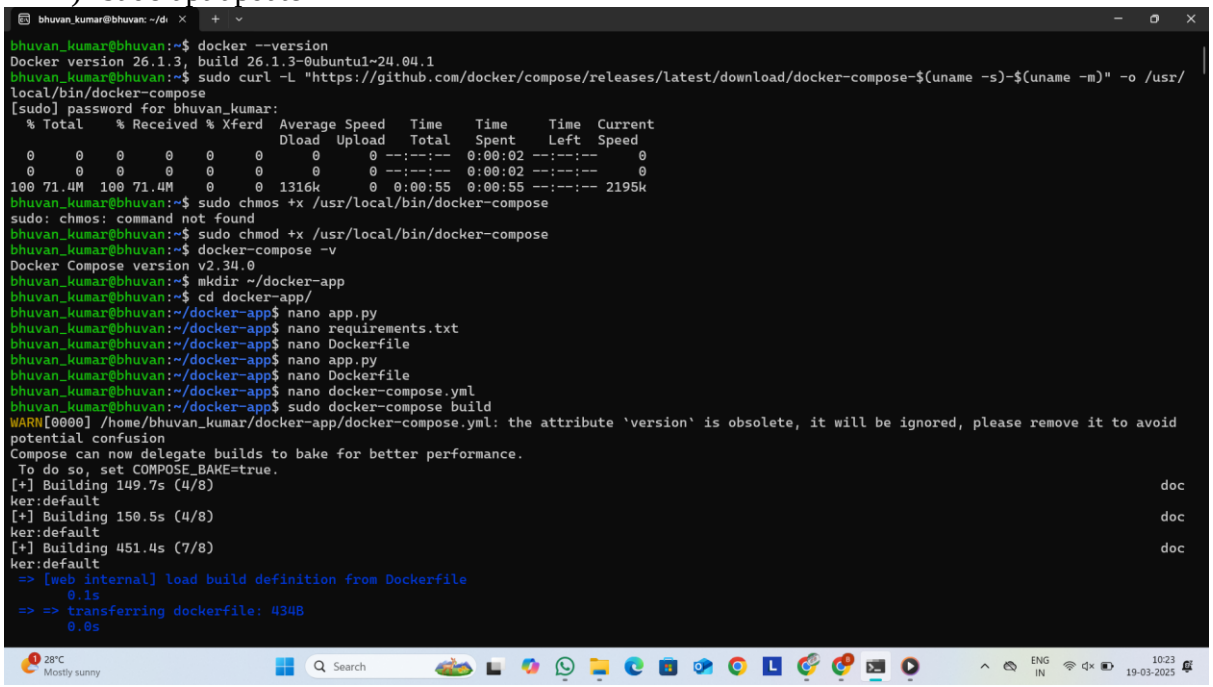
DAY-2

DEVOPS

STEP -1 :INSTALL DOCKER

1) sudo apt update



2) sudo apt install -y docker.io

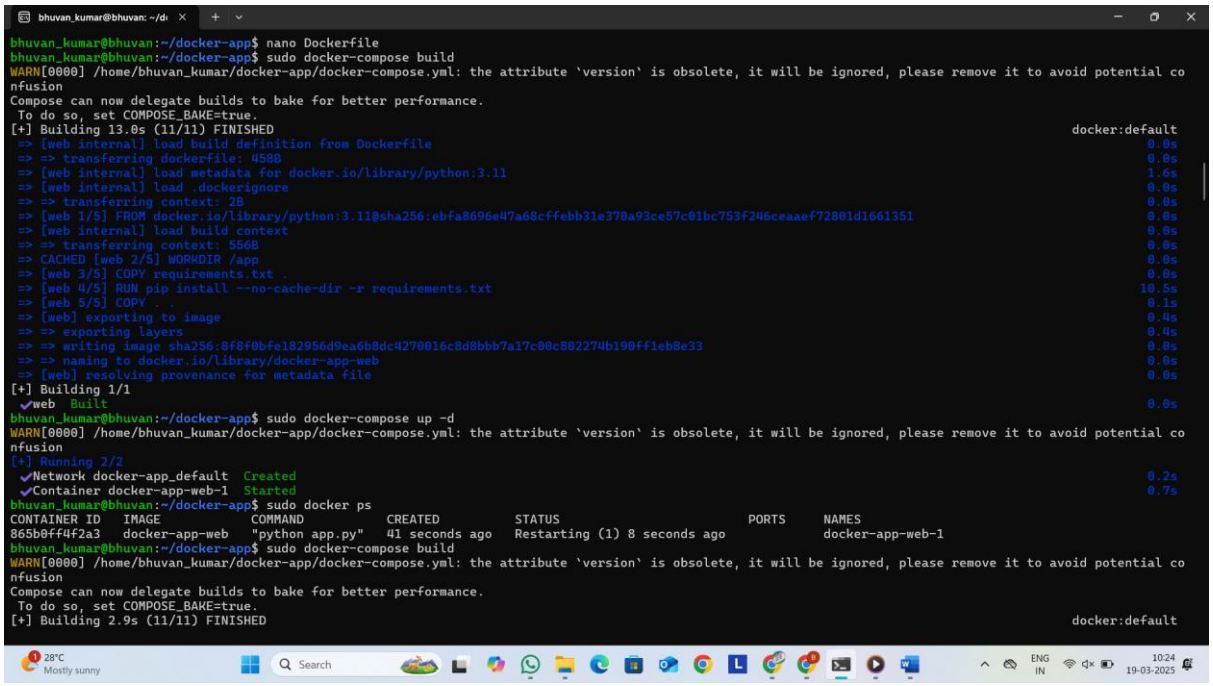
STEP 2: ENABLE AND DISABLE

1) sudo systemctl enable docker

2) sudo systemctl start docker

STEP 3:VERIFY THE INSTALLATION:

docker –version



STEP 4:INSTALL DOCKER COMPOSE

sudo curl -L "https://github.com/docker/compose/releases/latest/download/docker-compose-$(uname -s)-$(uname -m)" -o /usr/local/bin/docker-compose

Give execution permission:

VERIFY INSTALLATION

CREATE AN “HELLO WOLRD: APPLICATION

Create a project directory

Create the python Application File

Create a file

```
jeeva@Jeeva:~/docker-python-app$ nano app.py
jeeva@Jeeva:~/docker-python-app$ cat app.py
from flask import Flask
app=Flask(__name__)
@app.route("/")
def hello():
        return "Hello,World!"
if __name__ == "__main__":
        app.run(host="0.0.0.0",port=5000)

jeeva@Jeeva:~/docker-python-app$ nano requirements.txt
```

IN REQUIREMENTS.TXT TERMINAL WILL BE OPEN TYPE flask AND SAVE THE FILE BY CTRL+X,YES,ENTER.

