Containerization, Docker, and Docker Hub

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SUBMITTED TO : MR. VIKUL SIR

BATCH NO. SA240931

DATE: 13/12/2024

L1 - Create Docker file and build the docker container Application Image for the application build in Jenkins Module

STEP 1 : LAUNCH EC2 INSTANCE

CONFIGURE THE INBOUND RULE(1312)

STEP 2: CONNECT INSTANCE

STEP 3: ADD GIT REPOSITIRY TO THE MACHINE

- Clone the repository

Git clone https://github.com/adesh8484/addressbook-cicd-project

- *Remove unneccesrory file*

(rm file name)

- *Apt update*
- *Apt install openjdk-17-jdk -y*
- *Apt install maven*
- *Mvn package*
- *Apt install docker.io*

STEP 4: CREATE DOCKER FILE

vi Dockerfile

[FROM tomcat:9

COPY target/.war /usr/local/tomcat/webapps/addressbook.war*

EXPOSE 8080

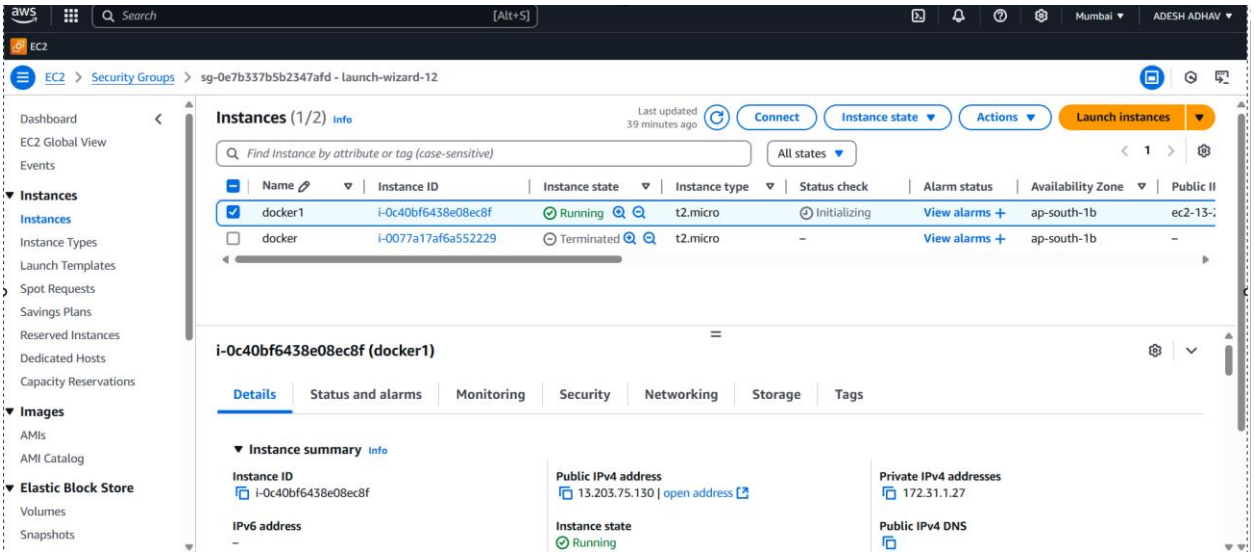
