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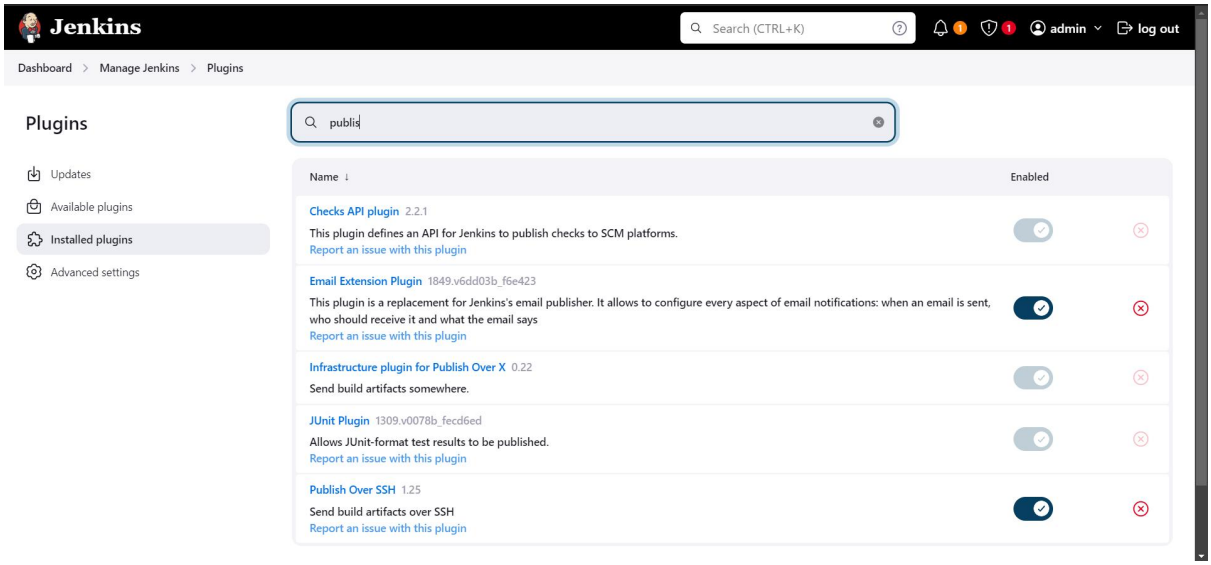
Course – Cloud Devops

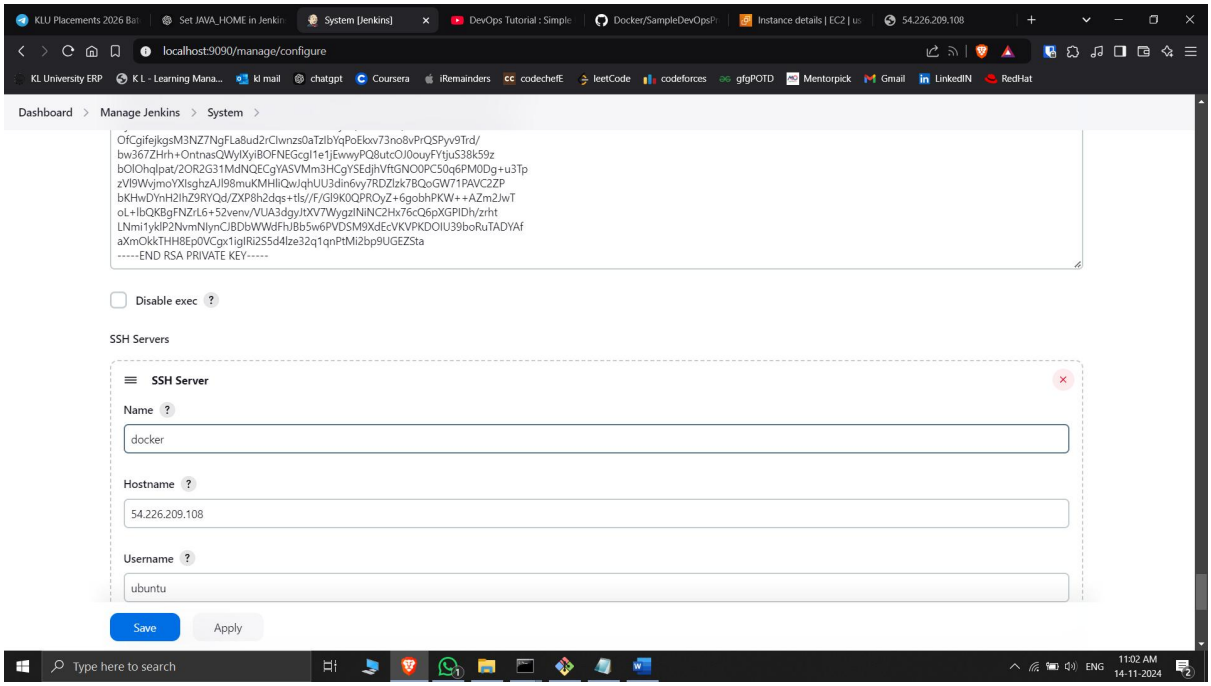
Simple DevOps Project (With Jenkins, Git and Docker Integration)