STEP -5 : CREATE A DOCKER FILE

CREATE A DOCKER COMPOSE

STEP 6:BUILD AND RUN THE DOCKER CONTAINER

OPEN THE LOCALHOST:5000 IT WILL DISPLAY OUTPUT OF CODE

STEP-7 CREATE A NEW REPO IN GITHUB

https://github.com/Jeeva-21BSR017/devops-sample.git

STEP-8 GO TO THE LINK https://github.com/settings/tokens/new

STEP-9 CLICK TOKEN CLASSIC AND GENERARTE TOKEN CLASSIC

STEP-10 IN GENERATE TOKEN CLASSIC GIVE THE NAME AND CLICK THE WORKFLOW AND ADMIN HOOK REPO

STEP-11 GENERATE TOKEN

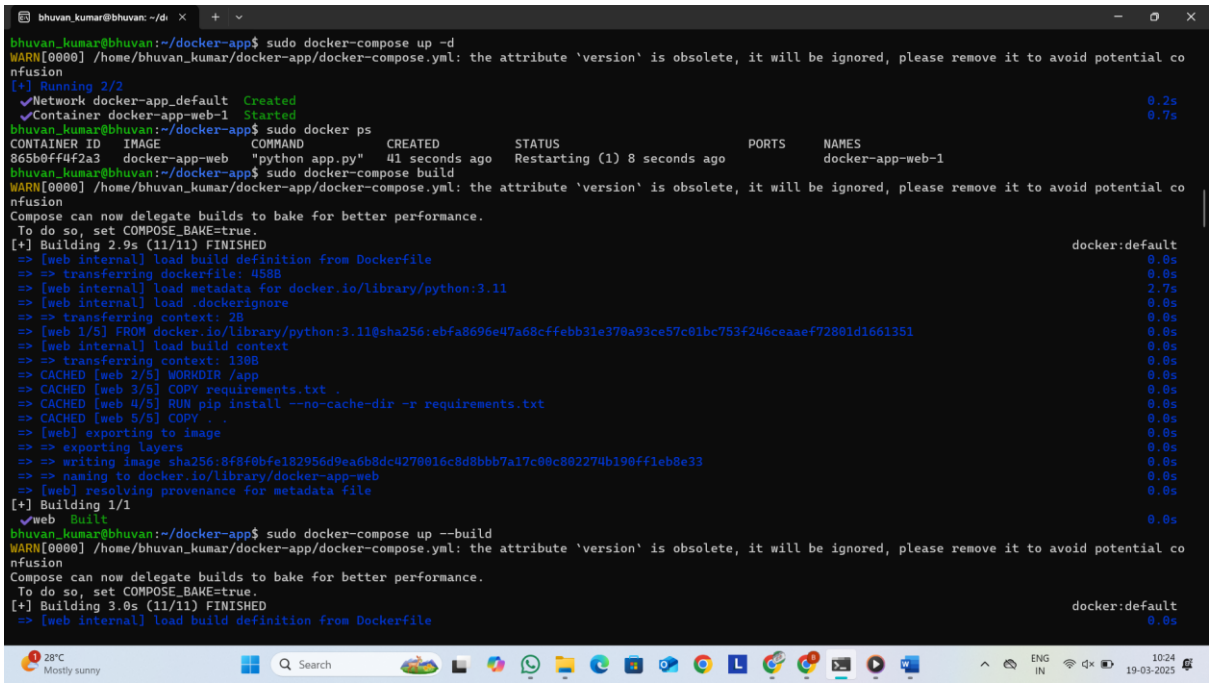
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