CMD ["catalina.sh","run"] }

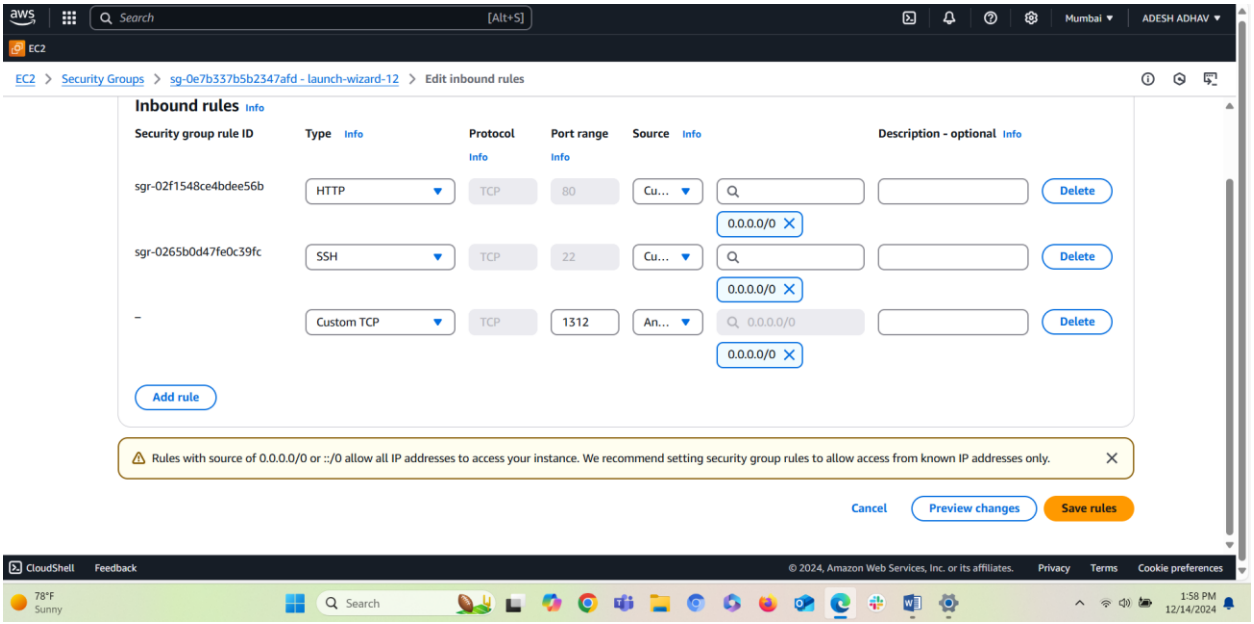
STEP 5: CREATE IMAGE

Docker build -t addressbook1

STEP 6: CRAETE CANTAINER

Docker run -it -p 1312:8080 addressbook1




Search [Alt+S]
Mumbai
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EC2
EC2 > Security Groups > sg-0e7b337b5b2347afd - launch-wizard-12 > Edit inbound rules
Inbound rules Info
Security group rule ID
Type Info
Protocol Info
Port range Info
Source Info
Description - optional Info
sgr-02f1548ce4bdee56b
HTTP
TCP
80
Cu...
0.0.0.0/0
Delete
sgr-0265b0d47fe0c39fc
SSH
TCP
22
Cu...
0.0.0.0/0
Delete
-
Custom TCP
TCP
1312
An...
0.0.0.0/0
0.0.0.0/0
Delete
Add rule
Rules with source of 0.0.0.0/0 or ::/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.
Cancel
Preview changes
Save rules
CloudShell
Feedback
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Sunny