1) We have to install “Publish over SSH” Plugin-



2) Manage Jenkins → Configure There we have to add rsa key
How to get RSA key?
For this we have to create a EC2 instance with a key pair. Then a pem file will be downloaded.
If we open that .pem file with note pad we will get the RSA key.
Then fill Name- docker
Host name – IP address of EC 2 Instance
User – Ubuntu

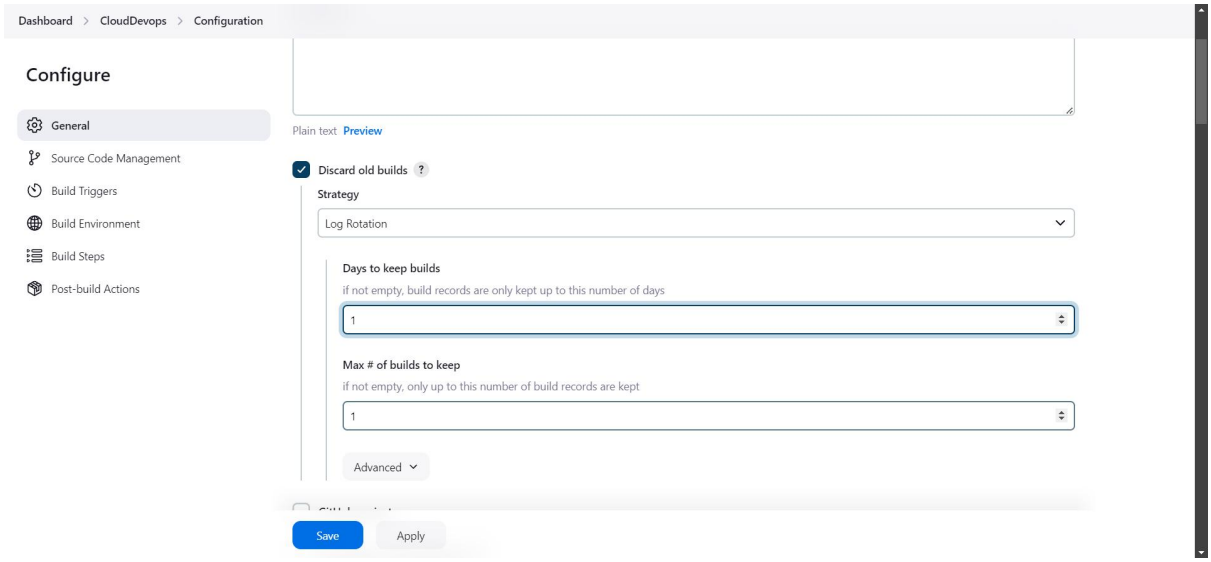
Then click on “Apply” and Save the settings.



3)Then Create a new Project name it as “CloudDevops”

It is a free style project.