STEP-12 START THE JENKINS

Username:admin

Password:b0e507d6b0f14097ba040a5e1dd67f6d

STEP-13 Create a new ITEM AND PIPELINE THEN CLICK THE PIPLELINE THEN PILELINE SCM THEN GIT

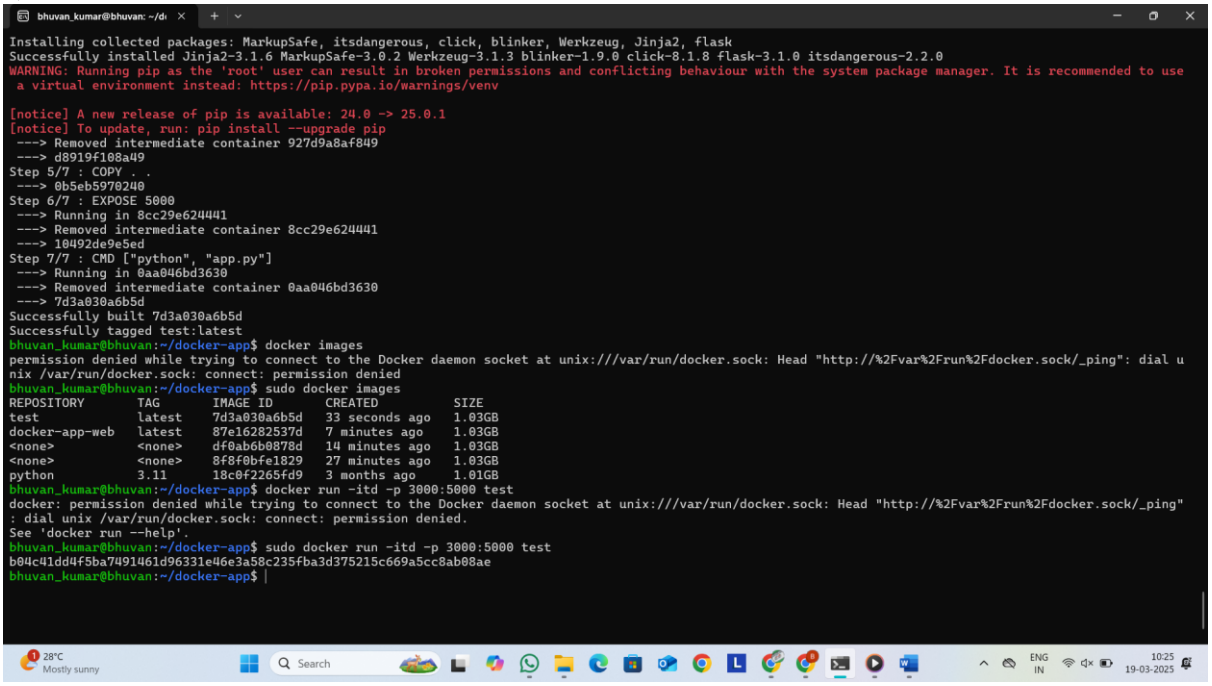

bhuvan_kumar@bhuvan:~/docker-app$ sudo docker-compose up -d
WARN[0000] /home/bhuvan_kumar/docker-app/docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential co
nfusion
[+] Running 2/2
✔Network docker-app_default Created 0.2s
✔Container docker-app-web-1 Started 0.7s
bhuvan_kumar@bhuvan:~/docker-app$ sudo docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
865b0ff4f2a3 docker-app-web "python app.py" 41 seconds ago Restarting (1) 8 seconds ago docker-app-web-1
bhuvan_kumar@bhuvan:~/docker-app$ sudo docker-compose build
WARN[0000] /home/bhuvan_kumar/docker-app/docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential co
nfusion
Compose can now delegate builds to bake for better performance.
To do so, set COMPOSE_BAKE=true.
[+] Building 2.9s (11/11) FINISHED docker:default
=> [web internal] load build definition from Dockerfile 0.0s
=> => transferring dockerfile: 458B 0.0s
=> [web internal] load metadata for docker.io/library/python:3.11 2.7s
=> [web internal] load .dockerignore 0.0s
=> => transferring context: 2B 0.0s
=> [web 1/5] FROM docker.io/library/python:3.11@sha256:ebfa8696e47a68cffebb31e370a93ce57c01bc753f246ceaaef72801d1661351 0.0s
=> [web internal] load build context 0.0s
=> => transferring context: 130B 0.0s
=> CACHED [web 2/5] WORKDIR /app 0.0s
=> CACHED [web 3/5] COPY requirements.txt . 0.0s
=> CACHED [web 4/5] RUN pip install --no-cache-dir -r requirements.txt 0.0s
=> CACHED [web 5/5] COPY . . 0.0s
=> [web] exporting to image 0.0s
=> => exporting layers 0.0s
=> => writing image sha256:8f8f0bfe182956d9ea6b8dc4270816c8d8bbb7a17c80c802274b190ff1eb8e33 0.0s
=> => naming to docker.io/library/docker-app-web 0.0s
=> [web] resolving provenance for metadata file 0.0s
[+] Building 1/1
✔web Built 0.0s
bhuvan_kumar@bhuvan:~/docker-app$ sudo docker-compose up --build
WARN[0000] /home/bhuvan_kumar/docker-app/docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential co
nfusion
Compose can now delegate builds to bake for better performance.
To do so, set COMPOSE_BAKE=true.
[+] Building 3.0s (11/11) FINISHED docker:default
=> [web internal] load build definition from Dockerfile 0.0s
28°C
Mostly sunny
Search
ENG
IN
10:24
19-03-2025

STEP-14 PASTE THE GITHUB LINK AND IN CREDITIONALS ADD OPTIONS THEN JENKIN.

STEP-15 PROVIDE GITHUB USERNAME AND GENERATED TOKEN PASSWORD IN PASSWORD THEN GIVE THE ID AS YOUR PREFERENCE AFTER COMPLETING CLICK ADD

