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|--------------------|-----------------------------|---------------------|--|
| Name of candidate: | Mareena Mark Fernandes | | |
| Roll no.: 8669 | Year: TE | Semester:-VI | |
| Branch: IT | Subject: Service Design Lab | | |
| Experiment No.: 4 | Date of performance: | Date of submission: | |
| CO's Covered: LO5 | | | |

Rubrics for Practical

| Indicator | Poor | Average | Good | Excellent |
|------------------------|--|---|---|--|
| Timeline (3) | More than two weeks late (0) | Two weeks late (1) | One week late (2) | Early or on time (3) |
| Knowledge (3) | Not Able to answer any Question (0) | Able to answer a Question (1) | Able to answer few Questions (2) | Able to answer all questions (3) |
| Performance (4) | Able to partially perform the experiment (1) | Able to perform the experiment for certain extent (2) | Able to perform the experiment with support (3) | Able to perform the experiment considering all aspects (4) |
| Rubrics | Timeline(3) | Knowledge(3) | Performance(4) | Total (10) |
| Score | | | | |

Signature of faculty:

```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/powershell

PS C:\Users\mareena> docker --version
Docker version 20.10.6, build 376c289
PS C:\Users\mareena> docker info
Client:
Context:    default
Debug Mode: false
Plugins:
  app: Docker App (Docker Inc., v0.9.1-beta3)
  buildx: Build with BuildKit (Docker Inc., v0.5.1-docker)
  compose: Docker Compose (Docker Inc., 2.0.0-beta.1)
  scan: Docker Scan (Docker Inc., v0.8.0)

Server:
Containers: 2
  Running: 1
  Paused: 0
  Stopped: 1
Images: 2
Server Version: 20.10.6
Storage Driver: overlay2
  Backing Filesystem: extfs
  Supports d_type: true
  Native Overlay Diff: true
  userxattr: false
Logging Driver: json-file
Cgroup Driver: cgroupfs
Cgroup Version: 1
Plugins:
  Volume: local
  Network: bridge host ipvlan macvlan null overlay
  Log: awslogs fluentd gcplogs gelf journald json-file local logentries splunk syslog
Swarm: inactive
Runtimes: io.containerd.runc.v2 io.containerd.runtime.v1.linux runc
Default Runtime: runc
Init Binary: docker-init
```

```
WARNING: No blkio throttle.read_iops_device support
WARNING: No blkio throttle.write_iops_device support
PS C:\Users\mareena> docker login
Authenticating with existing credentials...
Login Succeeded
PS C:\Users\mareena> docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
8d0fde127a2b: Pull complete
Digest: sha256:5122f0204b645554e6487582abb3c46b1c337a46b5be0225b835d091b99e46c
Status: Downloaded newer image for hello-world:latest

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
