



**School of Computer Science Engineering and Application**

**BCA TY SEM VI**

**Subject Name: Container and Orchestration Practical**

**Assignment No 6**

**Aim: Install Docker compose packate on docker then create and run multi-container applications using docker compose.**

**Submitted By**

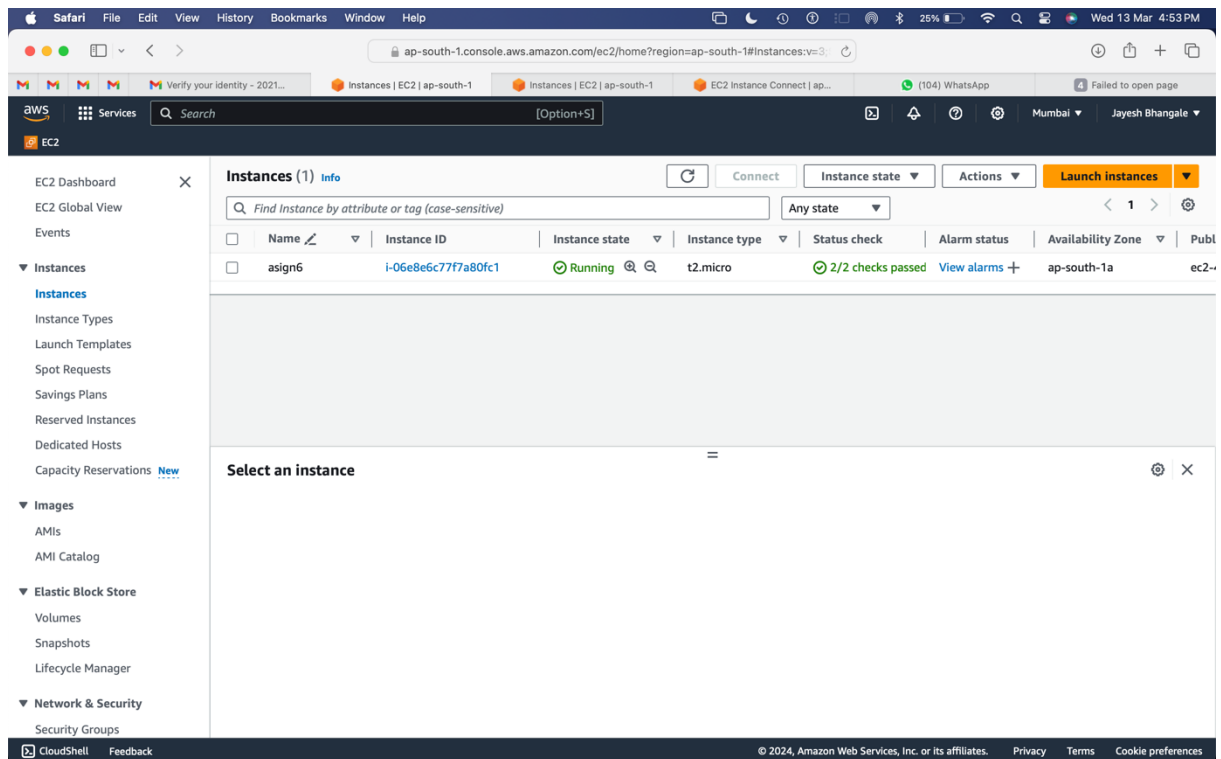
**Name: Jayesh Bhangale**

**PRN: 20210801024**

**Date: (06/03/2024)**

## Technology Used: Docker, Container, AWS

### Step 1: Create and instance and connect it:



### Step 2: Installing docker compose and its plugin manually.

- **curl -SL**  
**[https://github.com/docker/compose/releases/download/v2.24.6/docker](https://github.com/docker/compose/releases/download/v2.24.6/docker-compose-linux-x86_64)**  
**-compose-linux-x86\_64 -o /usr/local/bin/docker-compose**
- **chmod +x /usr/local/bin/docker-compose**
- **docker compose version**

Create a directory for the project and navigate to this directory.

- **mkdir composetest**
- **cd composetest**

Create a file called app.py in your project directory and write the required code.