STEP-16 TO PUSH INTO GITHUB

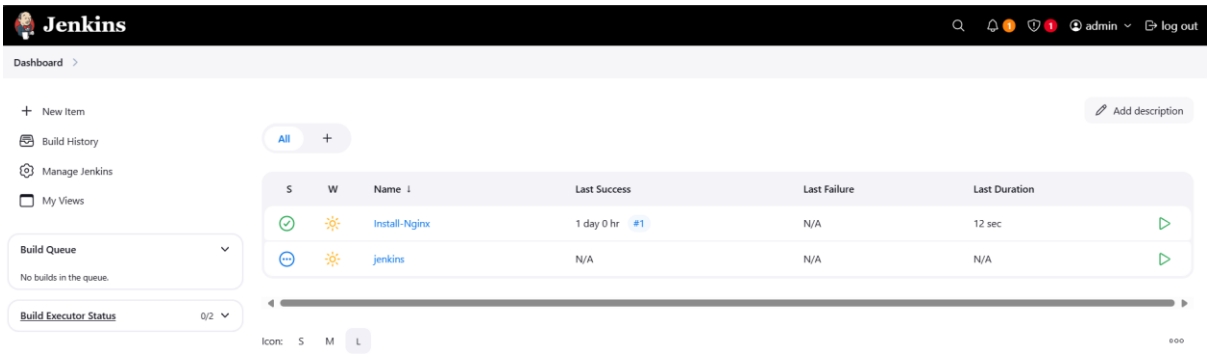
1) Clone



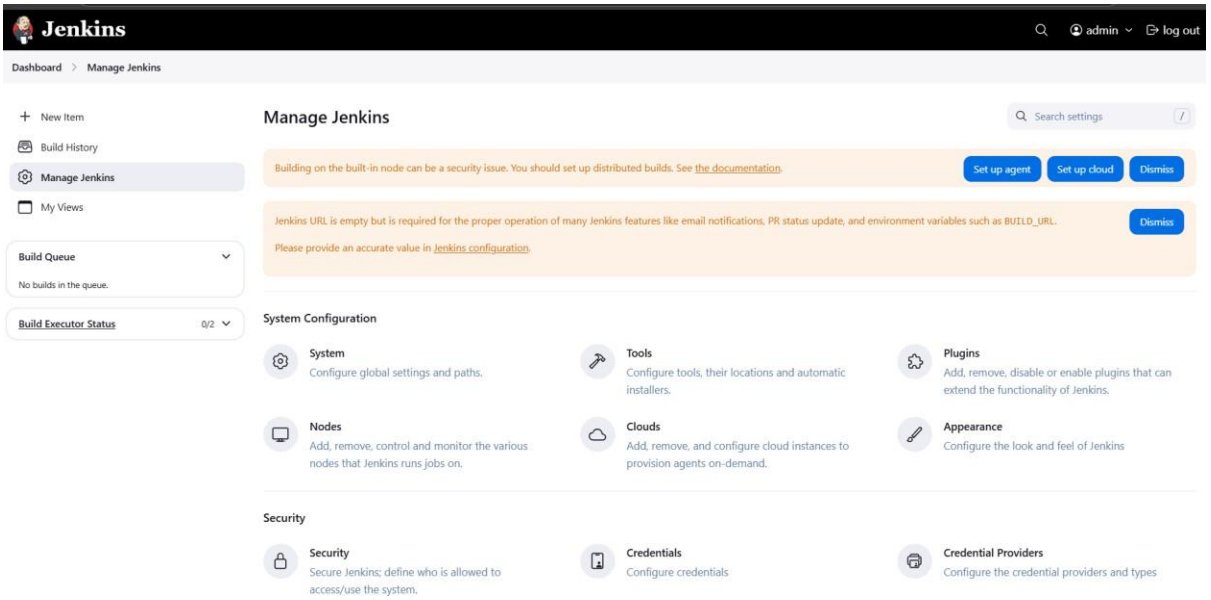
2) check file

3) Add to the repository

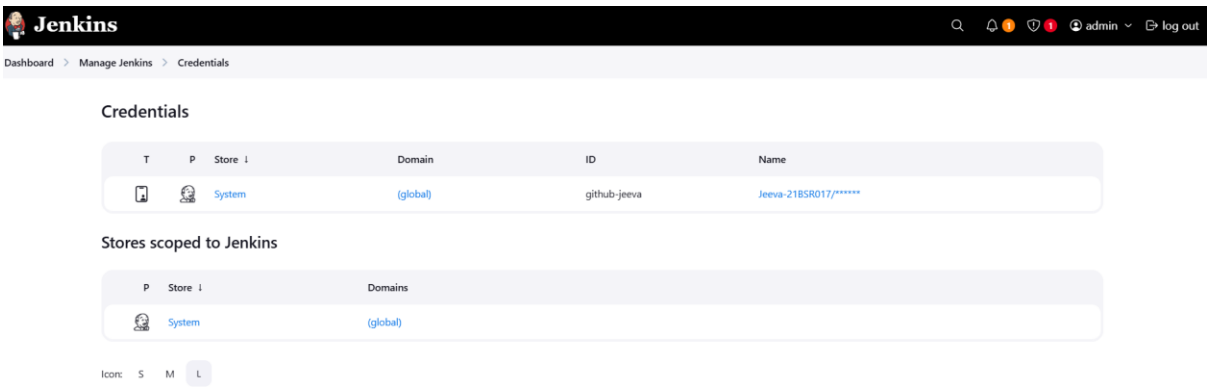
STEP-17 Open docker image app.docker.com



