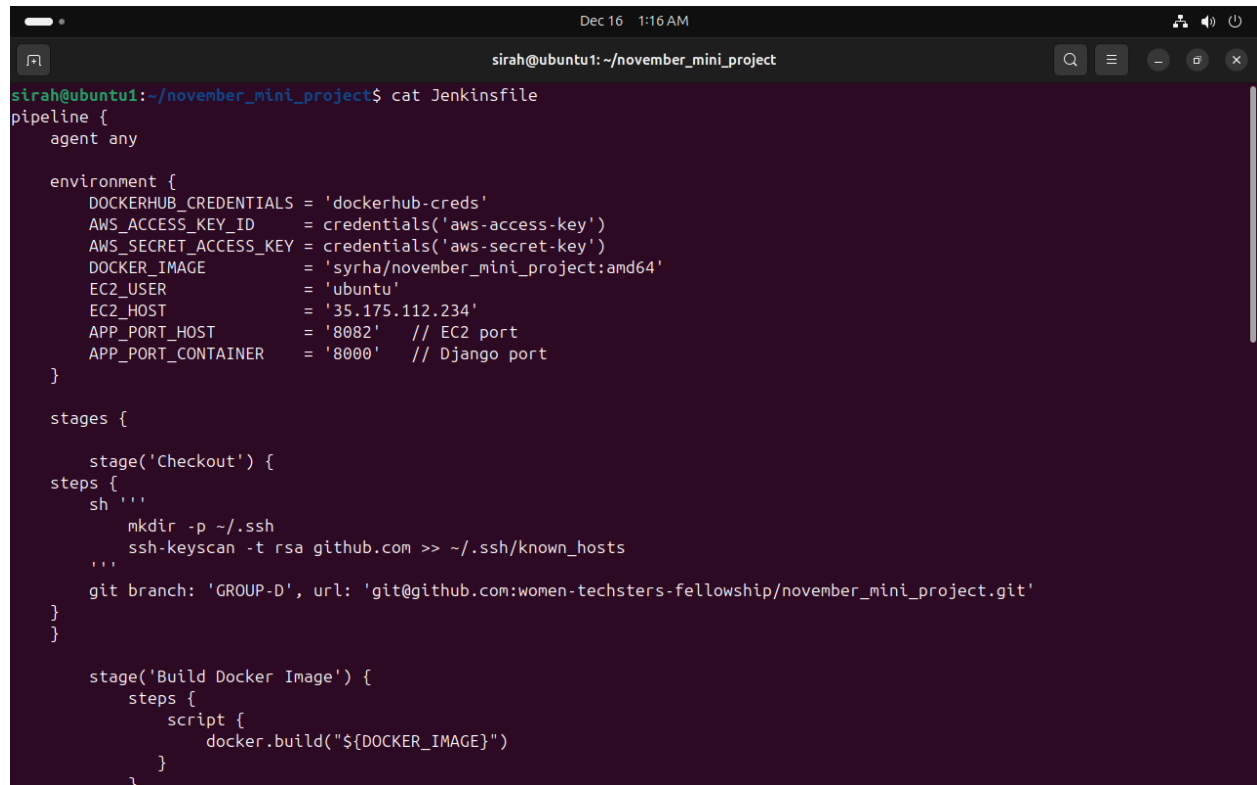


SCREENSHOT OF YOUR JENKINSFILE

A screenshot of a terminal window with a dark background. The window title bar shows 'Dec 16 1:16 AM' and 'sirah@ubuntu1: ~/november_mini_project'. The terminal displays the command 'cat Jenkinsfile' and its output, which is a Jenkinsfile script. The script defines a pipeline with an 'agent any' and an 'environment' block containing various credentials and variables. It also defines two stages: 'Checkout' and 'Build Docker Image'.

```
sirah@ubuntu1:~/november_mini_project$ cat Jenkinsfile
pipeline {
  agent any

  environment {
    DOCKERHUB_CREDENTIALS = 'dockerhub-creds'
    AWS_ACCESS_KEY_ID     = credentials('aws-access-key')
    AWS_SECRET_ACCESS_KEY = credentials('aws-secret-key')
    DOCKER_IMAGE           = 'sirha/november_mini_project:amd64'
    EC2_USER               = 'ubuntu'
    EC2_HOST               = '35.175.112.234'
    APP_PORT_HOST          = '8082' // EC2 port
    APP_PORT_CONTAINER     = '8000' // Django port
  }

  stages {
    stage('Checkout') {
      steps {
        sh '''
          mkdir -p ~/.ssh
          ssh-keyscan -t rsa github.com >> ~/.ssh/known_hosts
          '''
