

TASK 2

Step 1: Open Jenkins and click "**New Item.**"

Step 2: Enter a project name, select "**Pipeline,**" then click **OK.**

Step 3: In the **General** tab, scroll down to the "**Pipeline**" section.

Step 4: Under "**Definition,**" select "**Pipeline script from SCM.**"

Step 5: In the **SCM** field, choose "**Git,**" then enter your GitHub repository URL.

Step 6: Ensure your GitHub repository contains the following files:

- app.py (Application code)
- Dockerfile (Instructions to build the Docker image)
- docker-compose.yml (For container orchestration)
- Jenkinsfile (Defines the pipeline stages)
- requirements.txt (Dependencies for the application)

Step 7: Click "**Save**" to apply the configuration.

Step 8: On the project page, click "**Build Now**" to start the job.

Step 9: The build status will appear in the **Build History** panel (left-side panel).

Step 10: Click on the latest build (#1, #2, etc.) and select "**Console Output**" to view logs and results.

Mar 21 03:33

CICD-PIPELINE #12 Console | Inbox (1,821) - midhunraji | +

localhost:8080/job/CICD-PIPELINE/12/console

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Dashboard > CICD-PIPELINE > #12

Status

Changes

Console Output

Edit Build Information

Delete build '#12'

Timings

Git Build Data

Pipeline Overview

Pipeline Console

Replay

Pipeline Steps

Workspaces

Previous Build

Console Output

```
Started by user MITHUN
Obtained Jenkinsfile from git https://github.com/MIDHUNRAJ-B/Jenkins
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in /var/lib/jenkins/workspace/CICD-PIPELINE
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Declarative: Checkout SCM)
[Pipeline] checkout
Selected Git installation does not exist. Using Default
The recommended git tool is: NONE
No credentials specified
> git rev-parse --resolve-git-dir /var/lib/jenkins/workspace/CICD-PIPELINE/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/MIDHUNRAJ-B/Jenkins # timeout=10
Fetching upstream changes from https://github.com/MIDHUNRAJ-B/Jenkins
> git --version # timeout=10
> git --version # 'git version 2.43.0'
> git fetch --tags --force --progress -- https://github.com/MIDHUNRAJ-B/Jenkins +refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse origin/main^{commit} # timeout=10
Checking out Revision 7f6e9448fecd4214fa09e4e19e2fd6cde1b6895c (origin/main)
> git config core.sparsecheckout # timeout=10
> git checkout -f 7f6e9448fecd4214fa09e4e19e2fd6cde1b6895c # timeout=10
Commit message: "Update and rename docker-compose(1).yaml to docker-compose.yaml"
> git rev-list --no-walk 7f6e9448fecd4214fa09e4e19e2fd6cde1b6895c # timeout=10
[Pipeline] }
[Pipeline] // stage
[Pipeline] withEnv
[Pipeline] {
[Pipeline] withEnv
[Pipeline] {
```

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localhost:8080/job/CICD-PIPELINE/12/console

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Dashboard > CICD-PIPELINE > #12

```
[Pipeline] script
[Pipeline] {
[Pipeline] sh
+ docker build -t midhunraji13/my-app:latest .
#0 building with "default" instance using docker driver

#1 [internal] load build definition from Dockerfile
#1 transferring dockerfile: 30B 0.0s
#1 transferring dockerfile: 471B 0.0s done
#1 DONE 0.1s

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

#3 [auth] library/python:pull token for registry-1.docker.io
#3 DONE 0.0s

#2 [internal] load metadata for docker.io/library/python:3.11-slim
#2 DONE 2.4s

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

#5 [1/5] FROM docker.io/library/python:3.11-slim@sha256:7029b00486ac40bed03e36775b864d3f3d39dcdbf19cd45e6a52d541e6c178f0
#5 DONE 0.0s

#6 [internal] load build context
#6 transferring context: 8.40kB 0.1s done
#6 DONE 0.2s

#7 [2/5] WORKDIR /app
#7 CACHED

#8 [3/5] COPY requirements.txt /app/
#8 CACHED

#9 [4/5] RUN pip install --no-cache-dir -r requirements.txt
#9 CACHED

#10 [5/5] COPY . /app
```

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CICD-PIPELINE #12 Cons...

localhost:8080/job/CICD-PIPELINE/12/console

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Dashboard > CICD-PIPELINE > #12

```
#10 [5/5] COPY . /app
#10 DONE 0.4s

#11 exporting to image
#11 exporting layers
#11 exporting layers 0.2s done
#11 writing image sha256:0c2b199558296a5259a72de34810edb43aa4cab8ef33503f62857ce843b0c9a3 0.0s done
#11 naming to docker.io/midhunraj13/my-app:latest 0.0s done
#11 DONE 0.3s

[Pipeline] }
[Pipeline] // script
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Login to Docker Registry)
[Pipeline] script
[Pipeline] {
[Pipeline] sh
+ echo midhun1365
+ docker login -u midhunraj13 --password-stdin
Login Succeeded
[Pipeline] }
[Pipeline] // script
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Push Image to Docker Registry)
[Pipeline] script
[Pipeline] {
[Pipeline] sh
+ docker push midhunraj13/my-app:latest
The push refers to repository [docker.io/midhunraj13/my-app]
477bd6c0af8f: Preparing
29536c022e74: Preparing
e16d26bbb4a6: Preparing
77d134be71e2: Preparing
e394b4c0757a: Preparing
97d879c3dfa3: Preparing
e2f88fe30c9c: Preparing
```