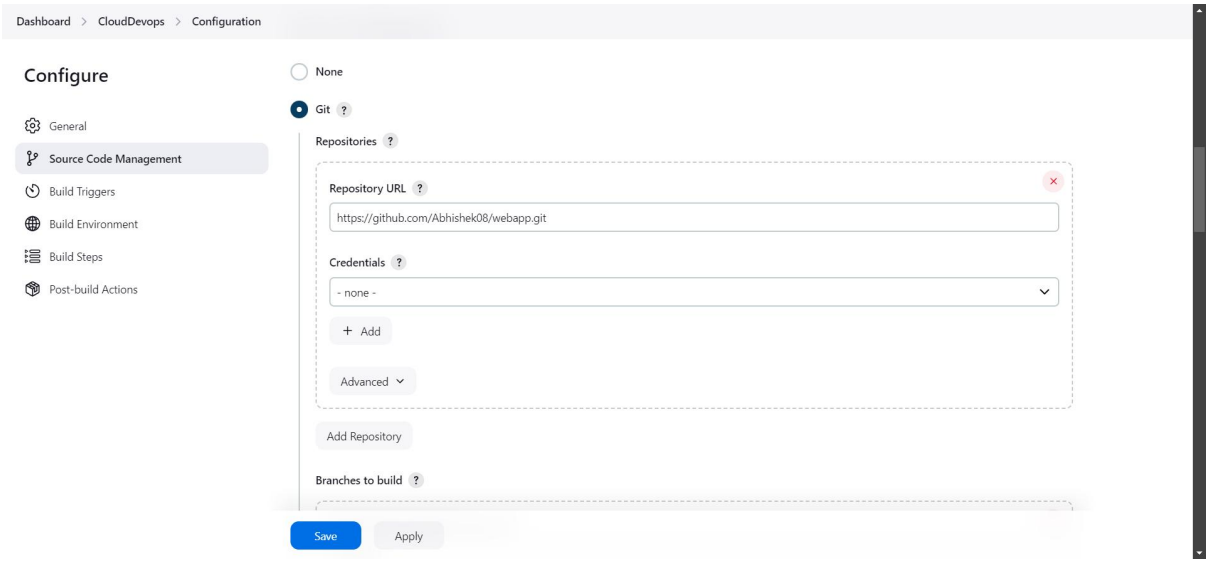
Select Discard old builds by this option it will delete old builds for every new Build



4)I am using a git repository of others in this project

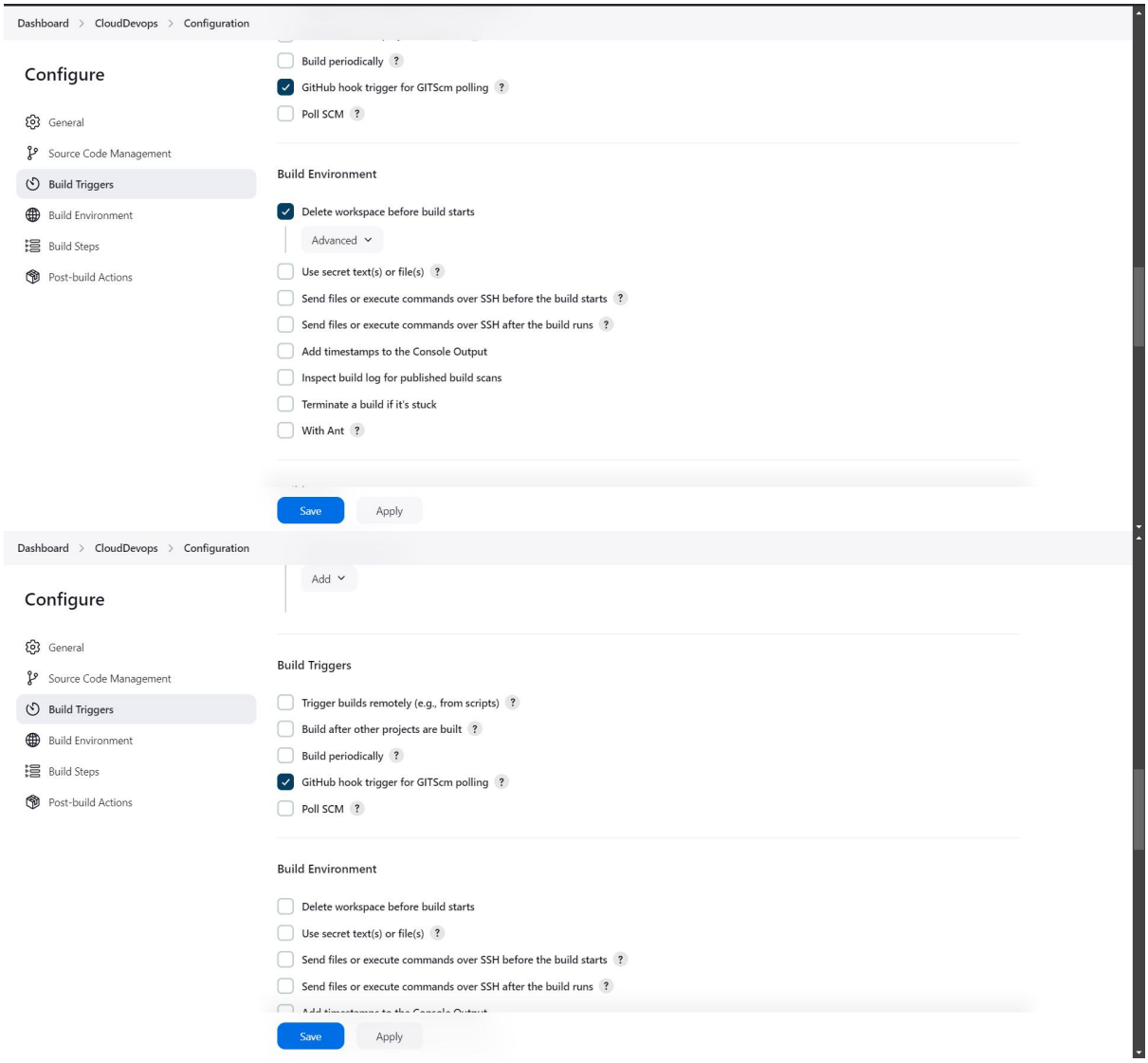
URL-https://github.com/Abhishek08/webapp.git