        git branch: 'GROUP-D', url: 'git@github.com:women-techsters-fellowship/november_mini_project.git'
      }
    }

    stage('Build Docker Image') {
      steps {
        script {
          docker.build("${DOCKER_IMAGE}")
        }
      }
    }
  }
}
```

```
Dec 16 1:16 AM
sirah@ubuntu1: ~/november_mini_project

stage('Checkout') {
  steps {
    sh '''
      mkdir -p ~/.ssh
      ssh-keyscan -t rsa github.com >> ~/.ssh/known_hosts
    '''
    git branch: 'GROUP-D', url: 'git@github.com:women-techsters-fellowship/november_mini_project.git'
  }
}

stage('Build Docker Image') {
  steps {
    script {
      docker.build("${DOCKER_IMAGE}")
    }
  }
}

stage('Push to Docker Hub') {
  steps {
    script {
      docker.withRegistry('https://index.docker.io/v1/', "dockerhub-creds") {
        docker.image("${DOCKER_IMAGE}").push()
      }
    }
  }
}

stage('Deploy to EC2') {
  steps {
    sshagent(['ec2-ssh-key']) {
      sh """
```

```
Dec 16 1:16 AM
sirah@ubuntu1: ~/november_mini_project

    }
  }

stage('Deploy to EC2') {
  steps {
    sshagent(['ec2-ssh-key']) {
      sh """
        ssh -o StrictHostKeyChecking=no ${EC2_USER}@${EC2_HOST} '

          # Install Docker if missing
          if ! command -v docker &> /dev/null; then