Create another file called requirements.txt in your project directory and paste the following code:

- flask
- Redis

Now we have to create Dockerfile and configure it.

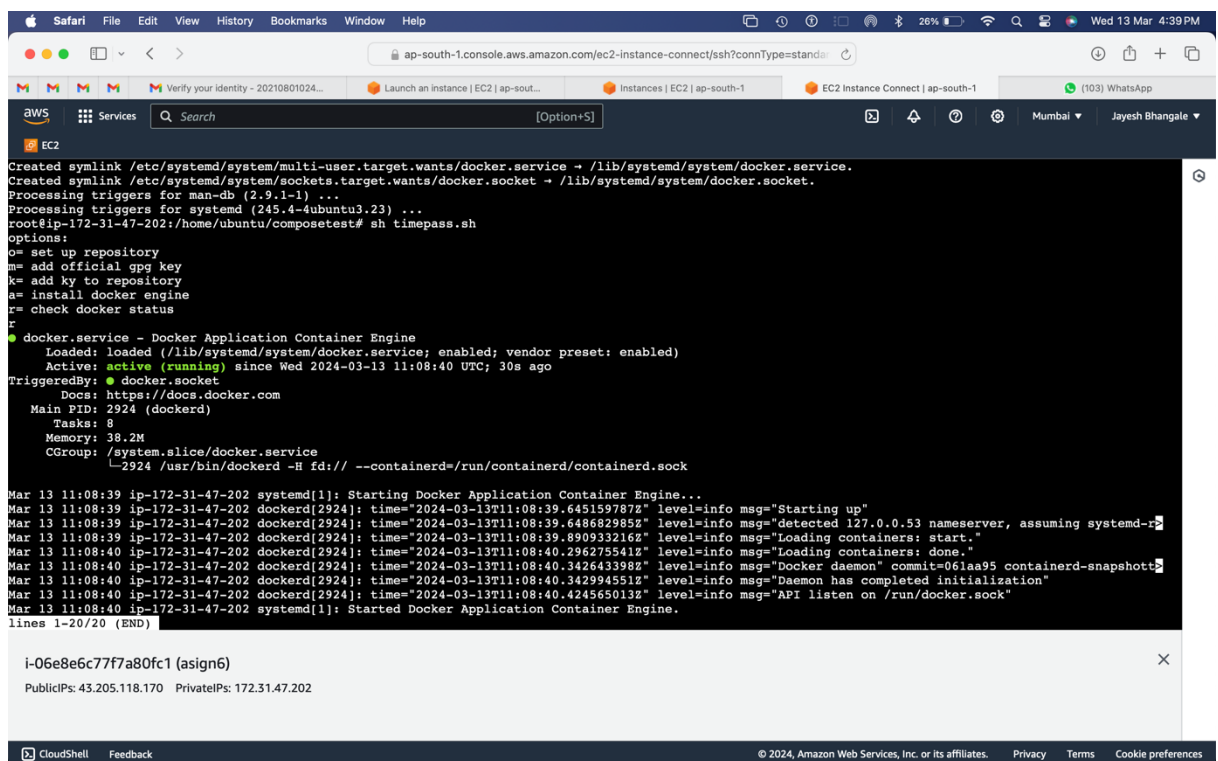
- Vim/nano Dockerfile

Now we have to create compose.yml and configure it.

- Vim/nano compose.yml

From your project directory, start up your application :