We have to add this Repository

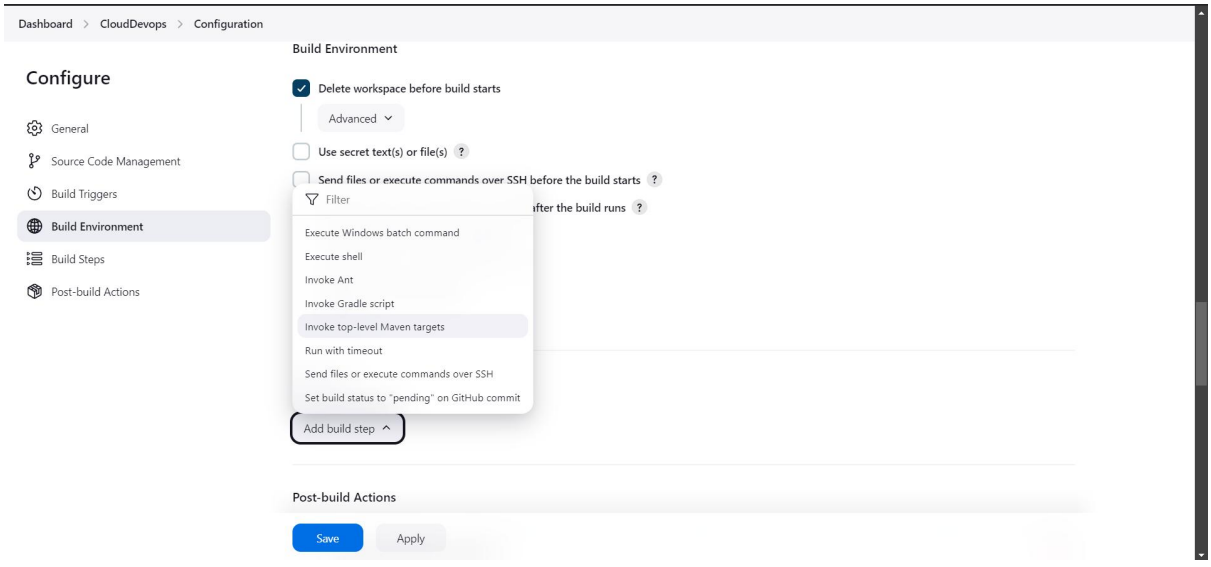


5)Select “GitHub hook trigger for GITScm polling” in Build Triggers-

We have to select this, it will delete workspace before starting.