            sudo apt-get update
            sudo apt-get install -y docker.io
            sudo usermod -aG docker ubuntu
          fi

          # Pull latest image
          sudo docker pull ${DOCKER_IMAGE}

          # Stop old container
          sudo docker rm -f python_app || true

          # Run new container with correct port mapping
          sudo docker run -d --name python_app \\
            -p ${APP_PORT_HOST}:${APP_PORT_CONTAINER} \\
            ${DOCKER_IMAGE}

        '
      """
    }
  }
}
```

```
Dec 16 1:16 AM
sirah@ubuntu1: ~/november_mini_project

    sudo apt-get install -y docker.io
    sudo usermod -aG docker ubuntu
fi

# Pull latest image
sudo docker pull ${DOCKER_IMAGE}

# Stop old container
sudo docker rm -f python_app || true

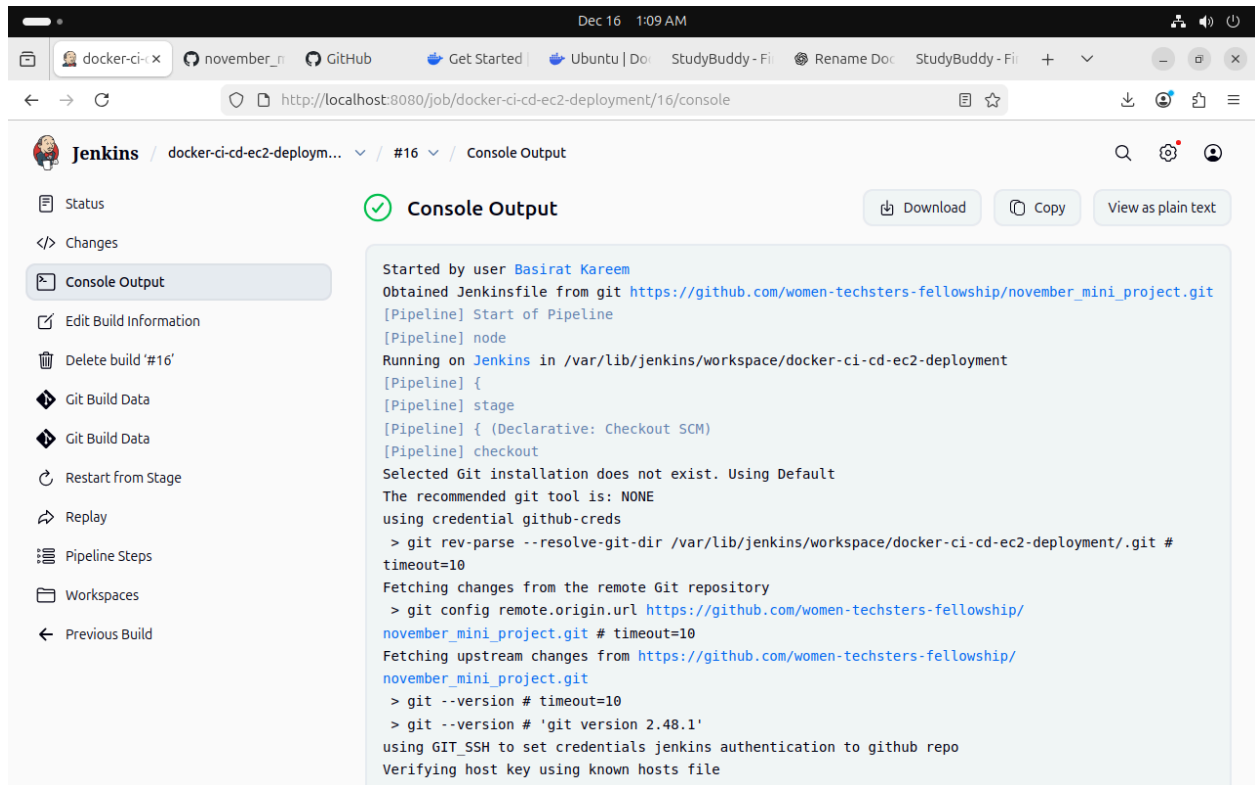
# Run new container with correct port mapping
sudo docker run -d --name python_app \\\
-p ${APP_PORT_HOST}:${APP_PORT_CONTAINER} \\\
${DOCKER_IMAGE}

'''
'''
}
}
}
}
}

post {
    success {
        echo "Deployment successful!"
    }
    failure {
        echo "Deployment failed."
    }
}
}

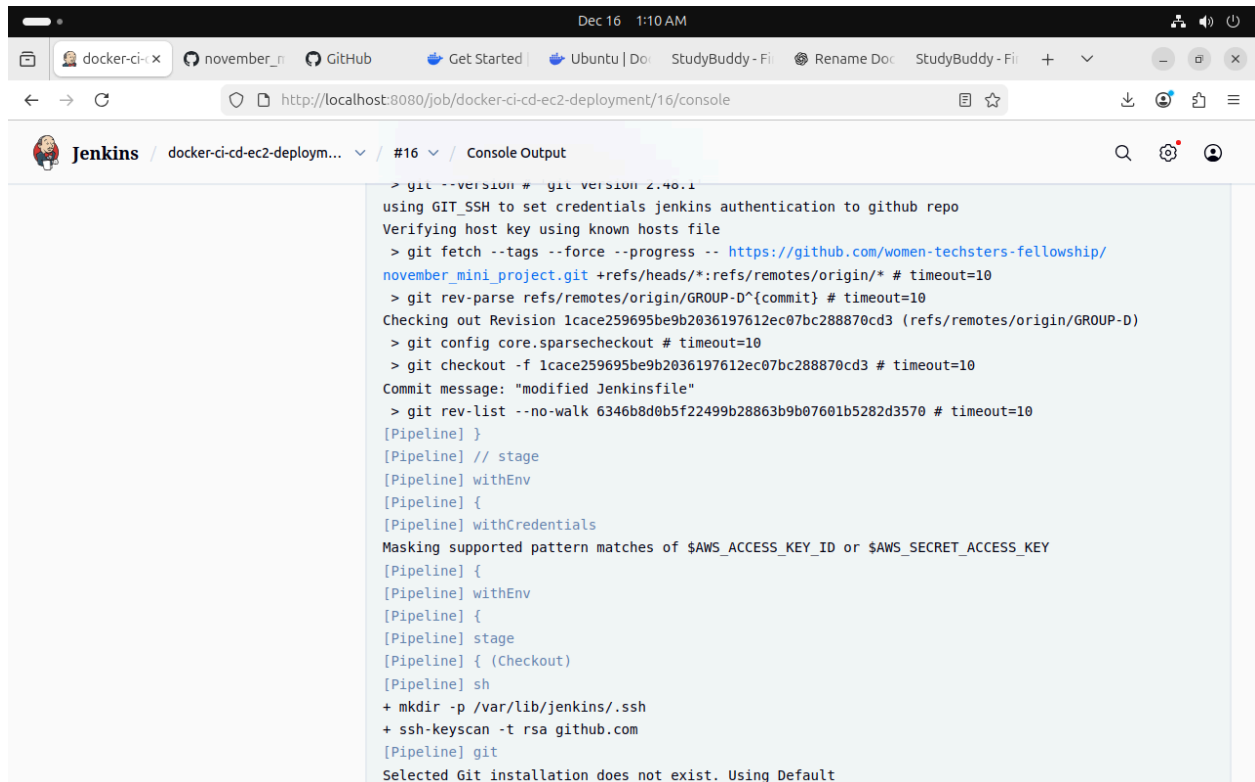
sirah@ubuntu1:~/november_mini_project$
```