- Docker compose up



```
Created symlink /etc/systemd/system/multi-user.target.wants/docker.service → /lib/systemd/system/docker.service.
Created symlink /etc/systemd/system/sockets.target.wants/docker.socket → /lib/systemd/system/docker.socket.
Processing triggers for man-db (2.9.1-1) ...
Processing triggers for systemd (245.4-4ubuntu3.23) ...
root@ip-172-31-47-202:/home/ubuntu/composetest# sh timepass.sh
options:
o= set up repository
m= add official gpg key
k= add ky to repository
a= install docker engine
r= check docker status
r
* docker.service - Docker Application Container Engine
   Loaded: loaded (/lib/systemd/system/docker.service; enabled; vendor preset: enabled)
   Active: active (running) since Wed 2024-03-13 11:08:40 UTC; 30s ago
   TriggeredBy: ● docker.socket
   Docs: https://docs.docker.com
   Main PID: 2924 (dockerd)
   Tasks: 8
   Memory: 38.2M
   CGroup: /system.slice/docker.service
           └─2924 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock

Mar 13 11:08:39 ip-172-31-47-202 systemd[1]: Starting Docker Application Container Engine...
Mar 13 11:08:39 ip-172-31-47-202 dockerd[2924]: time="2024-03-13T11:08:39.645159787Z" level=info msg="Starting up"
Mar 13 11:08:39 ip-172-31-47-202 dockerd[2924]: time="2024-03-13T11:08:39.648682985Z" level=info msg="detected 127.0.0.53 nameserver, assuming systemd-r
Mar 13 11:08:39 ip-172-31-47-202 dockerd[2924]: time="2024-03-13T11:08:39.890933216Z" level=info msg="Loading containers: start."
Mar 13 11:08:39 ip-172-31-47-202 dockerd[2924]: time="2024-03-13T11:08:40.296275541Z" level=info msg="Loading containers: done."
Mar 13 11:08:40 ip-172-31-47-202 dockerd[2924]: time="2024-03-13T11:08:40.342643398Z" level=info msg="Docker daemon" commit=061aa95 containerd-snapshott
Mar 13 11:08:40 ip-172-31-47-202 dockerd[2924]: time="2024-03-13T11:08:40.424565013Z" level=info msg="Daemon has completed initialization"
Mar 13 11:08:40 ip-172-31-47-202 systemd[1]: Started Docker Application Container Engine.
lines 1-20/20 (END)
```

i-06e8e6c77f7a80fc1 (assign6)  
PublicIPs: 43.205.118.170 PrivateIPs: 172.31.47.202

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ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard

Verify your identity - 2021...Launch an instance | EC2 |...Instances | EC2 | ap-south-1EC2 Instance Connect | ap...104) WhatsAppFailed to open page

ServicesSearch[Option+S]