1. The Docker client contacted the Docker daemon.
2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
   (amd64)
3. The Docker daemon created a new container from that image which runs the
   executable that produces the output you are currently reading.
4. The Docker daemon streamed that output to the Docker client, which sent it
   to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
$ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
https://hub.docker.com/

For more examples and ideas, visit:
https://docs.docker.com/get-started/

PS C:\Users\mareena>
```

```
PS C:\Users\mareenaf> docker image ls
REPOSITORY          TAG          IMAGE ID       CREATED        SIZE
8669mareenadoc/docker10tutorial latest      6387aeea698c   7 minutes ago 28MB
docker10tutorial     latest      6387aeea698c   7 minutes ago 28MB
alpine/git           latest      2abeafdf5b9    2 days ago    25.1MB
hello-world          latest      d1165f221234   2 months ago  13.3kB

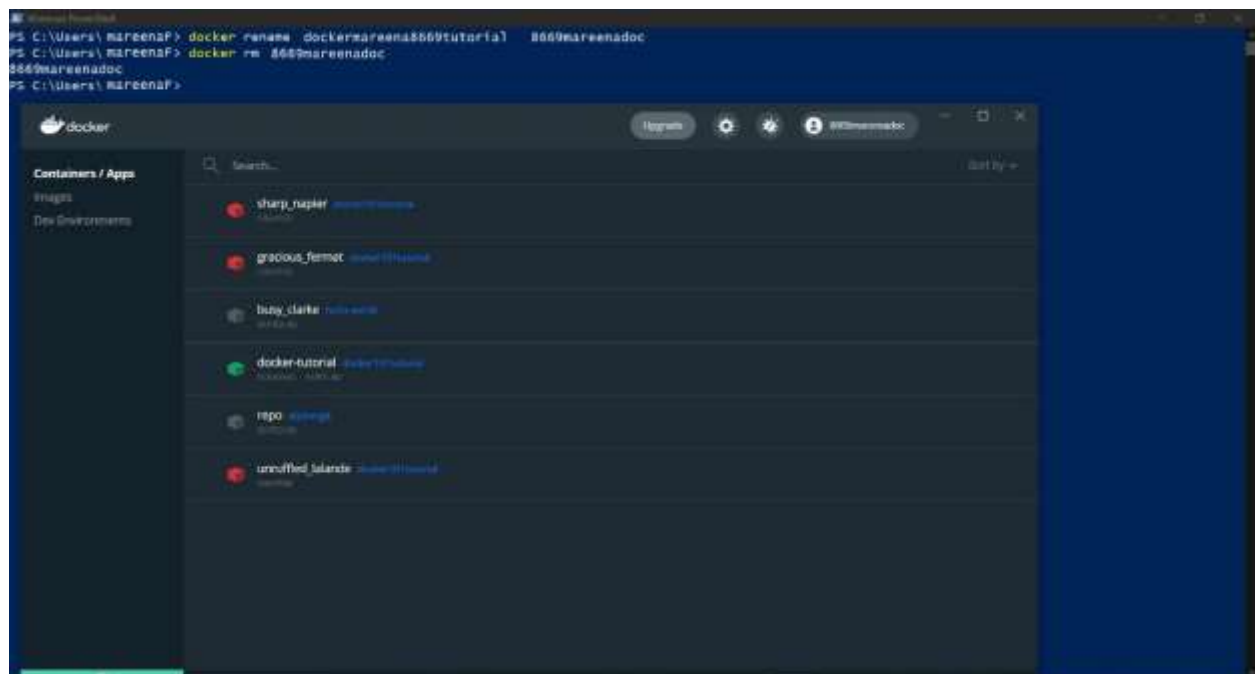
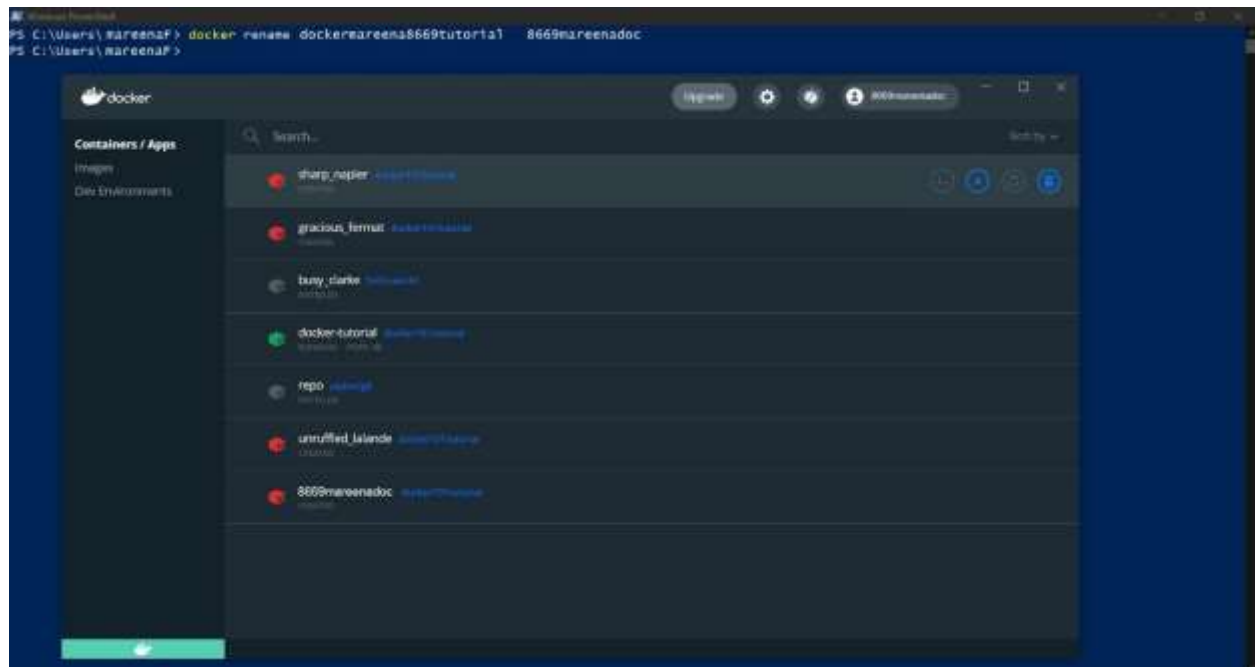
PS C:\Users\mareenaf> docker container ls --all
CONTAINER ID        IMAGE          COMMAND        CREATED        STATUS        PORTS          NAMES
e79b29d42be3       hello-world    "/hello"       2 minutes ago  Exited (0) 2 minutes ago           busy_clarke
ed9221d1155d       docker10tutorial "/docker-entrypoint..." 7 minutes ago  Up 7 minutes  0.0.0.0:80->80/tcp, :::80->80/tcp  docker-tutorial
db4261c1ff04       alpine/git     "git clone https://g-" 10 minutes ago Exited (0) 10 minutes ago           repo

PS C:\Users\mareenaf> docker container ls -aq
e79b29d42be3
ed9221d1155d
db4261c1ff04
PS C:\Users\mareenaf>
```

```
PS C:\Users\mareenaf> docker create docker10tutorial
bdd83575b2b3eddcd22976db4d2cef74999b8d581eedac2b906ba3d777b248a
PS C:\Users\mareenaf> docker rename bdd83575b2b3eddcd22976db4d2cef74999b8d581eedac2b906ba3d777b248a dockermareena8669tutorial
PS C:\Users\> docker container ls
CONTAINER ID        IMAGE          COMMAND        CREATED        STATUS        PORTS          NAMES
ed9221d1155d       docker10tutorial "/docker-entrypoint..." 28 minutes ago  Up 28 minutes  0.0.0.0:80->80/tcp, :::80->80/tcp  docker-tutorial

PS C:\Users\mareenaf> docker image ls
REPOSITORY          TAG          IMAGE ID       CREATED        SIZE
8669mareenadoc/docker10tutorial latest      6387aeea698c   29 minutes ago 28MB
docker10tutorial     latest      6387aeea698c   29 minutes ago 28MB
alpine/git           latest      2abeafdf5b9    2 days ago    25.1MB
hello-world          latest      d1165f221234   2 months ago  13.3kB

PS C:\Users\mareenaf>
```