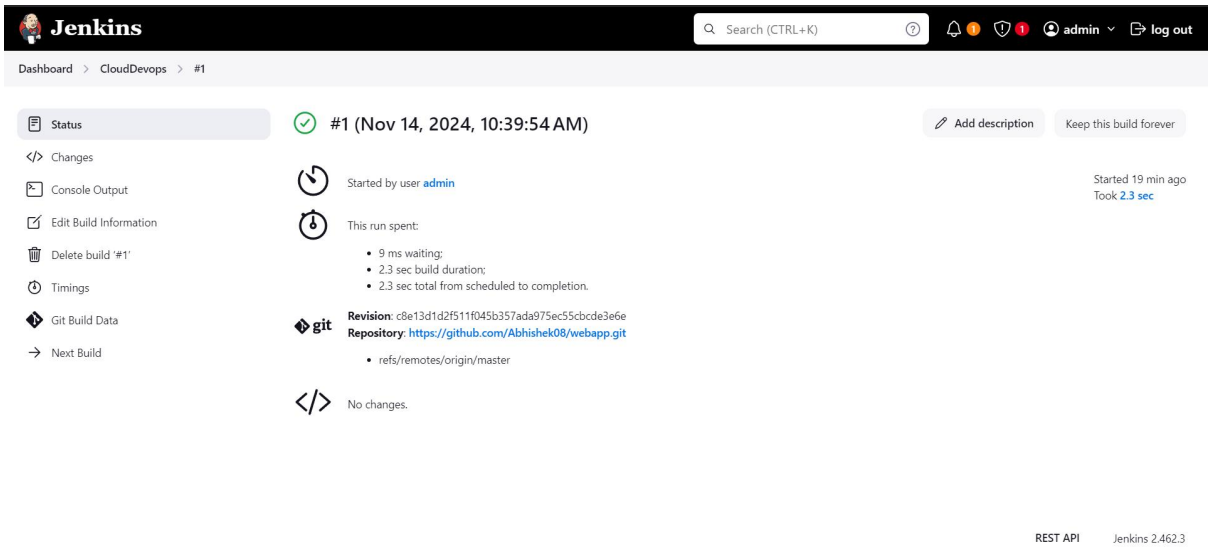
6)In Build Environment- Select Invoke Top level-maven targets.



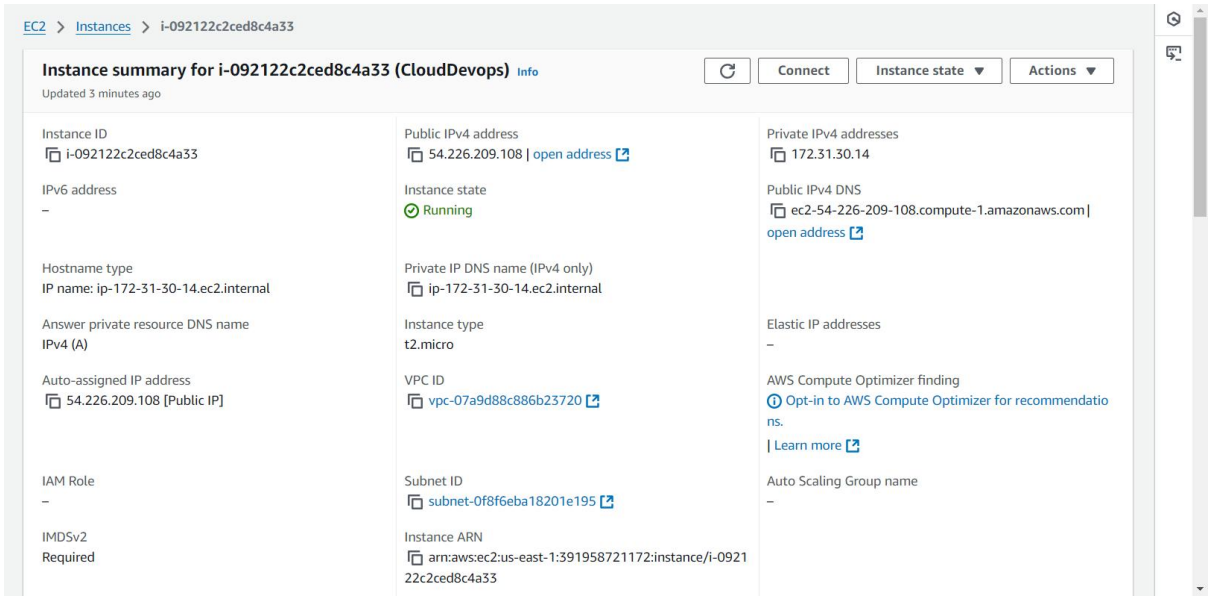
7)Then Click “apply” and save the project.