SCREENSHOT OF JENKINS JOB OUTPUT



This screenshot shows the Jenkins web interface for job #16. The left sidebar contains navigation links: Status, Changes, Console Output (selected), Edit Build Information, Delete build '#16', Git Build Data, Restart from Stage, Replay, Pipeline Steps, Workspaces, and Previous Build. The main area displays the 'Console Output' with a green checkmark icon and buttons for Download, Copy, and View as plain text. The output text shows the start of a pipeline run by user Basirat Kareem, including checkout and fetch commands.

```
Started by user Basirat Kareem
Obtained Jenkinsfile from git https://github.com/women-techsters-fellowship/november_mini_project.git
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in /var/lib/jenkins/workspace/docker-ci-cd-ec2-deployment
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Declarative: Checkout SCM)
[Pipeline] checkout
Selected Git installation does not exist. Using Default
The recommended git tool is: NONE
using credential github-creds
> git rev-parse --resolve-git-dir /var/lib/jenkins/workspace/docker-ci-cd-ec2-deployment/.git #
timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/women-techsters-fellowship/
november_mini_project.git # timeout=10
Fetching upstream changes from https://github.com/women-techsters-fellowship/
november_mini_project.git
> git --version # timeout=10
> git --version # 'git version 2.48.1'
using GIT_SSH to set credentials jenkins authentication to github repo
Verifying host key using known hosts file
```



This screenshot shows the continuation of the Jenkins console output for job #16. The output text continues from the previous stage, showing fetch, checkout, and checkout commands, followed by a commit message and a rev-list command.

```
> git --version # 'git version 2.48.1'
using GIT_SSH to set credentials jenkins authentication to github repo
Verifying host key using known hosts file
> git fetch --tags --force --progress -- https://github.com/women-techsters-fellowship/
november_mini_project.git +refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/GROUP-D^{commit} # timeout=10
Checking out Revision 1cace259695be9b2036197612ec07bc288870cd3 (refs/remotes/origin/GROUP-D)
> git config core.sparsecheckout # timeout=10
> git checkout -f 1cace259695be9b2036197612ec07bc288870cd3 # timeout=10
Commit message: "modified Jenkinsfile"
> git rev-list --no-walk 6346b8d0b5f22499b28863b9b07601b5282d3570 # timeout=10
[Pipeline] }
[Pipeline] // stage
[Pipeline] withEnv
[Pipeline] {
[Pipeline] withCredentials
Masking supported pattern matches of $AWS_ACCESS_KEY_ID or $AWS_SECRET_ACCESS_KEY
[Pipeline] {
[Pipeline] withEnv
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Checkout)
[Pipeline] sh
+ mkdir -p /var/lib/jenkins/.ssh
+ ssh-keyscan -t rsa github.com
[Pipeline] git
Selected Git installation does not exist. Using Default
```

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← → ↻ http://localhost:8080/job/docker-ci-cd-ec2-deployment/16/console

