c4b 2 months ago 499MB
hyperledger/fabric-ccenv 2.2.13 149cc8353c4b 2 months ago 499MB
hyperledger/fabric-ccenv latest 149cc8353c4b 2 months ago 499MB
hyperledger/fabric-baseos 2.2 1d0c755f6a1e 2 months ago 8.49MB
hyperledger/fabric-baseos 2.2.13 1d0c755f6a1e 2 months ago 8.49MB
hyperledger/fabric-baseos latest 1d0c755f6a1e 2 months ago 8.49MB
hyperledger/fabric-tools 2.2.12 7b5a7c6c16dd 4 months ago 385MB
hyperledger/fabric-peer 2.2.12 a0a206b0f43c 4 months ago 54MB
hyperledger/fabric-orderer 2.2.12 88c464bad593 4 months ago 35.2MB
hyperledger/fabric-ccenv 2.2.12 a4c010c07d9b 4 months ago 444MB
hyperledger/fabric-baseos 2.2.12 c4f8a3b482a2 4 months ago 6.8MB
hyperledger/fabric-ca 1.5 8446b174e2a9 6 months ago 209MB
hyperledger/fabric-ca 1.5.6 8446b174e2a9 6 months ago 209MB
hyperledger/fabric-ca latest 8446b174e2a9 6 months ago 209MB
nicomedes@Ubuntu: ~/Desktop$
```

```
Ubuntu [Running] - Oracle VM VirtualBox
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nicomedes@Ubuntu: ~/Desktop

====> Pulling fabric ca image
====> docker.io/hyperledger/fabric-ca:1.5.6
1.5.6: Pulling from hyperledger/fabric-ca
Digest: sha256:c5c6dfa2d1d4cdee4d22dbfd928506a9504931e53f60468e0efbad3773f9d30
Status: Image is up to date for hyperledger/fabric-ca:1.5.6
docker.io/hyperledger/fabric-ca:1.5.6
====> List out hyperledger docker images
hyperledger/fabric-tools 2.2 878e8666fcfc 2 months ago 385MB
hyperledger/fabric-tools 2.2.13 878e8666fcfc 2 months ago 385MB
hyperledger/fabric-tools latest 878e8666fcfc 2 months ago 385MB
hyperledger/fabric-peer 2.2 addc52b52407 2 months ago 55.7MB
hyperledger/fabric-peer 2.2.13 addc52b52407 2 months ago 55.7MB
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hyperledger/fabric-orderer 2.2 71805c71c4fb 2 months ago 36.9MB
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hyperledger/fabric-orderer latest 71805c71c4fb 2 months ago 36.9MB
hyperledger/fabric-ccenv 2.2 149cc8353c4b 2 months ago 499MB
hyperledger/fabric-ccenv 2.2.13 149cc8353c4b 2 months ago 499MB
hyperledger/fabric-ccenv latest 149cc8353c4b 2 months ago 499MB
hyperledger/fabric-baseos 2.2 1d0c755f6a1e 2 months ago 8.49MB
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hyperledger/fabric-ca latest 8446b174e2a9 6 months ago 209MB
nicomedes@Ubuntu: ~/Desktop$ ls
BCT DataStructures-main fabric-samples hyperledger.sh
nicomedes@Ubuntu: ~/Desktop$
```

Hyperledger fabric will be created and folder “fabric-samples” would be formed.