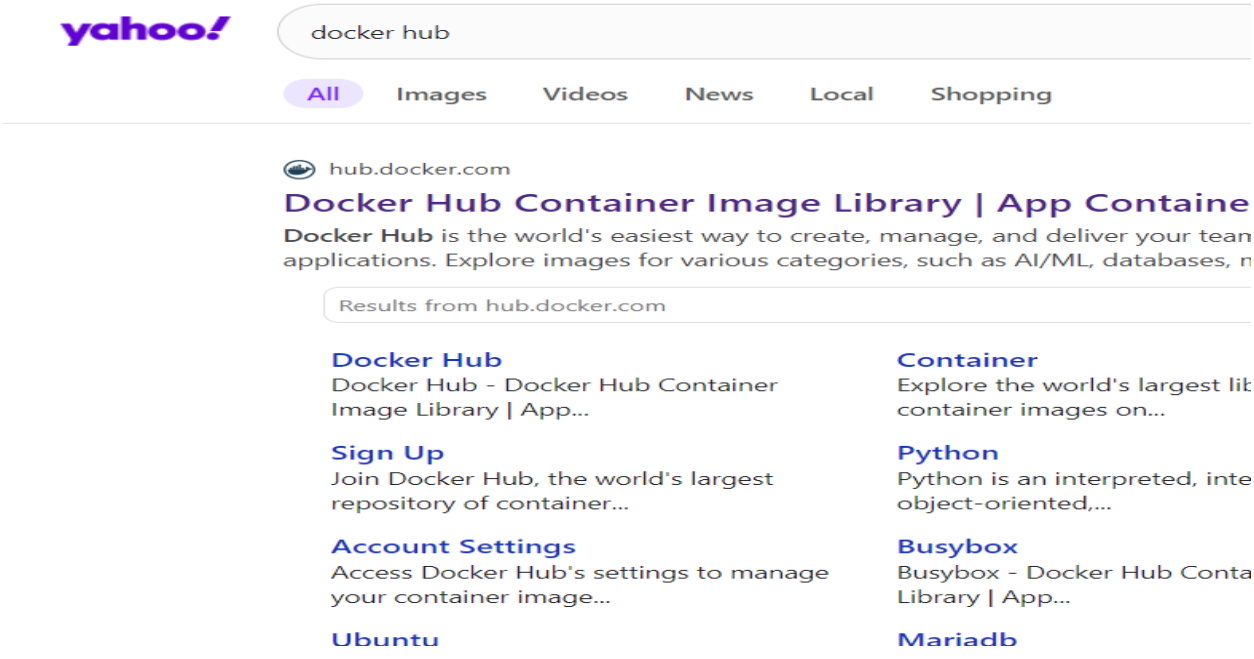
Date :- 22/07/24

Assignment – 1

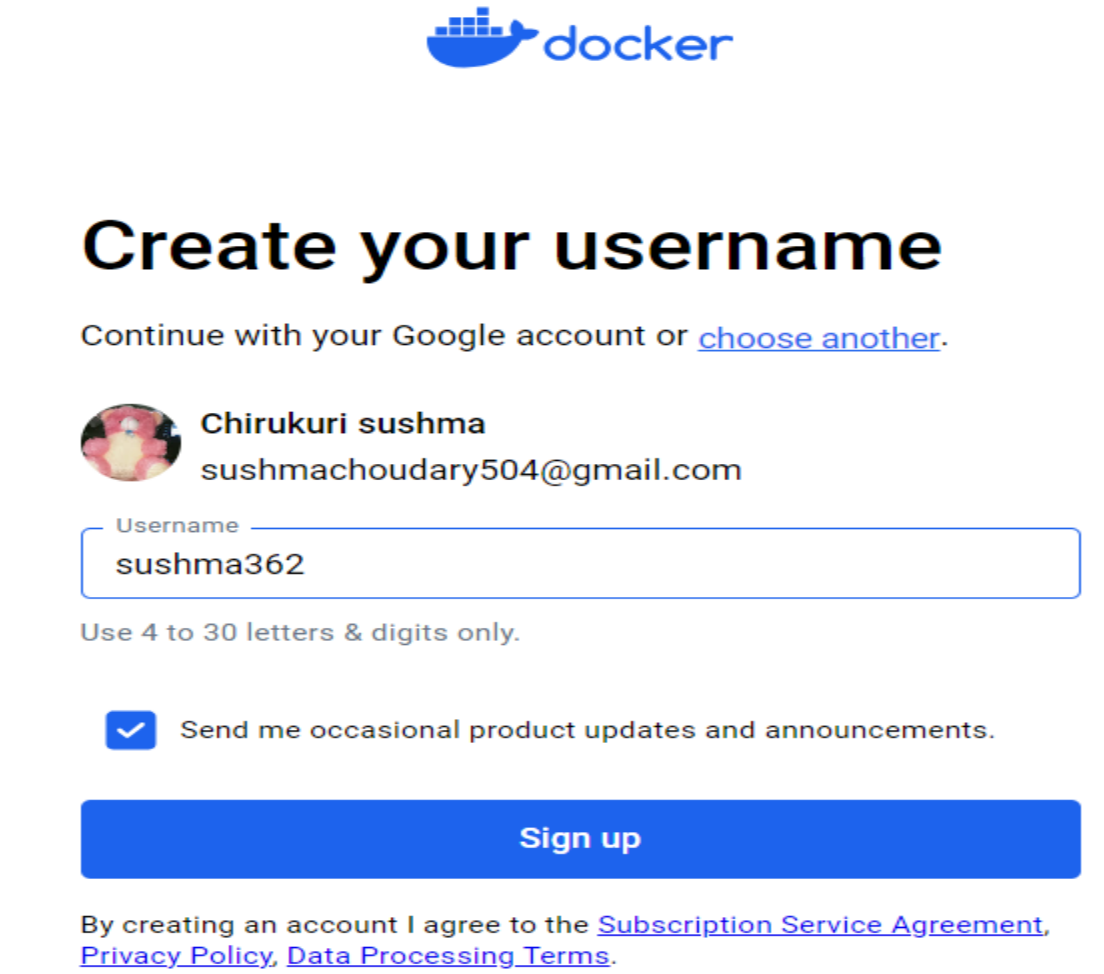
Docker Assignment

Docker hub create and login