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CICD-PIPELINE #12 Cons...

localhost:8080/job/CICD-PIPELINE/12/console

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Dashboard > CICD-PIPELINE > #12

```
e2f88fe30c9c: Waiting
1287fbecdfcc: Waiting
29536c022e74: Layer already exists
77d134be71e2: Layer already exists
e16d26bbb4a6: Layer already exists
e394b4c0757a: Layer already exists
1287fbecdfcc: Layer already exists
e2f88fe30c9c: Layer already exists
97d879c3dfa3: Layer already exists
477bd6c0af8f: Pushed
latest: digest: sha256:2b95a35f2d3f9d546f8eac7314c7918c5c3ba4550df4675922100bfe92ca7a16 size: 1992
[Pipeline] }
[Pipeline] // script
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Deploy using Docker Compose)
[Pipeline] script
[Pipeline] {
[Pipeline] sh
+ docker-compose up -d
Creating network "cicd-pipeline_default" with the default driver
Pulling redis (redis:alpine)...
alpine: Pulling from library/redis
Digest: sha256:02419de7eddf55aa5bcf49efb74e88fa8d931b4d77c07eff8a6b2144472b6952
Status: Downloaded newer image for redis:alpine
Pulling db (postgres:alpine)...
alpine: Pulling from library/postgres
Digest: sha256:7062a2109c4b51f3c792c7ea01e83ed12ef9a980886e3b3d380a7d2e5f6ce3f5
Status: Downloaded newer image for postgres:alpine
Building app
#0 building with "default" instance using docker driver

#1 [internal] load build definition from Dockerfile
#1 transferring dockerfile: 471B 0.0s done
#1 DONE 0.1s

#2 [internal] load metadata for docker.io/library/python:3.11-slim
#2 DONE 1.4s
```

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CICD-PIPELINE #12 Console

localhost:8080/job/CICD-PIPELINE/12/console

Dashboard > CICD-PIPELINE > #12

```
[Pipeline] withEnv
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Checkout Code)
[Pipeline] git
Selected Git installation does not exist. Using Default
The recommended git tool is: NONE
No credentials specified
> git rev-parse --resolve-git-dir /var/lib/jenkins/workspace/CICD-PIPELINE/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/MIDHUNRAJ-B/Jenkins # timeout=10
Fetching upstream changes from https://github.com/MIDHUNRAJ-B/Jenkins
> git --version # timeout=10
> git --version # 'git version 2.43.0'
> git fetch --tags --force --progress -- https://github.com/MIDHUNRAJ-B/Jenkins +refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/main^{commit} # timeout=10
Checking out Revision 7f6e9448fecd4214fa09e4e19e2fd6cde1b6895c (refs/remotes/origin/main)
> git config core.sparsecheckout # timeout=10
> git checkout -f 7f6e9448fecd4214fa09e4e19e2fd6cde1b6895c # timeout=10
> git branch -a -v --no-abbrev # timeout=10
> git branch -D main # timeout=10
> git checkout -b main 7f6e9448fecd4214fa09e4e19e2fd6cde1b6895c # timeout=10
Commit message: "Update and rename docker-compose(1).yaml to docker-compose.yaml"
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Build Docker Image)
[Pipeline] script
[Pipeline] {
[Pipeline] sh
+ docker build -t midhunraj13/my-app:latest .
#0 building with "default" instance using docker driver

#1 [internal] load build definition from Dockerfile
#1 transferring dockerfile: 38B 0.0s
#1 transferring dockerfile: 471B 0.0s done
#1 DONE 0.1s

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

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CICD-PIPELINE #12 Console

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localhost:8080/job/CICD-PIPELINE/12/console

Dashboard > CICD-PIPELINE > #12

```
#7 [3/5] COPY requirements.txt /app/
#7 CACHED

#8 [4/5] RUN pip install --no-cache-dir -r requirements.txt
#8 CACHED

#9 [5/5] COPY . /app
#9 CACHED

#10 exporting to image
#10 exporting layers done
#10 writing image sha256:10c2b199558296a5259a72de34810ed43aa4cab8ef33503f62857ce843b0c9a3 done
#10 naming to docker.io/library/cicd-pipeline_app 0.0s done
#10 DONE 0.1s
Image for service app was built because it did not already exist. To rebuild this image you must use `docker-compose build` or `docker-compose up --build`.
Creating cicd-pipeline_redis_1 ...
Creating cicd-pipeline_db_1 ...
Creating cicd-pipeline_redis_1 ... done
Creating cicd-pipeline_db_1 ... done
Creating cicd-pipeline_app_1 ...
Creating cicd-pipeline_app_1 ... done
[Pipeline] }
[Pipeline] // script
[Pipeline] }
[Pipeline] // stage
[Pipeline] { (Declarative: Post Actions)
[Pipeline] echo
Pipeline executed successfully!
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