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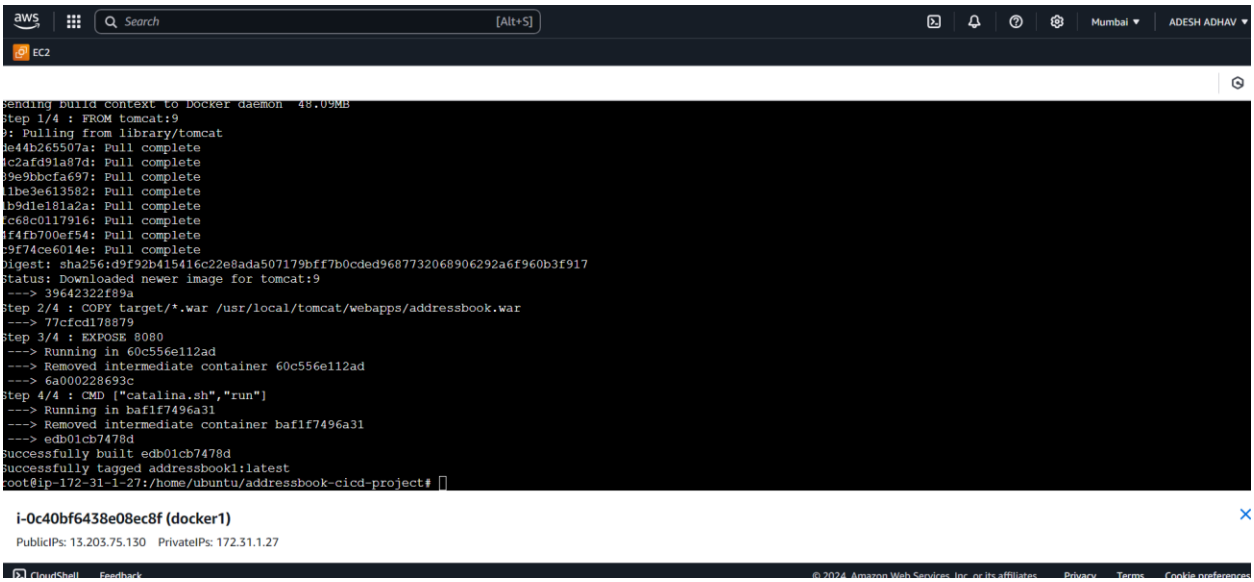
1:58 PM
12/14/2024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EC2
Sending build context to Docker daemon 48.09MB
Step 1/4 : FROM tomcat:9
9: Pulling from library/tomcat
de44b265507a: Pull complete
dc2afd91a87d: Pull complete
89e9bbcfa697: Pull complete
11be3e613582: Pull complete
1b9d1e181a2a: Pull complete
4c68c0117916: Pull complete
4f4fb700ef54: Pull complete
59f74ce6014e: Pull complete
Digest: sha256:d9f92b415416c22e8ada507179bff7b0cded9687732068906292a6f960b3f917
Status: Downloaded newer image for tomcat:9
---> 39642322f89a
Step 2/4 : COPY target/*.war /usr/local/tomcat/webapps/addressbook.war
---> 77cfcd178879
Step 3/4 : EXPOSE 8080
---> Running in 60c556e112ad
---> Removed intermediate container 60c556e112ad
---> 6a000228693c