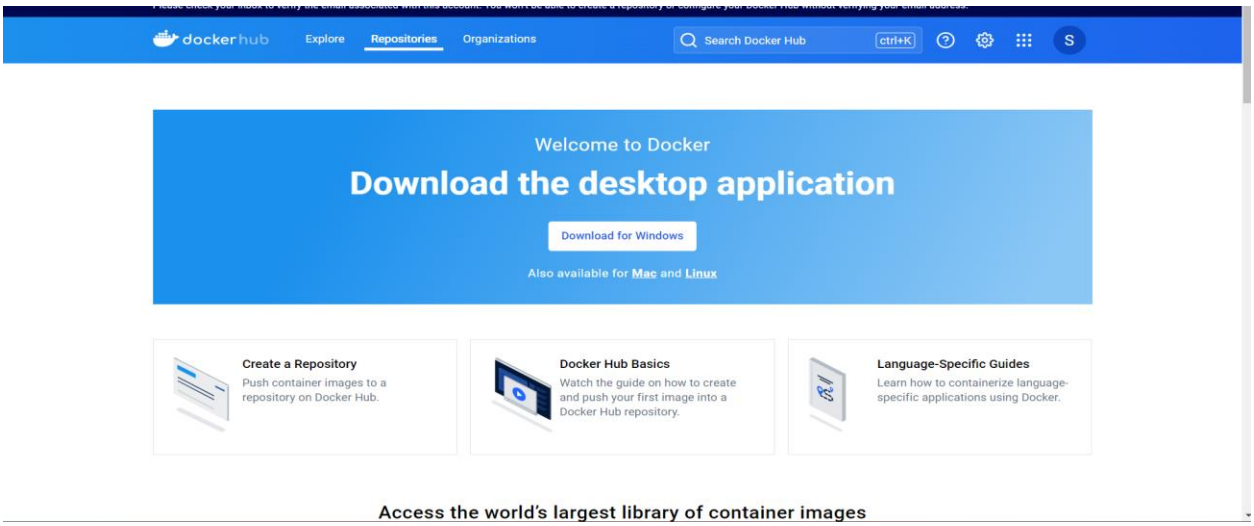
Step 1 : - Open google and search docker hub and click on docker hub container image libaray .