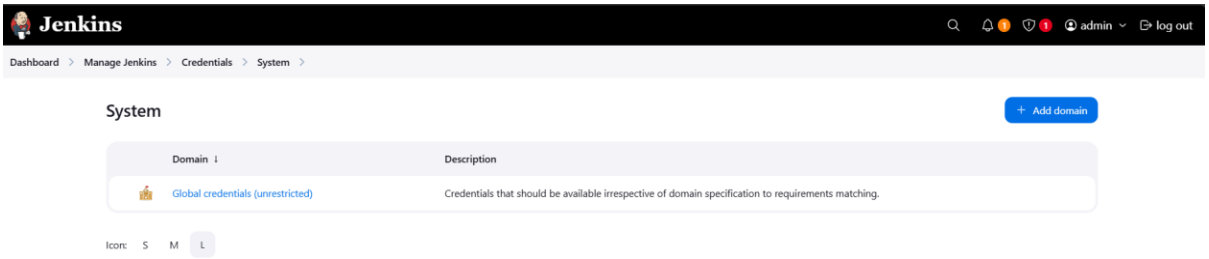
STEP-18 OPEN MANAGE JENKINS



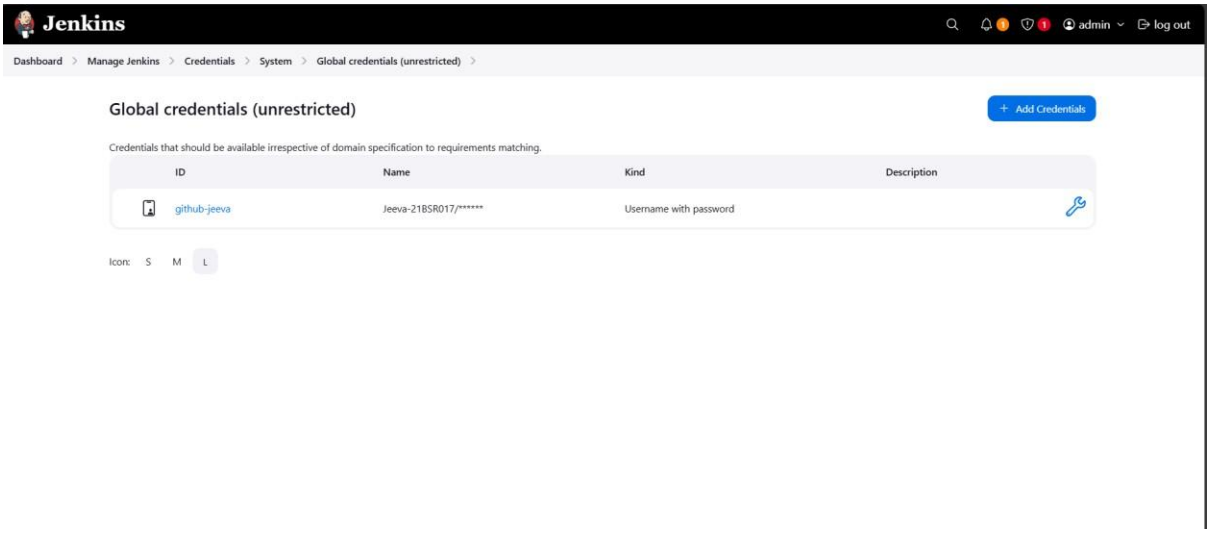
STEP-19 OPEN CREDENTIALS



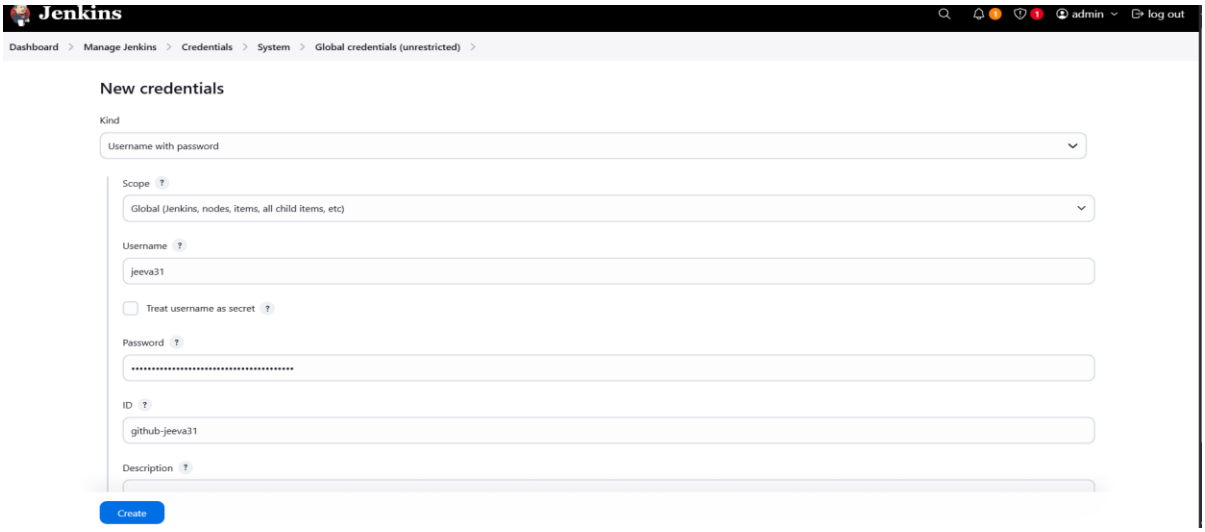
STEP-20 OPEN SYSTEM



STEP-21 OPEN MANAGE JENKINS

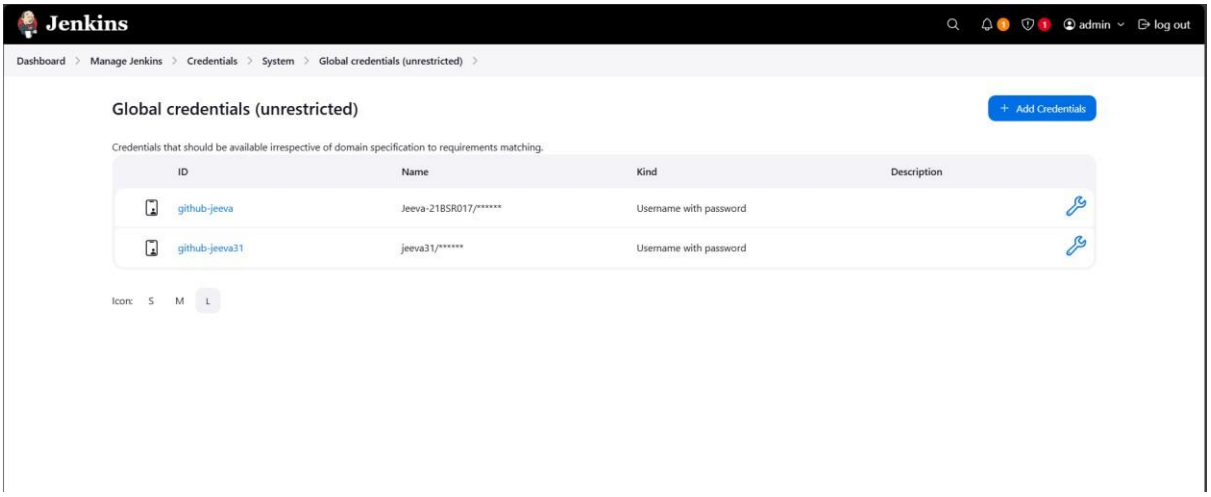


STEP-22 OPEN GLOBAL CREDENTIALS



STEP-23 OPEN MANAGE JENKINS

=>IT DISPLAYS THE GITHUB CREDENTIALS ID AND DOCKER CREDENTIALS ID



STEP 24:OPEN UBUNTU AND CREATE nano Jenkinsfile