Jenkins / docker-ci-cd-ec2-deploy... / #16 / Console Output

```
The recommended git tool is: NONE
No credentials specified
> git rev-parse --resolve-git-dir /var/lib/jenkins/workspace/docker-ci-cd-ec2-deployment/.git #
timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url git@github.com:women-techsters-fellowship/november_mini_project.git #
timeout=10
Fetching upstream changes from git@github.com:women-techsters-fellowship/november_mini_project.git
> git --version # timeout=10
> git --version # 'git version 2.48.1'
> git fetch --tags --force --progress -- git@github.com:women-techsters-fellowship/
november_mini_project.git +refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/GROUP-D^{commit} # timeout=10
Checking out Revision 1cace259695be9b2036197612ec07bc288870cd3 (refs/remotes/origin/GROUP-D)
> git config core.sparsecheckout # timeout=10
> git checkout -f 1cace259695be9b2036197612ec07bc288870cd3 # timeout=10
> git branch -a -v --no-abbrev # timeout=10
> git branch -D GROUP-D # timeout=10
> git checkout -b GROUP-D 1cace259695be9b2036197612ec07bc288870cd3 # timeout=10
Commit message: "modified Jenkinsfile"
> git rev-list --no-walk 6346b8d0b5f22499b28863b9b07601b5282d3570 # timeout=10
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Build Docker Image)
[Pipeline] script
[Pipeline] {
```

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← → ↻ http://localhost:8080/job/docker-ci-cd-ec2-deployment/16/console

Jenkins / docker-ci-cd-ec2-deploy... / #16 / Console Output

```
[Pipeline] { (Build Docker Image)
[Pipeline] script
[Pipeline] {
[Pipeline] isUnix
[Pipeline] withEnv
[Pipeline] {
[Pipeline] sh
+ docker build -t syrha/november_mini_project:amd64 .
#0 building with "default" instance using docker driver

#1 [internal] load build definition from Dockerfile
#1 transferring dockerfile: 1.12kB 0.0s done
#1 DONE 0.0s

#2 [internal] load metadata for docker.io/library/python:3.11-slim
#2 DONE 2.5s

#3 [internal] load .dockerignore
#3 transferring context: 0.0s
#3 transferring context: 2B 0.0s done
#3 DONE 0.1s

#4 [1/6] FROM docker.io/library/python:3.11-
slim@sha256:158caf0e080e2cd74ef2879ed3c4e697792ee65251c8208b7afb56683c32ea6c
#4 DONE 0.0s

#5 [internal] load build context
```

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http://localhost:8080/job/docker-ci-cd-ec2-deployment/16/console

Jenkins / docker-ci-cd-ec2-deploy... / #16 / Console Output

```
#3 transferring context: 0.0s
#3 transferring context: 2B 0.0s done
#3 DONE 0.1s

#4 [1/6] FROM docker.io/library/python:3.11-slim@sha256:158caf0e880e2cd74ef2879ed3c4e697792ee65251c8208b7afb56683c32ea6c
#4 DONE 0.0s

#5 [internal] load build context
#5 transferring context: 45.05MB 1.2s done
#5 DONE 1.3s

#6 [2/6] RUN apt-get update && apt-get install -y build-essential gcc libjpeg62-turbo-dev
zlib1g-dev libpng-dev libfreetype6-dev liblcms2-dev libopenjp2-7-dev libtiff5-dev
tk-dev libwebp-dev && rm -rf /var/lib/apt/lists/*
#6 CACHED

#7 [3/6] WORKDIR /app
#7 CACHED

#8 [4/6] COPY requirements.txt .
#8 DONE 0.2s

#9 [5/6] RUN pip3 install --no-cache-dir -r requirements.txt
#9 8.989 Collecting asgiref==3.4.1 (from -r requirements.txt (line 1))
#9 9.669 Downloading asgiref-3.4.1-py3-none-any.whl.metadata (9.2 kB)
```

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http://localhost:8080/job/docker-ci-cd-ec2-deployment/16/console