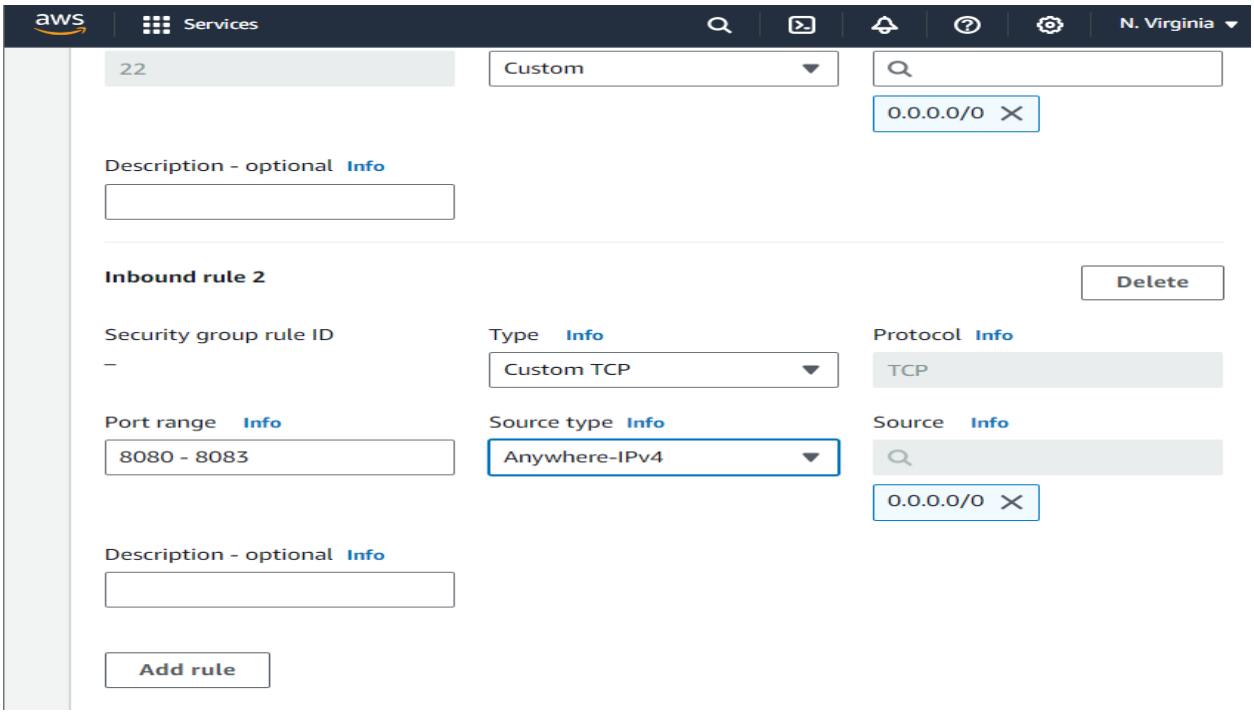
Step 2 :- And create a sign up and create a login



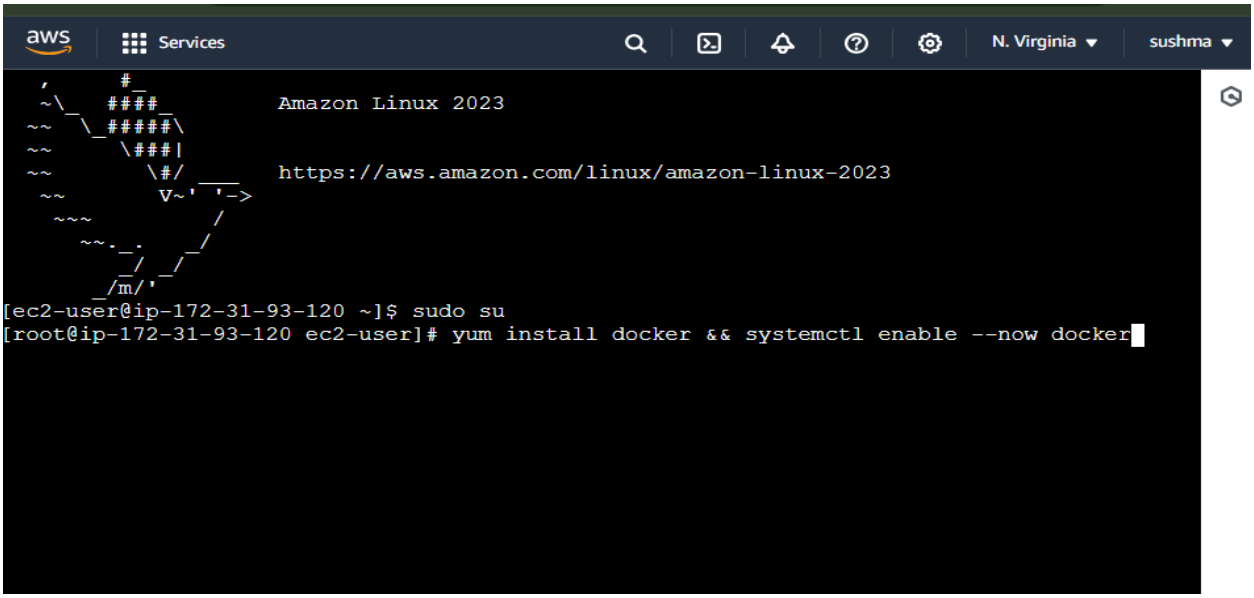
Step 3 :- it will open docker account and login docker hub account