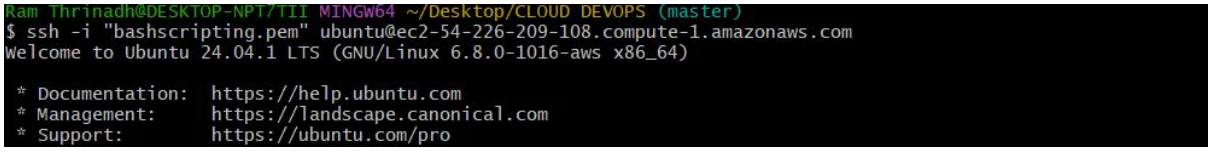
Build the project.

Successfully done.



8)Then start the EC-2 Instance and Connect it to gitBash-





9)I had Previously installed Dockers in this EC2 instance.

Create a Dockerfile –

Define te Image

FROM tomcat:8-jre8

Maintainer

MAINTAINER "abhishek"

Copy the war file into the tomcat webapps location

COPY WebApp.war /usr/local/tomcat/webapps

expose the 8080 port

EXPOSE 8080

```
ubuntu@ip-172-31-30-14:~$ cat Dockerfile
FROM tomcat:8-jre8
MAINTAINER "abhishek"
COPY webApp.war /usr/local/tomcat/webapps
EXPOSE 8081
ubuntu@ip-172-31-30-14:~$
```

10)Open Configurations in Project go to Post Build Actions-

Remote directory- /home/ubuntu

Exec commands-

sudo mv ./home/ubuntu/com/target/WebApp.war /home/ubuntu/com;

cd /home/ubuntu/com;

docker stop mycontainer;

docker rm mycontainer;

docker build -t myimage -;

docker run -d --name mycontainer -p 8090:8080 myimage;

Meaning of the Commands is as follows :

Copy the war file into the your Server Location

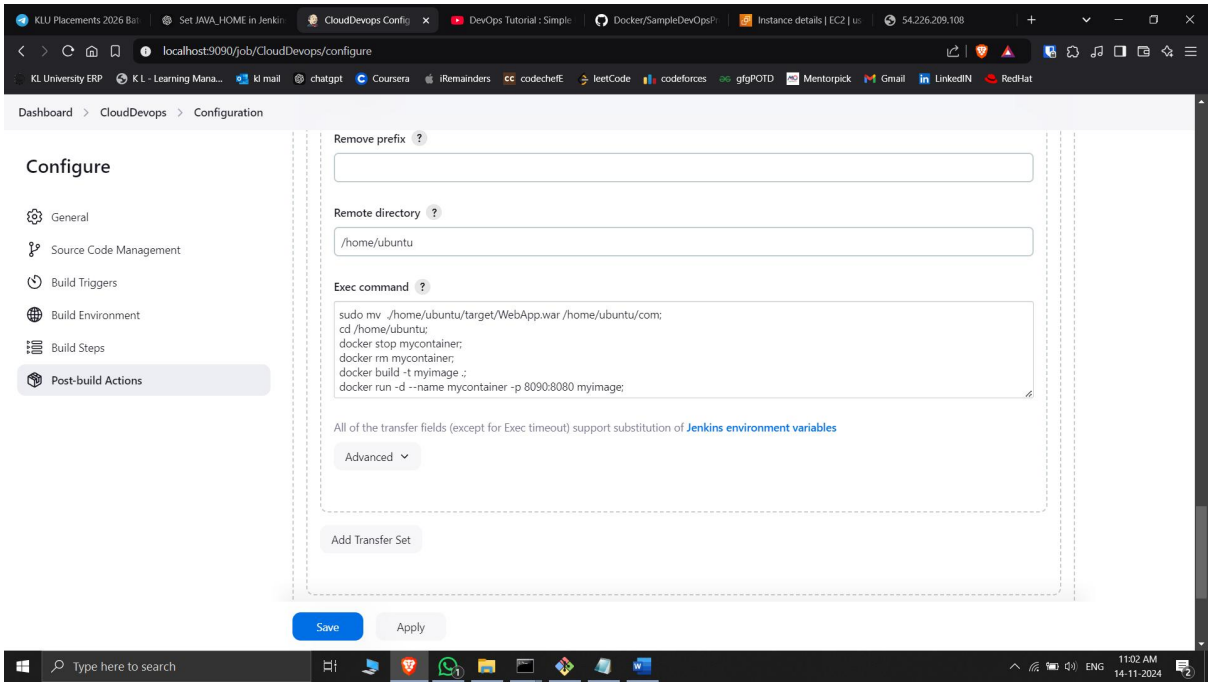
Goto the Location where DockerFile is present// Goto the Location where DockerFile is present