Jenkins / docker-ci-cd-ec2-deploy... / #16 / Console Output

```
#6 [2/6] RUN apt-get update && apt-get install -y build-essential gcc libjpeg62-turbo-dev
zlib1g-dev libpng-dev libfreetype6-dev liblcms2-dev libopenjp2-7-dev libtiff5-dev
tk-dev libwebp-dev && rm -rf /var/lib/apt/lists/*
#6 CACHED

#7 [3/6] WORKDIR /app
#7 CACHED

#8 [4/6] COPY requirements.txt .
#8 DONE 0.2s

#9 [5/6] RUN pip3 install --no-cache-dir -r requirements.txt
#9 8.989 Collecting asgiref==3.4.1 (from -r requirements.txt (line 1))
#9 9.669 Downloading asgiref-3.4.1-py3-none-any.whl.metadata (9.2 kB)
#9 9.907 Collecting autopep8==1.5.7 (from -r requirements.txt (line 2))
#9 10.06 Downloading autopep8-1.5.7-py2.py3-none-any.whl.metadata (16 kB)
#9 11.21 Collecting Django==3.2.7 (from -r requirements.txt (line 3))
#9 11.37 Downloading Django-3.2.7-py3-none-any.whl.metadata (3.9 kB)
#9 11.72 Collecting django-cors-headers==3.8.0 (from -r requirements.txt (line 4))
#9 11.88 Downloading django_cors_headers-3.8.0-py3-none-any.whl.metadata (15 kB)
#9 12.17 Collecting djangorestframework==3.12.4 (from -r requirements.txt (line 5))
#9 12.33 Downloading djangorestframework-3.12.4-py3-none-any.whl.metadata (9.9 kB)
#9 13.24 Collecting Pillow==8.3.2 (from -r requirements.txt (line 6))
#9 13.40 Downloading Pillow-8.3.2.tar.gz (48.8 MB)
#9 59.29 ----- 48.8/48.8 MB 840.7 kB/s eta 0:00:00
#9 61.87 Preparing metadata (setup.py): started
```

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```
#9 63.32 Preparing metadata (setup.py): finished with status 'done'
#9 63.57 Collecting pycodestyle==2.7.0 (from -r requirements.txt (line 7))
#9 63.74 Downloading pycodestyle-2.7.0-py2.py3-none-any.whl.metadata (30 kB)
#9 64.08 Collecting pytz==2021.1 (from -r requirements.txt (line 8))
#9 64.24 Downloading pytz-2021.1-py2.py3-none-any.whl.metadata (21 kB)
#9 64.49 Collecting sqlparse==0.4.2 (from -r requirements.txt (line 9))
#9 64.64 Downloading sqlparse-0.4.2-py3-none-any.whl.metadata (3.4 kB)
#9 64.84 Collecting toml==0.10.2 (from -r requirements.txt (line 10))
#9 64.99 Downloading toml-0.10.2-py2.py3-none-any.whl.metadata (7.1 kB)
#9 65.39 Downloading asgiref-3.4.1-py3-none-any.whl (25 kB)
#9 65.56 Downloading autopep8-1.5.7-py2.py3-none-any.whl (45 kB)
#9 65.59 _____ 45.0/45.0 kB 2.3 MB/s eta 0:00:00
#9 65.75 Downloading Django-3.2.7-py3-none-any.whl (7.9 MB)
#9 74.44 _____ 7.9/7.9 MB 910.9 kB/s eta 0:00:00
#9 74.60 Downloading django_cors_headers-3.8.0-py3-none-any.whl (12 kB)
#9 74.76 Downloading djangoorestframework-3.12.4-py3-none-any.whl (957 kB)
#9 75.70 _____ 957.7/957.7 kB 1.0 MB/s eta 0:00:00
#9 75.89 Downloading pycodestyle-2.7.0-py2.py3-none-any.whl (41 kB)
#9 75.89 _____ 41.7/41.7 kB 282.3 MB/s eta 0:00:00
#9 76.04 Downloading pytz-2021.1-py2.py3-none-any.whl (510 kB)
#9 76.56 _____ 510.8/510.8 kB 993.4 kB/s eta 0:00:00
#9 76.73 Downloading sqlparse-0.4.2-py3-none-any.whl (42 kB)
#9 76.78 _____ 42.3/42.3 kB 859.8 kB/s eta 0:00:00
#9 76.96 Downloading toml-0.10.2-py2.py3-none-any.whl (16 kB)
#9 77.11 Building wheels for collected packages: Pillow
#9 77.12 Building wheel for Pillow (setup.py): started
#9 137.9 Building wheel for Pillow (setup.py): still running...
```

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← → ↺ http://localhost:8080/job/docker-ci-cd-ec2-deployment/16/console

Jenkins / docker-ci-cd-deploy... #16 / Console Output