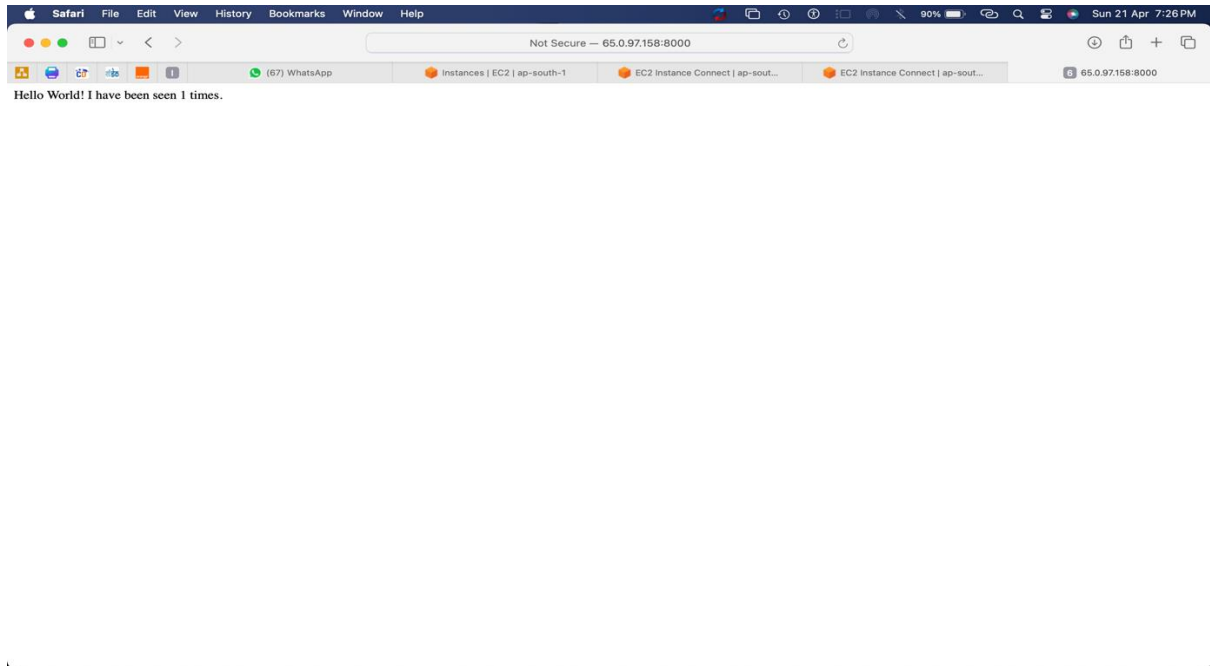
MumbaiJayesh Bhargale

```
aws
EC2
Mar 13 11:08:40 ip-172-31-47-202 dockerd[2924]: time="2024-03-13T11:08:40.342643398Z" level=info msg="Docker daemon" commit=061aa95 containerd-snapshott
Mar 13 11:08:40 ip-172-31-47-202 dockerd[2924]: time="2024-03-13T11:08:40.342994551Z" level=info msg="Daemon has completed initialization"
Mar 13 11:08:40 ip-172-31-47-202 dockerd[2924]: time="2024-03-13T11:08:40.424565013Z" level=info msg="API listen on /run/docker.sock"
Mar 13 11:08:40 ip-172-31-47-202 systemd[1]: Started Docker Application Container Engine.
root@ip-172-31-47-202:/home/ubuntu/composetest# docker compose up
[*] Running 9/9
redis 8 layers [#####] 0B/0B Pulled
  4abcf2066143 Pull complete 0.7s
  128c39a261ff Pull complete 0.7s
  f27432ce97d04 Pull complete 1.0s
  33486cc813b5 Pull complete 1.3s
  d29554ca490b Pull complete 1.6s
  2afe905a8615 Pull complete 1.7s
  4f4fe700e454 Pull complete 2.0s
  5cb59ee00f00 Pull complete 2.3s
[*] Building 14.7s (10/12) docker:default
[*] Building 17.8s (13/13) FINISHED docker:default
=> [web internal] load build definition from Dockerfile
=> => transferring dockerfile: 321B 0.0s
[web] resolve image config for docker.io/docker/dockerfile:1 2.3s
[web] docker-image://docker.io/docker/dockerfile:1sha256:ac85f380a63b13dfcfeaf89046420e1781752bab202122f8f50032edf31be0021 1.2s
=> resolve docker.io/docker/dockerfile:1sha256:ac85f380a63b13dfcfeaf89046420e1781752bab202122f8f50032edf31be0021 0.0s
=> sha256:657fcc152c7369f4cb394e4329150f8bdaf626cb38b1a0e1f1834c73ecc77e 482B / 482B 0.0s
=> sha256:ab79f45b48451647d9f528d54322ac6c11aa0a431b44bb89 1.27kB / 1.27kB 0.0s
=> sha256:93cf4b00be908ab694a4df732570bced3b8a96b7515d70ff93402179ad232 11.80MB / 11.80MB 0.7s
=> sha256:ac85f380a63b13dfcfeaf89046420e1781752bab202122f8f50032edf31be0021 8.40kB / 8.40kB 0.0s
=> extracting sha256:9d9c93f4b0b0be908ab694a4df732570bced3b8a96b7515d70ff93402179ad232 0.3s
[web internal] load metadata for docker.io/library/python:3.10-alpine 2.3s
[web internal] load .dockerignore 0.0s
=> transferring context: 2B 0.0s
[web 1/6] FROM docker.io/library/python:3.10-alpine@sha256:a84794f8f487847a49a6f92bc426f99b865d4c991344c682ce2c151a64c3d79b 2.0s
=> resolve docker.io/library/python:3.10-alpine@sha256:a84794f8f487847a49a6f92bc426f99b865d4c991344c682ce2c151a64c3d79b 0.0s
=> sha256:dca80dc46cccd1a97781addd6f74263b9d2f7b0dd3e2e15c109f5e34848c932 622.15kB / 622.15kB 0.3s
```

i-06e8e6c777f8a0fc1 (assign6)

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**End of the practical**

**Sign**

**Subject In charge**

**( Dr. Swapnil D. waghmare )**