Step 4/4 : CMD ["catalina.sh","run"]
---> Running in baf1f7496a31
---> Removed intermediate container baf1f7496a31
---> edb01cb7478d
Successfully built edb01cb7478d
Successfully tagged addressbook1:latest
root@ip-172-31-1-27:/home/ubuntu/addressbook-cicd-project#
i-0c40bf6438e08ec8f (docker1)
PublicIPs: 13.203.75.130 PrivateIPs: 172.31.1.27
CloudShell
Feedback
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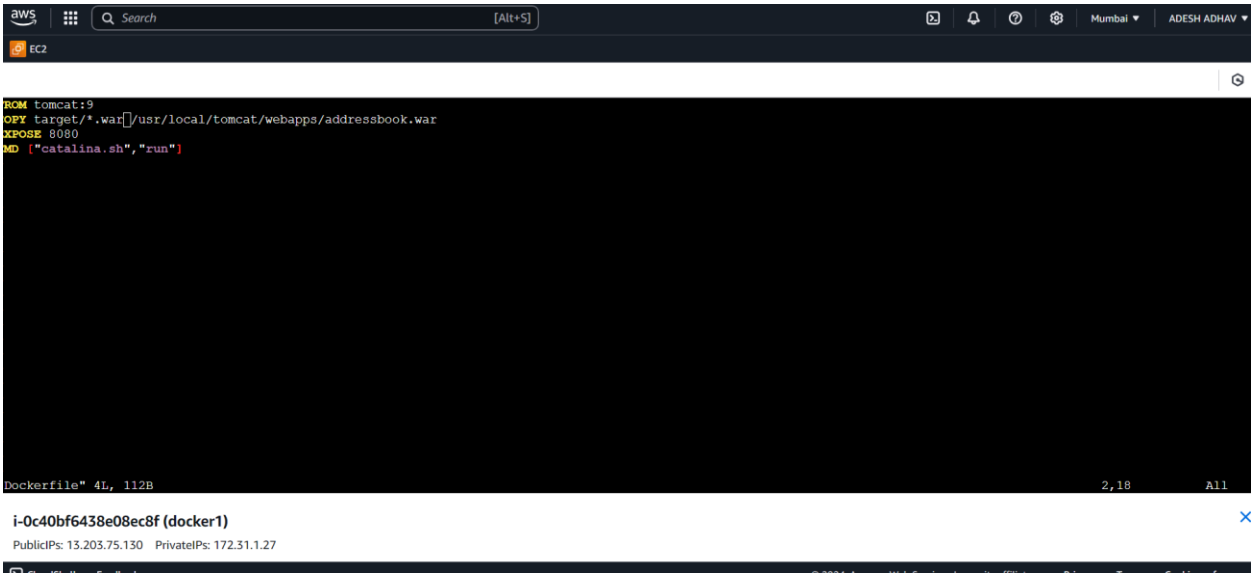
aws
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Mumbai
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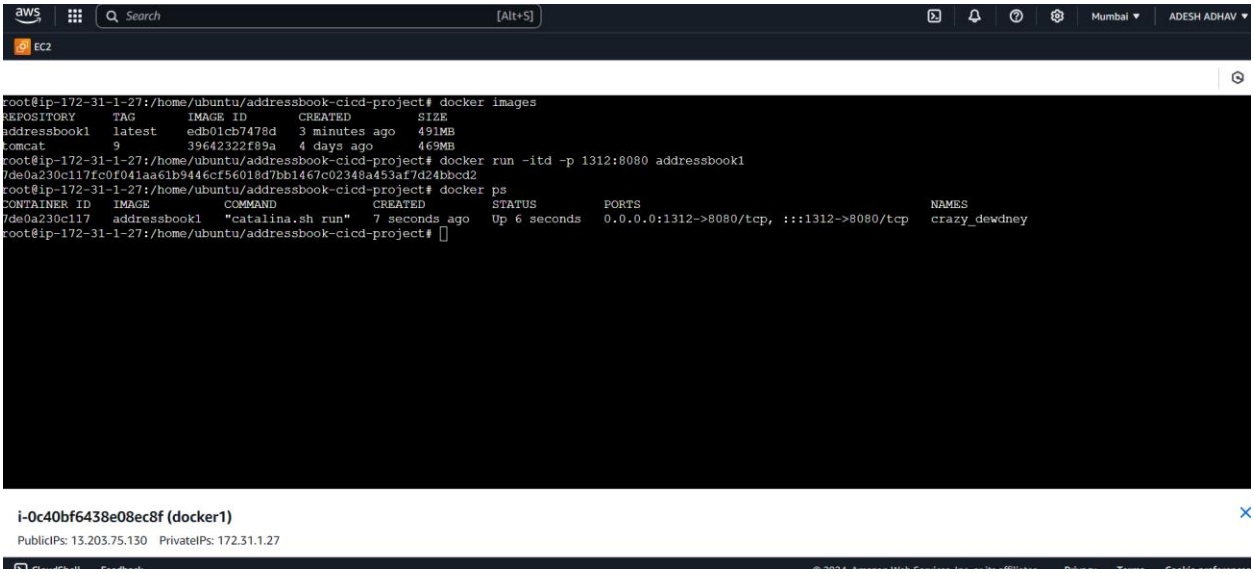
EC2
ROM tomcat:9
OPY target/*.war /usr/local/tomcat/webapps/addressbook.war
XPOSE 8080
MD ["catalina.sh","run"]
Dockerfile" 4L, 112B
2,18
All
i-0c40bf6438e08ec8f (docker1)
PublicIPs: 13.203.75.130 PrivateIPs: 172.31.1.27


