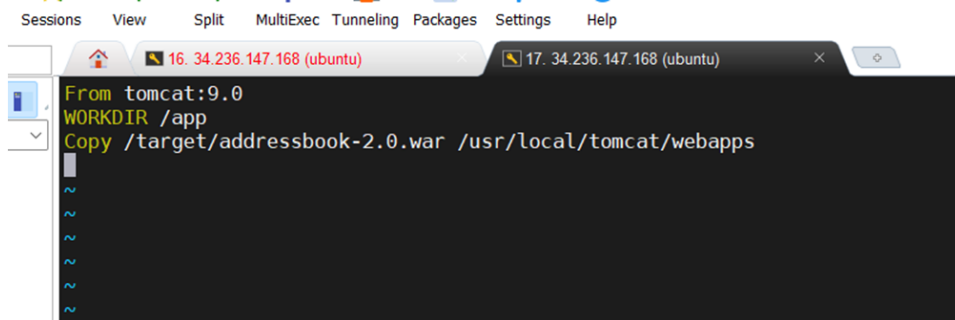Assignment -1

```
Last login: Tue Jan 23 18:46:03 2024 from 49.36.57.44
ubuntu@ip-172-31-18-21:~$ sudo -i
root@ip-172-31-18-21:~# sudo -i
root@ip-172-31-18-21:~# vi Dockerfile
root@ip-172-31-18-21:~# mkdir Docker.test
root@ip-172-31-18-21:~# cd Docker.test/
root@ip-172-31-18-21:~/Docker.test# git clone https://github.com/vaadin/addressbook.
Cloning into 'addressbook'...
remote: Enumerating objects: 1077, done.
remote: Total 1077 (delta 0), reused 0 (delta 0), pack-reused 1077
Receiving objects: 100% (1077/1077), 237.50 KiB | 11.88 MiB/s, done.
Resolving deltas: 100% (241/241), done.
root@ip-172-31-18-21:~/Docker.test# ls
addressbook
root@ip-172-31-18-21:~/Docker.test#
```

```
addressbook
root@ip-172-31-18-21:~/Docker.test# cd addressbook/
root@ip-172-31-18-21:~/Docker.test/addressbook# ls
README.md   addressbook_screenshot.png   pom.xml   src
root@ip-172-31-18-21:~/Docker.test/addressbook# mvn install
[INFO] Scanning for projects...
[INFO]
[INFO] ----------------< com.vaadin.tutorial:addressbook >----------------
```