Step 4 : -- and create a instance and change port number 8080 to 8083. Go to security choose launch wizaed -20 and select edit inbound rules and click on add rule change port number ..

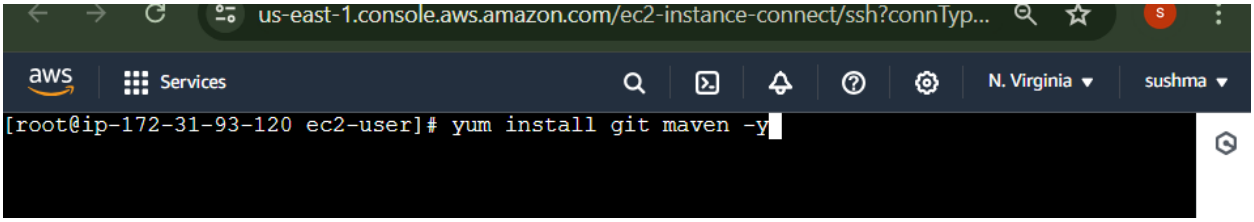


Step 5 :- Connect EC2 instance and download docker to enable this use command :- yum install docker && systemctl enable-now docker



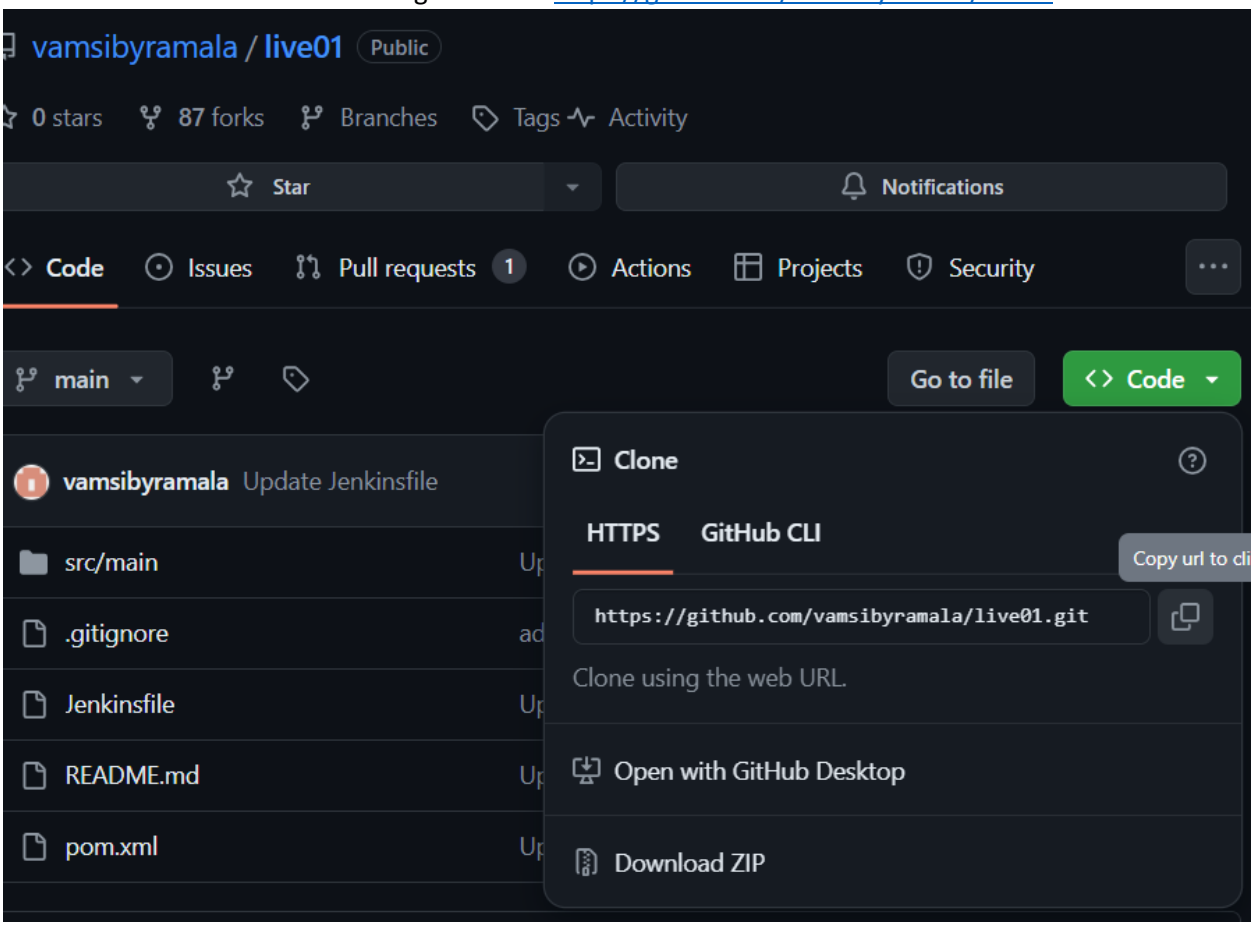
```
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing        :                                                        1/1
  Installing       : runc-1.1.11-1.amzn2023.0.1.x86_64                     1/10
  Installing       : containerd-1.7.11-1.amzn2023.0.1.x86_64               2/10
  Running scriptlet: containerd-1.7.11-1.amzn2023.0.1.x86_64               2/10
  Installing       : pigz-2.5-1.amzn2023.0.3.x86_64                        3/10
  Installing       : libnftnl-1.2.2-2.amzn2023.0.2.x86_64                  4/10
  Installing       : libnfnetlink-1.0.1-19.amzn2023.0.2.x86_64             5/10
  Installing       : libnetfilter_conntrack-1.0.8-2.amzn2023.0.2.x86_64    6/10
  Installing       : iptables-libs-1.8.8-3.amzn2023.0.2.x86_64             7/10
  Installing       : iptables-nft-1.8.8-3.amzn2023.0.2.x86_64              8/10