Stop the Container if its running

Remove the container

Create the new Image using Docker file

Create new Container using the custom Image.



11)Build Now the project again.

It is successful and all commands executed correctly

(2nd Build)

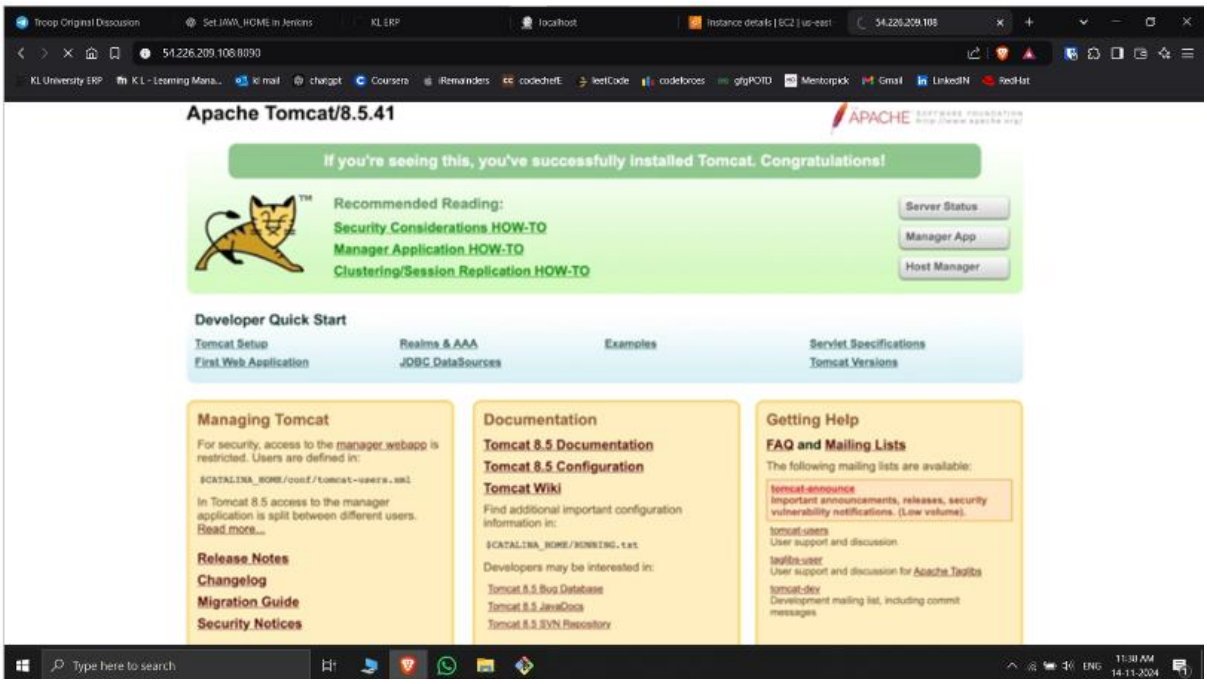
```
[INFO] WEB-INF/web.xml already added, skipping
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time: 2.521 s
[INFO] Finished at: 2020-07-25T05:34:58+00:00
[INFO] Final Memory: 9M/22M
[INFO] ------------------------------------------------------------------------
SSH: Connecting from host [ip-172-31-45-203]
SSH: Connecting with configuration [docker] ...
SSH: EXEC: STDOUT/STDERR from command [sudo mv  ./home/ubuntu/com/target/WebApp.war /home/ubuntu/com;
cd /home/ubuntu/com;
docker stop mycontainer;
docker rm mycontainer;
docker build -t myimage .;
docker run -d --name mycontainer -p 8090:8080 myimage;] ...
mycontainer
mycontainer
Sending build context to Docker daemon  13.82kB

Step 1/4 : FROM tomcat:8-jre8
 ---> 1639174793ba
Step 2/4 : MAINTAINER "abhishek"
 ---> Using cache
 ---> 1171c1e6bd12
Step 3/4 : COPY WebApp.war /usr/local/tomcat/webapps
 ---> b4f198efdfa7
Step 4/4 : EXPOSE 8080
 ---> Running in adcc5f7ee5f1
Removing intermediate container adcc5f7ee5f1
 ---> 38ea21191da5
Successfully built 38ea21191da5
Successfully tagged myimage:latest
37e0356f25f98cf07ebeb9804376425008b276225f7d9914d984a2127869d22c
SSH: EXEC: completed after 1,402 ms
SSH: Disconnecting configuration [docker] ...
SSH: Transferred 1 file(s)
Finished: SUCCESS
```