Sessions    View    Split    MultiExec  Tunneling  Packages  Settings    Help

16. 34.236.147.168 (ubuntu)          17. 34.236.147.168 (ubuntu)

```
From tomcat:9.0
WORKDIR /app
Copy /target/addressbook-2.0.war /usr/local/tomcat/webapps

~
~
~
~
~
~
```

```
root@ip-172-31-18-21:~# cd Docker.test/
root@ip-172-31-18-21:~/Docker.test# cd addressbook/
root@ip-172-31-18-21:~/Docker.test/addressbook# ls
Dockerfile  README.md  addressbook_screenshot.png  pom.xml  src  target
root@ip-172-31-18-21:~/Docker.test/addressbook# vi Dockerfile
root@ip-172-31-18-21:~/Docker.test/addressbook# docker build -t somajoshi/newaddressbook .
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
            Install the buildx component to build images with BuildKit:
            https://docs.docker.com/go/buildx/

Sending build context to Docker daemon  29.73MB
Step 1/3 : From tomcat:9.0
 ---> 2ca29d5b0b76
Step 2/3 : WORKDIR /app
 ---> Using cache
 ---> 191eaec77292
Step 3/3 : Copy /target/addressbook-2.0.war /usr/local/tomcat/webapps
 ---> Using cache
 ---> b10c1a8dd10a
Successfully built b10c1a8dd10a
Successfully tagged somajoshi/newaddressbook:latest
```

```
root@ip-172-31-18-21:~/Docker.test/addressbook/target# cd ..
root@ip-172-31-18-21:~/Docker.test/addressbook# docker images
REPOSITORY                TAG        IMAGE ID       CREATED         SIZE
somajoshi/newaddressbook  latest     b10c1a8dd10a   18 hours ago    470MB
<none>                    <none>     c24927089eee   19 hours ago    356MB
tomcat                    9.0        2ca29d5b0b76   39 hours ago    455MB
debian                    latest     a6916e41aa87   13 days ago     117MB
hello-world               latest     d2c94e258dcb   8 months ago    13.3kB
tomcat                    8.0        ef6a7c98d192   5 years ago     356MB
```

```
root@ip-172-31-18-21:~/Docker.test/addressbook# docker run -d -p 8087:8080 somajoshi/newaddressbook
39da6c26229fdc734ba75b570d2402e3110f05c19be3c9e5984de478b9b2884
root@ip-172-31-18-21:~/Docker.test/addressbook# docker ps
CONTAINER ID   IMAGE                      COMMAND            CREATED          STATUS          PORTS                                          NAMES
39da6c26229    somajoshi/newaddressbook   "catalina.sh run"  17 seconds ago   Up 15 seconds   0.0.0.0:8087->8080/tcp, :::8087->8080/tcp      frosty_lovelace
d2d63de1295    somajoshi/newaddressbook   "catalina.sh run"  58 minutes ago   Up 57 minutes   0.0.0.0:8088->8080/tcp, :::8088->8080/tcp      crazy_kowalevski
root@ip-172-31-18-21:~/Docker.test/addressbook#
```

```
root@ip-172-31-18-21:~/Docker.test/addressbook# docker push somajoshi/newaddressbook
Using default tag: latest
The push refers to repository [docker.io/somajoshi/newaddressbook]
8ef75c2dd3de: Mounted from somajoshi/addressbook4
bf3ee817d00b: Mounted from somajoshi/addressbook4
1960c2d0ab03: Mounted from somajoshi/addressbook4
3188359ec748: Mounted from somajoshi/addressbook4
f9eb9a1ec146: Mounted from somajoshi/addressbook4
35114f45a20f: Mounted from somajoshi/addressbook4
d676e29d25eb: Mounted from somajoshi/addressbook4
c67d95bae387: Mounted from somajoshi/addressbook4
d2210512edb4: Mounted from somajoshi/addressbook4
8e87ff28f1b5: Mounted from somajoshi/addressbook4
latest: digest: sha256:dc969f90dc84c05e4e1f744dd356b11672fc6d0afa82cb631337b72aedfefe28 size: 2413
root@ip-172-31-18-21:~/Docker.test/addressbook#
```
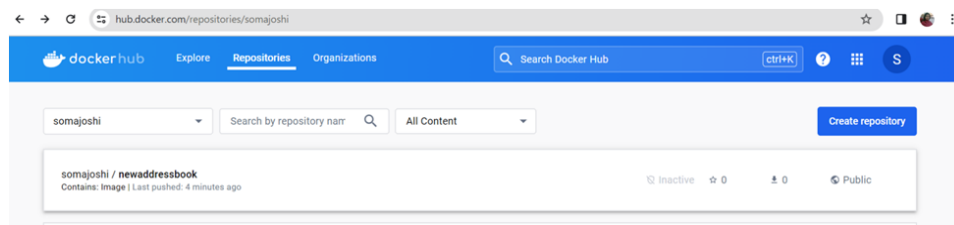
```
8e87ff28f1b5: Mounted from somajoshi/addressbook4
latest: digest: sha256:dc969f90dc84c05e4e1f744dd356b11672fc6d0afa82cb631337b72aedfefe28 size: 2413
root@ip-172-31-18-21:~/Docker.test/addressbook# docker login -u somajoshi
Password:
WARNING! Your password will be stored unencrypted in /root/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

Login Succeeded
root@ip-172-31-18-21:~/Docker.test/addressbook#
```

hub.docker.com/repositories/somajoshi

docker hub    Explore    **Repositories**    Organizations          Q Search Docker Hub    ctrl+K    ?    ⠿    S

somajoshi    ▼    Search by repository nam    Q    All Content    ▼                              Create repository

somajoshi / **newaddressbook**
Contains: Image | Last pushed: 4 minutes ago                    ⊘ Inactive    ☆ 0    ± 0    🌐 Public