  Running scriptlet: iptables-nft-1.8.8-3.amzn2023.0.2.x86_64              8/10
  Installing       : libcgroup-3.0-1.amzn2023.0.1.x86_64                   9/10
  Running scriptlet: docker-25.0.3-1.amzn2023.0.2.x86_64                  10/10
  Installing       : docker-25.0.3-1.amzn2023.0.2.x86_64                  10/10
  Running scriptlet: docker-25.0.3-1.amzn2023.0.2.x86_64                  10/10
Created symlink /etc/systemd/system/sockets.target.wants/docker.socket → /usr/lib/system
d/system/docker.socket.

  Verifying        : containerd-1.7.11-1.amzn2023.0.1.x86_64               1/10
  Verifying        : docker-25.0.3-1.amzn2023.0.2.x86_64                   2/10
  Verifying        : iptables-libs-1.8.8-3.amzn2023.0.2.x86_64             3/10
  Verifying        : iptables-nft-1.8.8-3.amzn2023.0.2.x86_64              4/10
  Verifying        : libcgroup-3.0-1.amzn2023.0.1.x86_64                   5/10
  Verifying        : libnetfilter_conntrack-1.0.8-2.amzn2023.0.2.x86_64    6/10
  Verifying        : libnfnetlink-1.0.1-19.amzn2023.0.2.x86_64             7/10
  Verifying        : libnftnl-1.2.2-2.amzn2023.0.2.x86_64                  8/10
  Verifying        : pigz-2.5-1.amzn2023.0.3.x86_64                        9/10
  Verifying        : runc-1.1.11-1.amzn2023.0.1.x86_64                    10/10
```