aws
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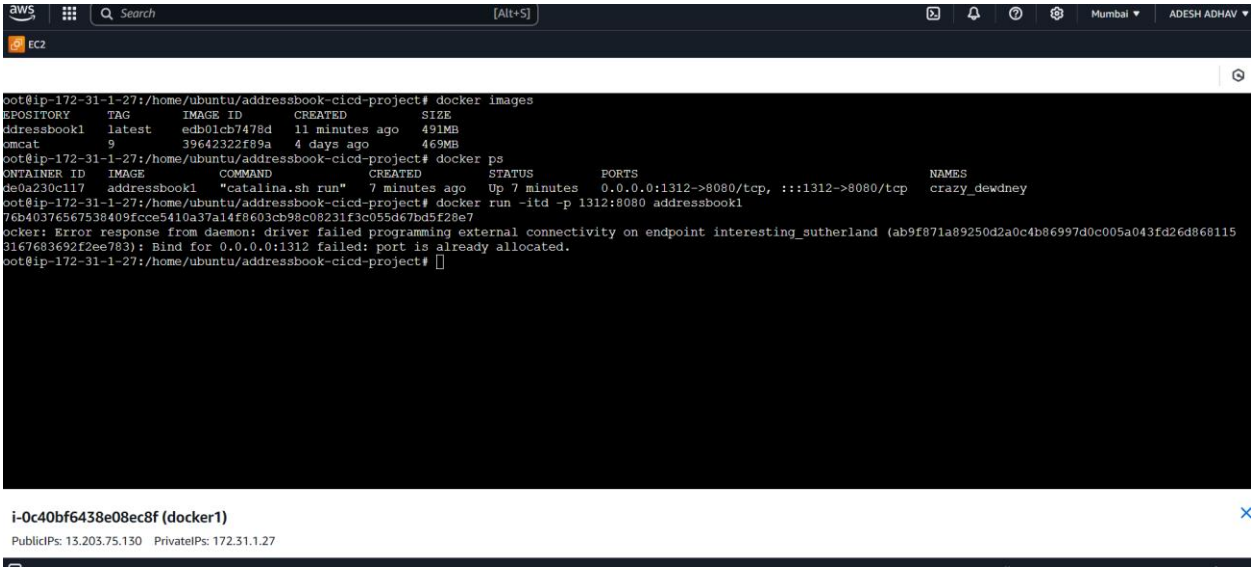
EC2
root@ip-172-31-1-27:/home/ubuntu/addressbook-cicd-project# docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
addressbook1 latest edb01cb7478d 3 minutes ago 491MB
tomcat 9 39642322f89a 4 days ago 469MB
root@ip-172-31-1-27:/home/ubuntu/addressbook-cicd-project# docker run -itd -p 1312:8080 addressbook1
7de0a230c117fc0f041aa61b9446cf56018d7bb1467c02348a453af7d24bbcd2
root@ip-172-31-1-27:/home/ubuntu/addressbook-cicd-project# docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
7de0a230c117 addressbook1 "catalina.sh run" 7 seconds ago Up 6 seconds 0.0.0.0:1312->8080/tcp, :::1312->8080/tcp crazy_dewdney
root@ip-172-31-1-27:/home/ubuntu/addressbook-cicd-project#
i-0c40bf6438e08ec8f (docker1)
PublicIPs: 13.203.75.130 PrivateIPs: 172.31.1.27