Assignment 2



```
root@ip-172-31-18-21:~/dockercompose# vi docker-compose.yml
root@ip-172-31-18-21:~/dockercompose# cat docker-compose.yml
version: '3.1'

services:

  wordpress:
    image: wordpress
    restart: always
    ports:
      - 8080:80
    environment:
      WORDPRESS_DB_HOST: db
      WORDPRESS_DB_USER: exampleuser
      WORDPRESS_DB_PASSWORD: examplepass
      WORDPRESS_DB_NAME: exampledb
    volumes:
      - wordpress:/var/www/html

  db:
    image: mysql:8.0
    restart: always
    environment:
      MYSQL_DATABASE: exampledb
      MYSQL_USER: exampleuser
      MYSQL_PASSWORD: examplepass
      MYSQL_RANDOM_ROOT_PASSWORD: '1'
    volumes:
      - db:/var/lib/mysql

volumes:
  wordpress:
  db:
root@ip-172-31-18-21:~/dockercompose# docker compose up
+] Running 34/34
 ✓ wordpress 21 layers [######################]      0B/0B      Pulled
   ✓ 2f44b7a888fa Pull complete
```
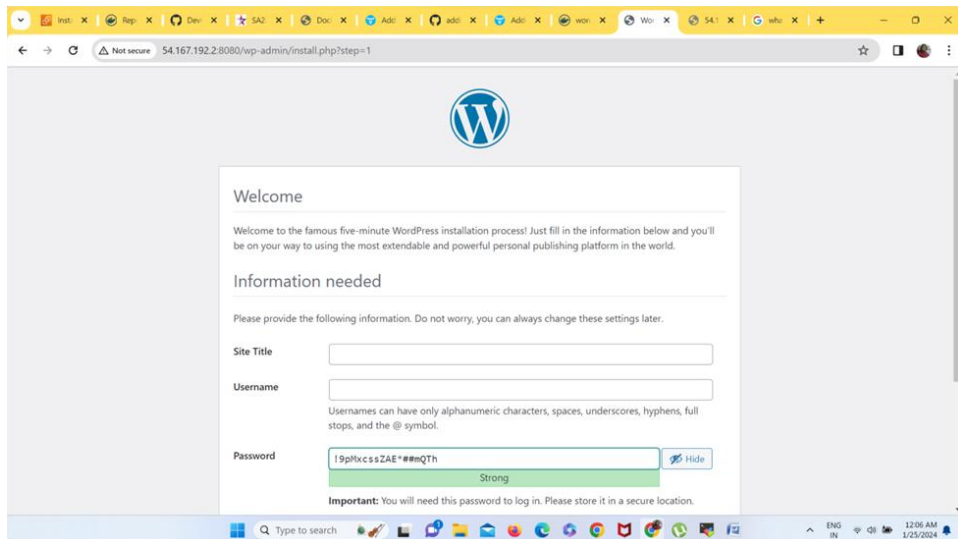
```
398a27d452a4   wordpress   "docker-entrypoint.s…"   49 minutes ago   Up 49 minutes   0.0.0.0:8080->80/tcp, :::8080->80/tcp   doc
0b4598fe899f   mysql:8.0   "docker-entrypoint.s…"   49 minutes ago   Up 49 minutes   3306/tcp, 33060/tcp                    doc
root@ip-172-31-37-2:~# docker compose down
[+] Running 3/3
 ✓ Container root-dbserv1-1   Removed
 ✓ Container root-webserv1-1  Removed
 ✓ Network root_default       Removed
root@ip-172-31-37-2:~#
```

```
root@ip-172-31-37-2:~# docker compose ps
NAME      IMAGE     COMMAND    SERVICE    CREATED    STATUS    PORTS
root@ip-172-31-37-2:~#
```

Assignment 3

```
root@ip-172-31-37-2:~/new/demo2# ls
Dockerfile  mvnw  mvnw.cmd  pom.xml  src  target
root@ip-172-31-37-2:~/new/demo2# cd src/main/resources/static/
root@ip-172-31-37-2:~/new/demo2/src/main/resources/static# ls
index.html
root@ip-172-31-37-2:~/new/demo2/src/main/resources/static# cat index.html
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>This is springboot Application</title>
</head>
<body>

</body>
```

```
</html>root@ip-172-31-37-2:~/new/demo2/src/main/resources/static# cd ../../../
root@ip-172-31-37-2:~/new/demo2/src# cd ..
root@ip-172-31-37-2:~/new/demo2# ls
Dockerfile  mvnw  mvnw.cmd  pom.xml  src  target
root@ip-172-31-37-2:~/new/demo2# cat Dockerfile
FROM openjdk:17
VOLUME /tmp
EXPOSE 8080
ARG JAR_FILE=target/demo2-0.0.1-SNAPSHOT.jar
ADD ${JAR_FILE} app.jar
ENTRYPOINT ["java","-jar","/app.jar"]
root@ip-172-31-37-2:~/new/demo2#
```

Build an image from a Dockerfile
root@ip-172-31-37-2:~/new/demo2# docker build -t somajoshi/springboot:1.0 .
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
          Install the buildx component to build images with BuildKit:
          https://docs.docker.com/go/buildx/