Step 6 :- next install git and maven also the command is :- yum install git maven -y

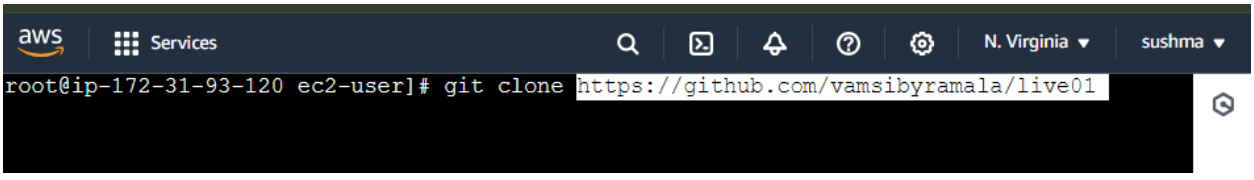


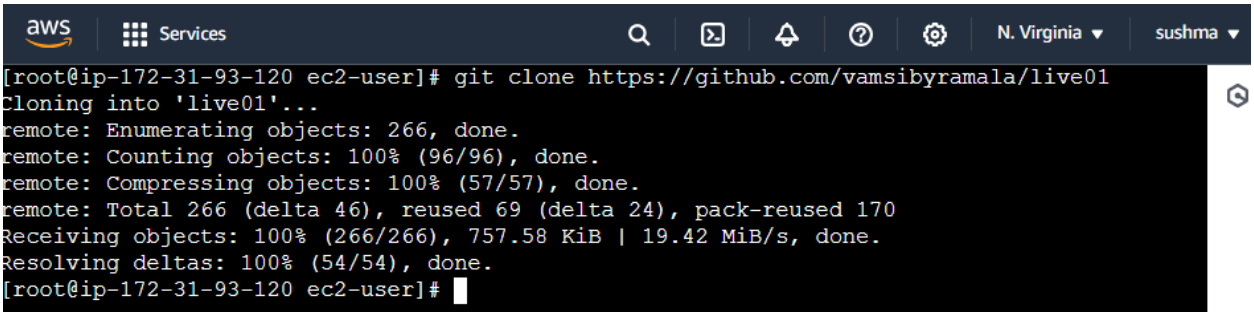

```
 libX11-common-1.7.2-3.amzn2023.0.4.noarch
 libXau-1.0.9-6.amzn2023.0.2.x86_64
 libXext-1.3.4-6.amzn2023.0.2.x86_64
 libXrender-0.9.10-14.amzn2023.0.2.x86_64
 libbrotli-1.0.9-4.amzn2023.0.2.x86_64
 libjpeg-turbo-2.1.4-2.amzn2023.0.5.x86_64
 libpng-2:1.6.37-10.amzn2023.0.6.x86_64
 libxcb-1.13.1-7.amzn2023.0.2.x86_64
 maven-1:3.8.4-3.amzn2023.0.5.noarch
 maven-amazon-corretto17-1:3.8.4-3.amzn2023.0.5.noarch
 maven-lib-1:3.8.4-3.amzn2023.0.5.noarch
 maven-resolver-1:1.7.3-3.amzn2023.0.4.noarch
 maven-shared-utils-3.3.4-4.amzn2023.0.3.noarch
 maven-wagon-3.4.2-6.amzn2023.0.4.noarch
 perl-Error-1:0.17029-5.amzn2023.0.2.noarch
 perl-File-Find-1.37-477.amzn2023.0.6.noarch
 perl-Git-2.40.1-1.amzn2023.0.3.noarch
 perl-TermReadKey-2.38-9.amzn2023.0.2.x86_64
 perl-lib-0.65-477.amzn2023.0.6.x86_64
 pixman-0.40.0-3.amzn2023.0.3.x86_64
 plexus-cipher-1.8-3.amzn2023.0.3.noarch
 plexus-classworlds-2.6.0-10.amzn2023.0.4.noarch
 plexus-containers-component-annotations-2.1.0-9.amzn2023.0.4.noarch
 plexus-interpolation-1.26-10.amzn2023.0.4.noarch
 plexus-sec-dispatcher-2.0-3.amzn2023.0.3.noarch
 plexus-utils-3.3.0-9.amzn2023.0.4.noarch
 publicsuffix-list-20240212-61.amzn2023.noarch
 sisu-1:0.3.4-9.amzn2023.0.4.noarch
 slf4j-1.7.32-3.amzn2023.0.4.noarch
 xml-common-0.6.3-56.amzn2023.0.2.noarch

omplete!
root@ip-172-31-93-120 ec2-user]#
```