```
#9 76.73 Downloading sqlparse-0.4.2-py3-none-any.whl (42 kB)
#9 76.78 _____ 42.3/42.3 kB 859.8 kB/s eta 0:00:00
#9 76.96 Downloading toml-0.10.2-py2.py3-none-any.whl (16 kB)
#9 77.11 Building wheels for collected packages: Pillow
#9 77.12 Building wheel for Pillow (setup.py): started
#9 137.9 Building wheel for Pillow (setup.py): still running...
#9 149.6 Building wheel for Pillow (setup.py): finished with status 'done'
#9 149.6 Created wheel for Pillow: filename=pillow-8.3.2-cp311-cp311-linux_aarch64.whl size=1349829
sha256=c29c5e74ba646316bd55ab35b76751b2ba9de4405fbb42dd29da30da0769d79e
#9 149.6 Stored in directory: /tmp/pip-ephem-wheel-cache-5c8ffxkv/wheels/
b7/42/63/77ac30adf908e40326191e7134909628bb6e242aac46e749b4
#9 149.7 Successfully built Pillow
#9 149.9 Installing collected packages: pytz, toml, sqlparse, pycodestyle, Pillow, asgiref, Django,
autopep8, djangoorestframework, django-cors-headers
#9 154.4 WARNING: Running pip as the 'root' user can result in broken permissions and conflicting
behaviour with the system package manager. It is recommended to use a virtual environment instead:
https://pip.pypa.io/warnings/venv
#9 154.4 Successfully installed Django-3.2.7 Pillow-8.3.2 asgiref-3.4.1 autopep8-1.5.7 django-cors-
headers-3.8.0 djangoorestframework-3.12.4 pycodestyle-2.7.0 pytz-2021.1 sqlparse-0.4.2 toml-0.10.2
#9 155.3
#9 155.3 [notice] A new release of pip is available: 24.0 -> 25.3
#9 155.3 [notice] To update, run: pip install --upgrade pip
#9 DONE 155.9s

#10 [6/6] COPY . .
#10 DONE 0.9s
```

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http://localhost:8080/job/docker-ci-cd-ec2-deployment/16/console

Jenkins / docker-ci-cd-ec2-deploy... / #16 / Console Output

```
#10 [6/6] COPY . .
#10 DONE 0.9s

#11 exporting to image
#11 exporting layers
#11 exporting layers 4.9s done
#11 writing image sha256:17fa539749eb234b699b3a35d8dd1146c24143c1903a9e737c701d0d050382346 0.0s done
#11 naming to docker.io/syrha/november_mini_project:amd64 0.0s done
#11 DONE 5.0s
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // script
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Push to Docker Hub)
[Pipeline] script
[Pipeline] {
[Pipeline] withEnv
[Pipeline] {
[Pipeline] withDockerRegistry
$ docker login -u syrha -p ***** https://index.docker.io/v1/
WARNING! Using --password via the CLI is insecure. Use --password-stdin.

WARNING! Your credentials are stored unencrypted in '/var/lib/jenkins/workspace/docker-ci-cd-ec2-
denlment@tmp/dacff4ec-9d9d-4a9c-a836-3187d16e56d3/config.json'
```

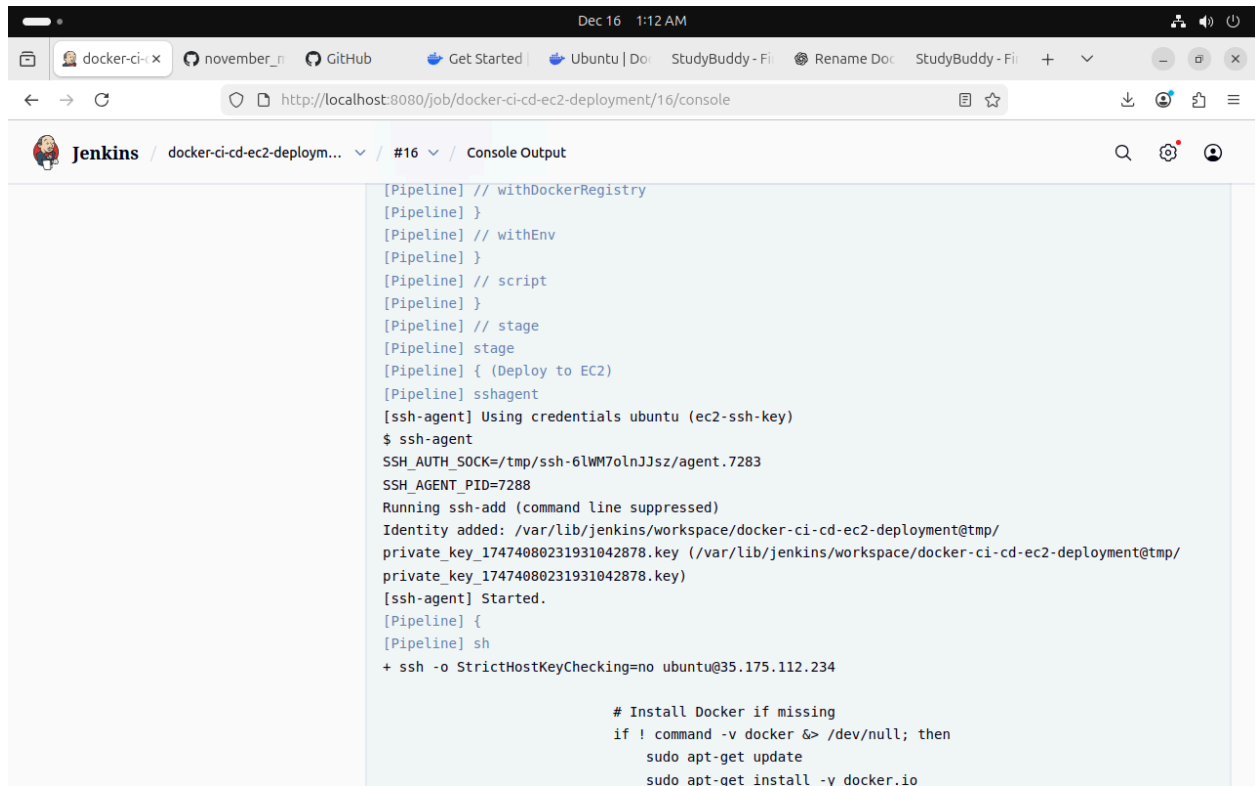
Dec 16 1:12 AM

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http://localhost:8080/job/docker-ci-cd-ec2-deployment/16/console

Jenkins / docker-ci-cd-ec2-deploy... / #16 / Console Output