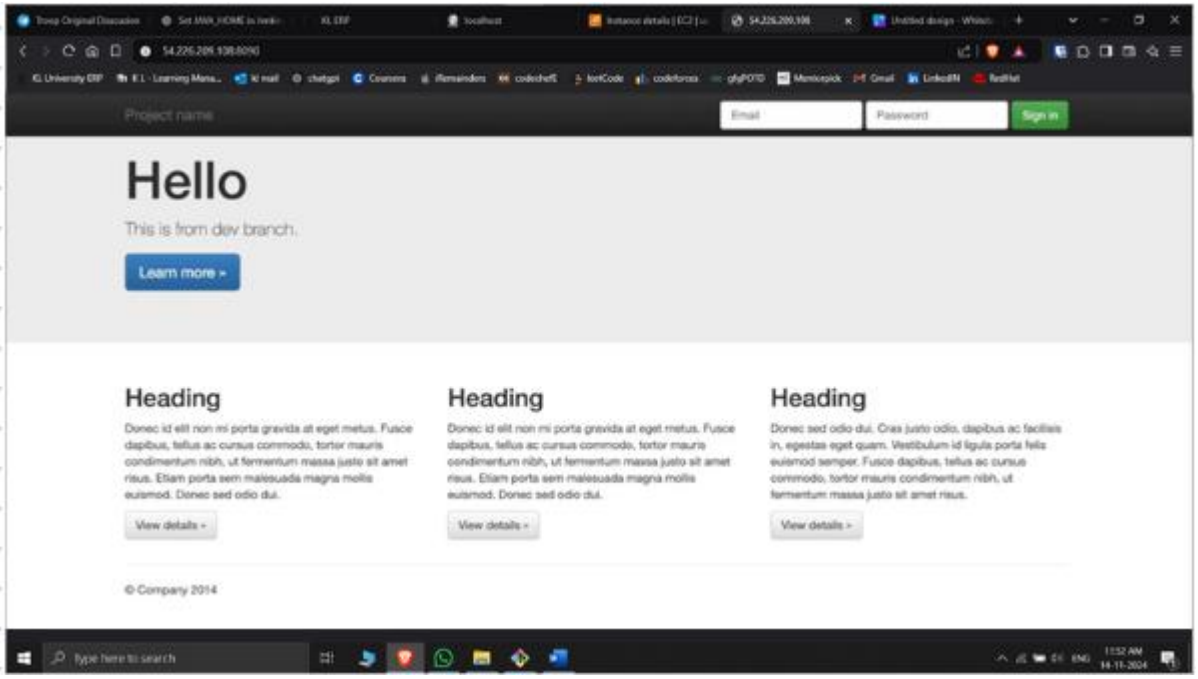
Out Put-

12)Navigate to IPaddress:8090 in your browser

Then we can see tomcat server.



13)Then Navigate to IPaddress:8090/webApps.



Our tomcat Server is successfully running.