Step 7 :- Next open the github account and select the project and open the source code and copy the web URL. I choose the choose using the URL https://github.com/vamsibyramala/live01



Step 8 :- next go to amazon linux and we have to run the command : git clone https://github.com/vamsibyramala/live01





Step 9 :- We have to run the tomcat server docker command : docker run -d tomcat

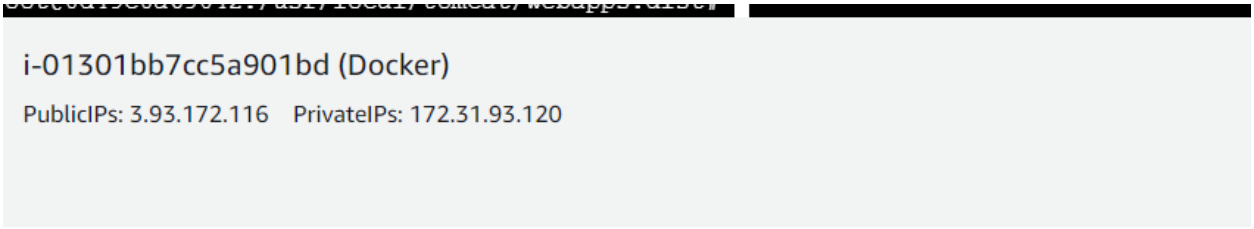
And to list the command : docker ps and we have to copy the container ID or name

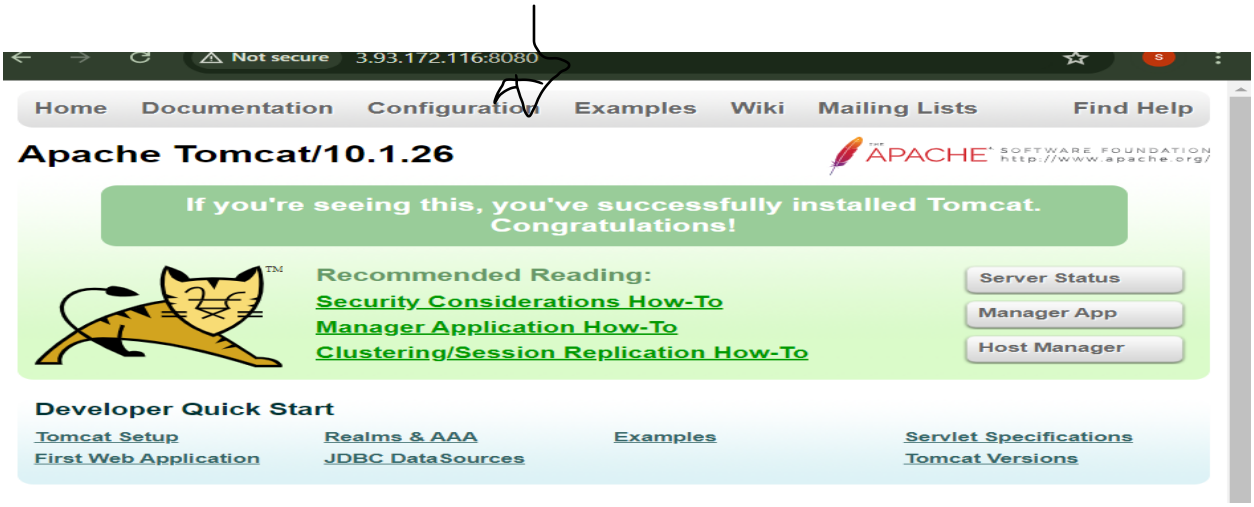
```
[root@ip-172-31-93-120 ec2-user]# docker run -d tomcat
Unable to find image 'tomcat:latest' locally
latest: Pulling from library/tomcat
9b857f539cb1: Pull complete
0ff50609e3ed: Pull complete
3ec0d02fe661: Pull complete
b0d053b8dd8b: Pull complete
b05b6f2f8269: Pull complete
348c7b20cdd3: Pull complete
4f4fb700ef54: Pull complete
0d211925efa0: Pull complete
Digest: sha256:8b677dabf8609f0870803eef736dfee6dfac113a29cb9e52559e0a227fd7c904
Status: Downloaded newer image for tomcat:latest
7273d31d777245dc0e71bc9835ff82ecf469b7c776c93a8c4c24a6892cf731b9
[root@ip-172-31-93-120 ec2-user]# docker -ps
unknown shorthand flag: 'p' in -ps
See 'docker --help'.

Usage:  docker [OPTIONS] COMMAND

A self-sufficient runtime for containers

Common Commands:
  run         Create and run a new container from an image
  exec        Execute a command in a running container
  ps          List containers
  build       Build an image from a Dockerfile
  pull        Download an image from a registry
  push        Upload an image to a registry
  images      List images
  login       Log in to a registry
  logout      Log out from a registry
  search      Search Docker Hub for images
```