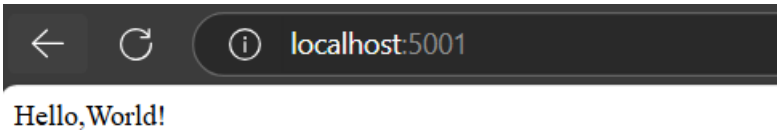
STEP 25:

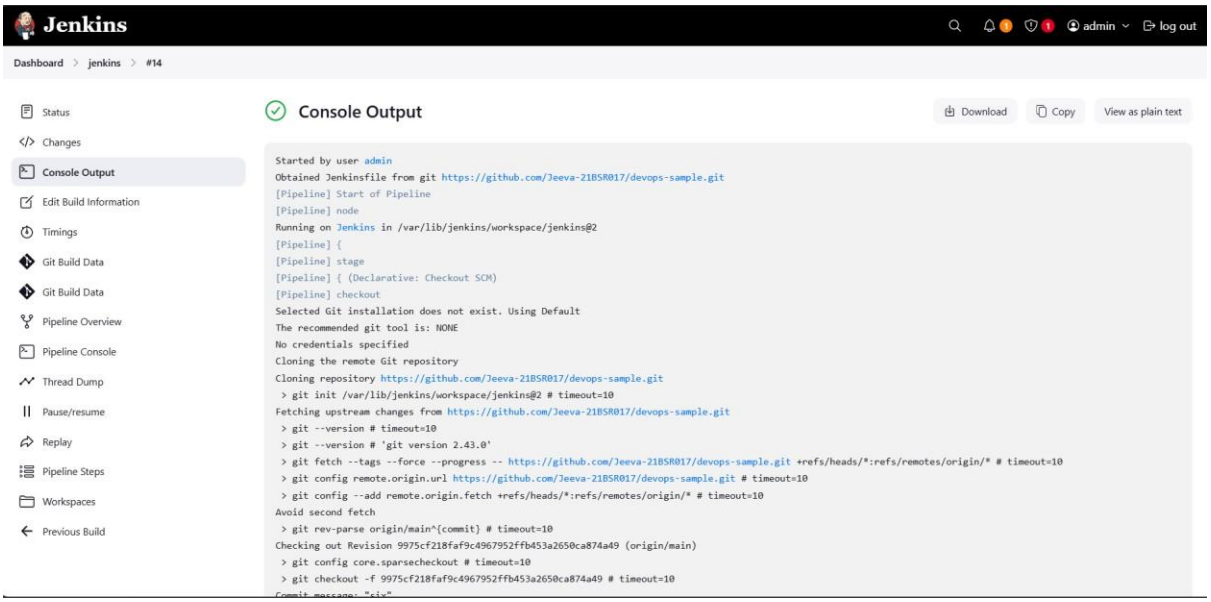
```
                if [ "$(docker ps -aq -f name=$CONTAINER_NAME)" ]; then
                    docker stop $CONTAINER_NAME || true
                    docker rm $CONTAINER_NAME || true
                fi
                '''
            }
        }
    }

    stage('Run Docker Container') {
        steps {
            sh 'docker run -d -p 5001:5000 --name $CONTAINER_NAME
$DOCKER_IMAGE'
        }
    }
}
```

```
    post {
        success {
            echo "Build, push, and container execution successful!"
        }
        failure {
            echo "Build or container execution failed."
        }
    }
}
```

STEP 26:IN JENKINS BUILD NOW THE Jenkins

STEP 27:IN LOCALHOST:5001 IT DISPLAYS THE OUTPUT.





STEP-28 : IN DOCKERHUB THE PROCESS ARE TO DONE AND THEN THE LINUX IMAGE HAS TO BE DISPLAY.