aws
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Mumbai
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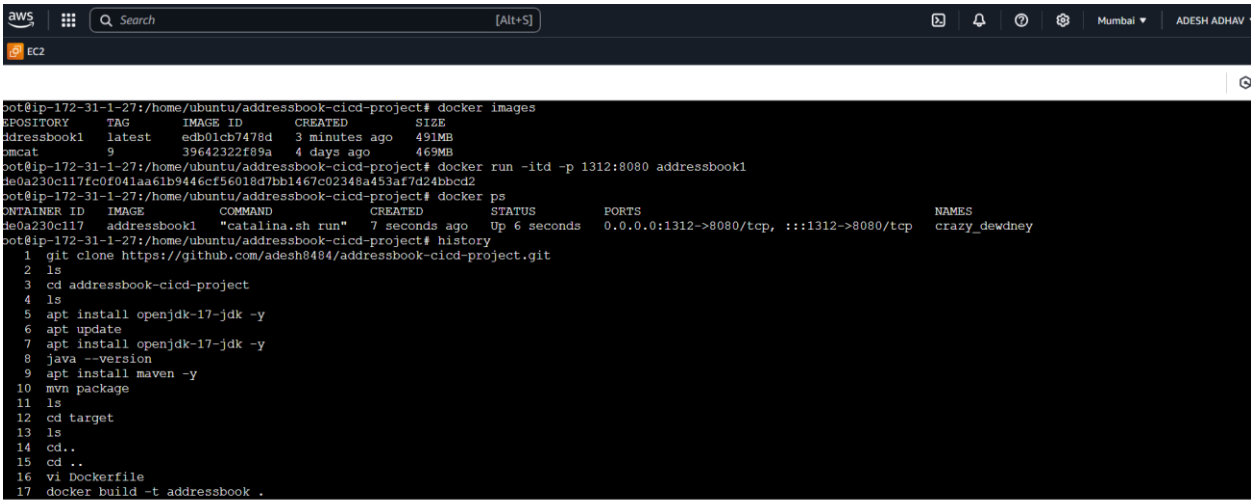
EC2
oot@ip-172-31-1-27:/home/ubuntu/addressbook-cicd-project# docker images
EPOSITORY TAG IMAGE ID CREATED SIZE
ddressbook1 latest edb01cb7478d 11 minutes ago 491MB
omcat 9 39642322f89a 4 days ago 469MB
oot@ip-172-31-1-27:/home/ubuntu/addressbook-cicd-project# docker ps
ONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
de0a230c117 addressbook1 "catalina.sh run" 7 minutes ago Up 7 minutes 0.0.0.0:1312->8080/tcp, :::1312->8080/tcp crazy_dewdney
oot@ip-172-31-1-27:/home/ubuntu/addressbook-cicd-project# docker run -itd -p 1312:8080 addressbook1
76b403765675384 09fcce5410a37a14f8603cb98c08231f3c055d67bd5f28e7
ocker: Error response from daemon: driver failed programming external connectivity on endpoint interesting_sutherland (ab9f871a89250d2a0c4b86997d0c005a043fd26d868115
8167683692f2ee783): Bind for 0.0.0.0:1312 failed: port is already allocated.
oot@ip-172-31-1-27:/home/ubuntu/addressbook-cicd-project#
i-0c40bf6438e08ec8f (docker1)
PublicIPs: 13.203.75.130 PrivateIPs: 172.31.1.27