Step 10 :- next we have to run the command docker exec -it container ID bash and after tomcat server command **:- docker run -dp 8080:8083 tomcat** and next ls webapps , we have to **ls** the commands and we have to go back **cd ../webapps.dist/,** again we have to **ls** the commands and now we have to copy the public IP address and search in google with Ip address and port number ..

```
Run 'docker COMMAND --help' for more information on a command.

For more help on how to use Docker, head to https://docs.docker.com/go/guides/

[root@ip-172-31-93-120 ec2-user]# docker ps
CONTAINER ID   IMAGE     COMMAND             CREATED              STATUS              PO
RTS       NAMES
7273d31d7772   tomcat    "catalina.sh run"   About a minute ago   Up About a minute   80
80/tcp    agitated_knuth
[root@ip-172-31-93-120 ec2-user]# docker rm -f 7273d31d7772
7273d31d7772
[root@ip-172-31-93-120 ec2-user]# docker run -d -p 8080:8080 tomcat
0d49c0a6904205f1279aefedac12c86d52bb1ed9f65e205ed2a4f6ce5fbfc5b1
[root@ip-172-31-93-120 ec2-user]# docker ps
CONTAINER ID   IMAGE     COMMAND             CREATED          STATUS          PORTS
                NAMES
0d49c0a69042   tomcat    "catalina.sh run"   12 seconds ago   Up 12 seconds   0.0.0.0:80
80->8080/tcp, :::8080->8080/tcp   exciting_haslett
[root@ip-172-31-93-120 ec2-user]# ls
live01
[root@ip-172-31-93-120 ec2-user]# docker exec -it 0d49c0a69042 bash
root@0d49c0a69042:/usr/local/tomcat# ls
bin           CONTRIBUTING.md  logs            README.md      temp  work
BUILDING.txt  lib              native-jni-lib  RELEASE-NOTES  webapps
conf          LICENSE          NOTICE          RUNNING.txt    webapps.dist
root@0d49c0a69042:/usr/local/tomcat# cd webapps
root@0d49c0a69042:/usr/local/tomcat/webapps# ls
root@0d49c0a69042:/usr/local/tomcat/webapps# cd ../webapps.dist/
root@0d49c0a69042:/usr/local/tomcat/webapps.dist# ls
docs  examples  host-manager  manager  ROOT
root@0d49c0a69042:/usr/local/tomcat/webapps.dist# cp -r * ../webapps/
root@0d49c0a69042:/usr/local/tomcat/webapps.dist# docker ps
```

Step 11 . here is the public IP address 3.93.172.116 : 8080 port number paste this in google we will get tomcat server page ..




Not secure
3.93.172.116:8080
Home
Documentation
Configuration
Examples
Wiki
Mailing Lists
Find Help
Apache Tomcat/10.1.26
APACHE SOFTWARE FOUNDATION http://www.apache.org/
If you're seeing this, you've successfully installed Tomcat. Congratulations!
Recommended Reading:
Security Considerations How-To
Manager Application How-To
Clustering/Session Replication How-To
Server Status
Manager App
Host Manager
Developer Quick Start
Tomcat Setup
First Web Application
Realms & AAA
JDBC DataSources
Examples
Servlet Specifications
Tomcat Versions