```
Login Succeeded
[Pipeline] {
[Pipeline] isUnix
[Pipeline] withEnv
[Pipeline] {
[Pipeline] sh
+ docker tag syrha/november_mini_project:amd64 index.docker.io/syrha/november_mini_project:amd64
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] isUnix
[Pipeline] withEnv
[Pipeline] {
[Pipeline] sh
+ docker push index.docker.io/syrha/november_mini_project:amd64
The push refers to repository [docker.io/syrha/november_mini_project]
cab3bc25ad04: Preparing
4ee400ea1936: Preparing
1c48639fb735: Preparing
19cf42df065b: Preparing
61526b7da0f2: Preparing
ccd7ffd0cc2b: Preparing
4d7c3b3e69ba: Preparing
631a84bae701: Preparing
ccd7ffd0cc2b: Waiting
4d7c3b3e69ba: Waiting
631a84bae701: Waiting
```

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docker-ci-x november_n GitHub Get Started Ubuntu | Do StudyBuddy - Fi Rename Doc StudyBuddy - Fi +

← → ↺ http://localhost:8080/job/docker-ci-cd-ec2-deployment/16/console

Jenkins / docker-ci-cd-ec2-deploy... #16 / Console Output

```
if ! command -v docker &> /dev/null; then
    sudo apt-get update
    sudo apt-get install -y docker.io
    sudo usermod -aG docker ubuntu
fi

# Pull latest image
sudo docker pull syrha/november_mini_project:amd64

# Stop old container
sudo docker rm -f python_app || true

# Run new container with correct port mapping
sudo docker run -d --name python_app \
-p 8082:8000 \
syrha/november_mini_project:amd64

amd64: Pulling from syrha/november_mini_project
f626fba1463b: Already exists
7bf6e8047453: Already exists
faa8861819f0: Already exists
913c05e4a1c0: Already exists
2d26c1608ad1: Pulling fs layer
d1688cd11db9: Pulling fs layer
e47e7360b484: Pulling fs layer
08d5a916ha9d: Pulling fs layer
```

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← → ↺ http://localhost:8080/job/docker-ci-cd-ec2-deployment/16/console

Jenkins / docker-ci-cd-ec2-deploy... #16 / Console Output

```
$ ssh-agent -k
unset SSH_AUTH_SOCK;
unset SSH_AGENT_PID;
echo Agent pid 7288 killed;
[ssh-agent] Stopped.
[Pipeline] // sshagent
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Declarative: Post Actions)
[Pipeline] echo
Deployment successful!
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // withCredentials
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

EC2 IP/PORT

35.175.112.234:8082