Sending build context to Docker daemon  45.37MB
Step 1/6 : FROM openjdk:17
 ---> 5e28ba2b4cdb
Step 2/6 : VOLUME /tmp
 ---> Running in 79ae6e7f1d1a
Removing intermediate container 79ae6e7f1d1a
 ---> 6d5999cc0b07
Step 3/6 : EXPOSE 8080
 ---> Running in 0496cbe1ab18
Removing intermediate container 0496cbe1ab18
 ---> aa093ef258f4
Step 4/6 : ARG JAR_FILE=target/demo2-0.0.1-SNAPSHOT.jar
 ---> Running in cbe94de7ea63
Removing intermediate container cbe94de7ea63
 ---> e71e76ad2712
Step 5/6 : ADD ${JAR_FILE} app.jar
 ---> dddfca98d9b0
Step 6/6 : ENTRYPOINT ["java","-jar","/app.jar"]
 ---> Running in 876dd3b6d93b
Removing intermediate container 876dd3b6d93b
 ---> 2fcb1c071b55
Successfully built 2fcb1c071b55
Successfully tagged somajoshi/springboot:1.0
root@ip-172-31-37-2:~/new/demo2# docker run -d -p 8089:8080 somajoshi/springboot:1.0
89415033831efa54951a36cd2edeaa525690bce13f8354ae12dd4209fde04658

root@ip-172-31-37-2:~/new/demo2# docker ps
CONTAINER ID   IMAGE                      COMMAND                CREATED        STATUS         PORTS                                             NAMES
89415033831e   somajoshi/springboot:1.0   "java -jar /app.jar"   2 minutes ago  Up 2 minutes   0.0.0.0:8089->8080/tcp, :::8089->8080/tcp          laughing_no
bel
root@ip-172-31-37-2:~/new/demo2# docker push somajoshi/springboot:1.0
The push refers to repository [docker.io/somajoshi/springboot]
5b338a75c8c6: Pushed
dc9fa3d8b576: Mounted from library/openjdk
27ee19dc88f2: Mounted from library/openjdk
c8dd97366670: Mounted from library/openjdk
1.0: digest: sha256:a8c2a599a3f8a60e41c8b0fd15e01030dc2f577f81f112900ce7edf1e2d7255b size: 1166
root@ip-172-31-37-2:~/new/demo2#

somajoshi / Repositories / springboot / General

General   Tags   Builds   Collaborators   Webhooks   Settings

ⓘ  Add a short description for this repository
    The short description is used to index your content on Docker Hub and in search engines. It's visible to users in search results.

🌐  somajoshi / **springboot**

**Description**

This repository does not have a description  ✏️

🕐  Last pushed: 3 minutes ago

Docker co
To push a ne

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**Tags**

This repository contains 2 tag(s).

| Tag | OS | Type | Pulled | Pushed |
|-----|----|----|--------|--------|
| ● 1.0 | 🐧 | Image | --- | 4 minutes ago |

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This is springboot Application     ×     +

⚠ Not secure  34.229.196.56:8089        ☆  □  👤  ⋮
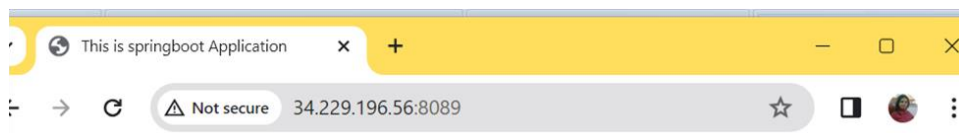
Assignment 4

```
ubuntu@ip-172-31-37-2:~$ docker volume create data
data
ubuntu@ip-172-31-37-2:~$ docker volume ls
DRIVER     VOLUME NAME
local      data
local      dockercompose_db
local      dockercompose_wordpress
local      unbuntuvolume
local      volume1
local      volume2
local      volume4
local      volume-2
ubuntu@ip-172-31-37-2:~$ docker inspect data
[
    {
        "CreatedAt": "2024-01-26T06:13:38Z",
        "Driver": "local",
        "Labels": null,
        "Mountpoint": "/var/lib/docker/volumes/data/_data",
        "Name": "data",
        "Options": null,
        "Scope": "local"
    }
]
ubuntu@ip-172-31-37-2:~$
```



```
root@ip-172-31-37-2:/var/lib/docker/volumes/data/_data# docker rm ce0d9a463b11
ce0d9a463b11
root@ip-172-31-37-2:/var/lib/docker/volumes/data/_data# ls
container.txt   file1.txt
root@ip-172-31-37-2:/var/lib/docker/volumes/data/_data#
```

```
root@ip-172-31-37-2:/var/lib/docker/volumes/data/_data# docker rm ce0d9a463b11
ce0d9a463b11
root@ip-172-31-37-2:/var/lib/docker/volumes/data/_data# ls
container.txt   file1.txt
root@ip-172-31-37-2:/var/lib/docker/volumes/data/_data# cd /
root@ip-172-31-37-2:/# cd ~
root@ip-172-31-37-2:~# cd /var/lib/docker/volumes/data/_data
root@ip-172-31-37-2:/var/lib/docker/volumes/data/_data# ls
container.txt   file1.txt
root@ip-172-31-37-2:/var/lib/docker/volumes/data/_data# cd ~
root@ip-172-31-37-2:~#
```

Assignment 3