aws
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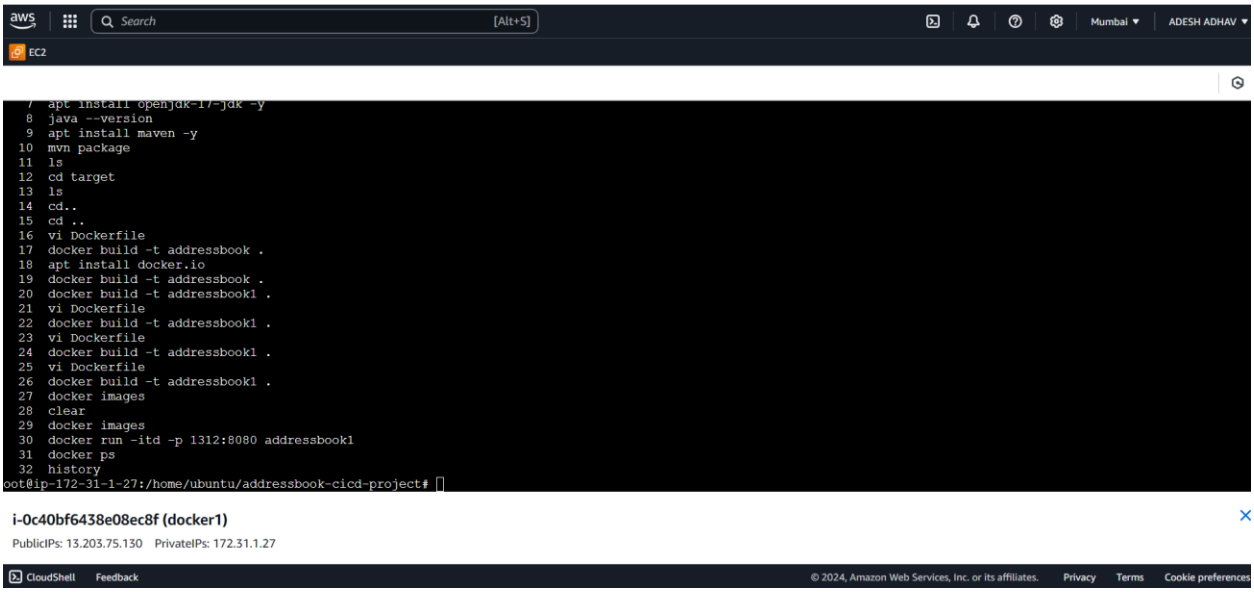
Mumbai
ADESH ADHAV
EC2
oot@ip-172-31-1-27:/home/ubuntu/addressbook-cicd-project# docker images
EPOSITORY TAG IMAGE ID CREATED SIZE
ddressbook1 latest edb01cb7478d 3 minutes ago 491MB
omcat 9 39642322f89a 4 days ago 469MB
oot@ip-172-31-1-27:/home/ubuntu/addressbook-cicd-project# docker run -itd -p 1312:8080 addressbook1
de0a230c117fc0f041aa61b9446cf56018d7bb1467c02348a453af7d24bbcd2
oot@ip-172-31-1-27:/home/ubuntu/addressbook-cicd-project# docker ps
ONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
de0a230c117 addressbook1 "catalina.sh run" 7 seconds ago Up 6 seconds 0.0.0.0:1312->8080/tcp, :::1312->8080/tcp crazy_dewdney
oot@ip-172-31-1-27:/home/ubuntu/addressbook-cicd-project# history
1 git clone https://github.com/adesh8484/addressbook-cicd-project.git
2 ls
3 cd addressbook-cicd-project
4 ls
5 apt install openjdk-17-jdk -y
6 apt update
7 apt install openjdk-17-jdk -y
8 java --version
9 apt install maven -y
10 mvn package
11 ls
12 cd target
13 ls
14 cd..
15 cd ..
16 vi Dockerfile
17 docker build -t addressbook .
i-0c40bf6438e08ec8f (docker1)
PublicIPs: 13.203.75.130 PrivateIPs: 172.31.1.27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EC2
7 apt install openjdk-17-jdk -y
8 java --version
9 apt install maven -y
10 mvn package
11 ls
12 cd target
13 ls
14 cd..
15 cd ..
16 vi Dockerfile
17 docker build -t addressbook .
18 apt install docker.io
19 docker build -t addressbook .
20 docker build -t addressbook1 .
21 vi Dockerfile
22 docker build -t addressbook1 .
23 vi Dockerfile
24 docker build -t addressbook1 .
25 vi Dockerfile
26 docker build -t addressbook1 .
27 docker images
28 clear
29 docker images
30 docker run -itd -p 1312:8080 addressbook1
31 docker ps
32 history
oot@ip-172-31-1-27:/home/ubuntu/addressbook-cicd-project#
i-0c40bf6438e08ec8f (docker1)
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