List all images that are locally stored with the docker engine

```
PS C:\Users\mareenaf> docker image ls
REPOSITORY          TAG         IMAGE ID      CREATED       SIZE
8669mareenaf/docker10tutorial latest      6387a8ee698c  18 hours ago 28MB
docker10tutorial     latest      6387a8ee698c  18 hours ago 28MB
alpine/git           latest      2abeafdf5b9   3 days ago   25.1MB
hello-world          latest      d1165f221234  2 months ago 13.3kB
PS C:\Users\mareenaf>
```

Show the history of an image

```
PS C:\Users\mareenaf> docker history docker10tutorial
IMAGE          CREATED        CREATED BY          SIZE      COMMENT
6387a8ee698c  18 hours ago  COPY /app/site /usr/share/nginx/html # build_ 3.59MB    buildkit.dockerfile.v0
<missing>     18 hours ago  COPY /app.zip /usr/share/nginx/html/assets/a_ 1.76MB    buildkit.dockerfile.v0
<missing>     5 weeks ago   /bin/sh -c #(nop) CMD ["nginx" "-g" "daemon_ 0B
<missing>     5 weeks ago   /bin/sh -c #(nop) STOPSIGNAL SIGQUIT         0B
<missing>     5 weeks ago   /bin/sh -c #(nop) EXPOSE 80                   0B
<missing>     5 weeks ago   /bin/sh -c #(nop) ENTRYPOINT ["/docker-entr_ 0B
<missing>     5 weeks ago   /bin/sh -c #(nop) COPY file:09a214a3e07c919a_ 4.61kB
<missing>     5 weeks ago   /bin/sh -c #(nop) COPY file:0fd5fca330dc6a7_ 1.04kB
<missing>     5 weeks ago   /bin/sh -c #(nop) COPY file:0b0866ff3fc1ef5b0_ 1.96kB
<missing>     5 weeks ago   /bin/sh -c #(nop) COPY file:65504f71f5855ca0_ 1.2kB
<missing>     5 weeks ago   /bin/sh -c set -x && addgroup -g 101 -S _ 17MB
<missing>     5 weeks ago   /bin/sh -c #(nop) ENV PKG_RELEASE=1          0B
<missing>     5 weeks ago   /bin/sh -c #(nop) ENV NJS_VERSION=0.5.3      0B
<missing>     5 weeks ago   /bin/sh -c #(nop) ENV NGINX_VERSION=1.19.10  0B
<missing>     5 weeks ago   /bin/sh -c #(nop) LABEL maintainer=NGINX Do_ 0B
<missing>     5 weeks ago   /bin/sh -c #(nop) CMD ["/bin/sh"]            0B
<missing>     5 weeks ago   /bin/sh -c #(nop) ADD file:8ec69d882e7f29f06_ 5.61MB
PS C:\Users\mareenaf>
```

Conclusion:

- Docker is an open-source platform that automates the deployment of applications inside software containers, by providing an additional layer of abstraction and automation of operating-system-level virtualization on Linux, Mac OS and Windows.
- Docker enables you to separate your applications from your infrastructure so you can deliver software quickly. With Docker, you can manage your infrastructure in the same ways you manage your applications.
- By taking advantage of Docker's methodologies for shipping, testing, and deploying code quickly, you can significantly reduce the delay between writing code and running it in production.

Post labs:

```
PS C:\Users\mareenaf> docker run -p 8080:8080 -p 50000:50000 jenkins/jenkins:lts
Unable to find image 'jenkins/jenkins:lts' locally
lts: Pulling from jenkins/jenkins
bd8f6a7501cc: Pull complete
12446dbb5de5: Pull complete
83885fb2a797: Pull complete
5327ffb154d4: Pull complete
fdada05ec229: Pull complete
92939f08f25f: Pull complete
590888de52a5: Pull complete
9f542aeal77f: Pull complete
cec192f98ca3: Pull complete
738ffebed3bf: Pull complete
29af40ed8126: Pull complete
5147346a547c: Pull complete
2876c11f9a52: Pull complete
321d79c28312: Pull complete
5d81e262a269: Pull complete
611d1b6054cd: Pull complete
Digest: sha256:3a441b1bcd2ce630b7bad3486e7972a8d107f25098a4a7c28b7f1a96d61742a6
Status: Downloaded newer image for jenkins/jenkins:lts
Running from /usr/share/jenkins/jenkins.war
webroot: EnvVars.masterEnvVars.get("JENKINS_HOME")
2021-05-20 06:25:19.519+0000 [id=1] INFO org.eclipse.jetty.util.log.Log#initialized: Logging initialized @302ms to org.eclipse.jetty.util.l
og.JavaUtilLog
2021-05-20 06:25:19.623+0000 [id=1] INFO winstone.Logger#logInternal: Beginning extraction from war file
2021-05-20 06:25:20.846+0000 [id=1] WARNING o.e.j.s.handler.ContextHandler#setContextPath: Empty contextPath
2021-05-20 06:25:20.900+0000 [id=1] INFO org.eclipse.jetty.server.Server#doStart: jetty-9.4.39.v20210325; built: 2021-03-25T14:42:11.471Z;
git: 9fc7ca5a922f2a37b84ec9dbc26a5168cee7e667; jvm 1.8.0_292-b10
2021-05-20 06:25:21.409+0000 [id=1] INFO o.e.j.u.StandardDescriptorProcessor#visitServlet: NO JSP Support for /, did not find org.eclipse.j
etty.jsp.JettyJspServlet
2021-05-20 06:25:21.452+0000 [id=1] INFO o.e.j.s.s.DefaultSessionIdManager#doStart: DefaultSessionIdManager workerName=node0
2021-05-20 06:25:21.452+0000 [id=1] INFO o.e.j.s.s.DefaultSessionIdManager#doStart: No SessionScavenger set, using defaults
2021-05-20 06:25:21.454+0000 [id=1] INFO o.e.j.server.session.HouseKeeper#startScavenging: node0 Scavenging every 60000ms
2021-05-20 06:25:22.207+0000 [id=1] INFO hudson.WebAppMain#contextInitialized: Jenkins home directory: /var/jenkins_home found at: EnvVars.
```

