

# UE23CS351B : Cloud Computing

LAB - 06

DATE: 26/02/2026

NAME:BHAVANI	SRN:PES2UG23CS125	SEC:B
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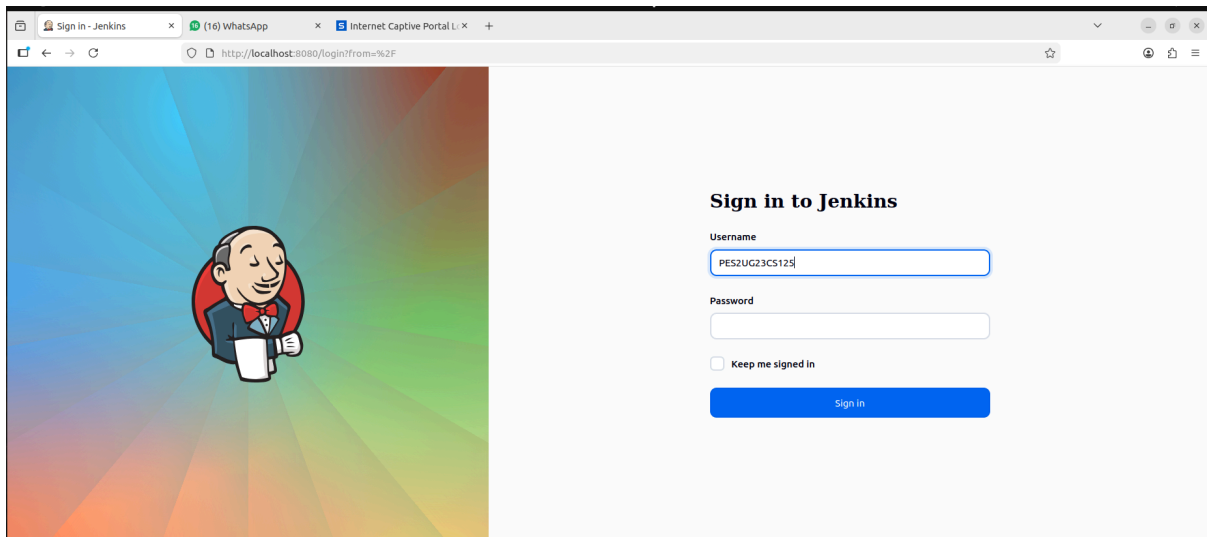
## Task 1: SS1)

```
pes2ug23cs125@pes2ug23cs125:~$ docker pull jenkins/jenkins:its
its: Pulling from jenkins/jenkins
a2375846a225: Pull complete
967448ab02b0: Pull complete
7eb8b3c92c08: Pull complete
33c88f4df4eb7: Pull complete
24446a3c816: Pull complete
1354b1aa1de9: Pull complete
f63b11f22c5e: Pull complete
8c31487ae971: Pull complete
650135881854: Pull complete
3c9c6b56010: Pull complete
5681e84d3308: Pull complete
f783dc6a915: Pull complete
9b156237551b: Download complete
Digest: sha256:23b84d1066dbee9f2c17288c83ac071127092d726f14b3b8044d868468619c7
Status: Downloaded newer image for jenkins/jenkins:its
docker.io/jenkins/jenkins:its
pes2ug23cs125@pes2ug23cs125:~$ docker run -d \
--name jenkins \
-p 8080:8080 \
-p 50000:50000 \
-v jenkins_home:/var/jenkins_home \
-v /var/run/docker.sock:/var/run/docker.sock \
--user root \
jenkins/jenkins:its
9340dc9d8e84b9b2f4342c0ab210c8554ed1786a2a942e980ec388f8e0b3e1
pes2ug23cs125@pes2ug23cs125:~$ docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED       STATUS       PORTS
9340dc9d8e84  jenkins/jenki "/usr/bin/tini -- /u..." 15 seconds ago Up 14 seconds 0.0.0.0:8080->8080/tcp, [::]:8080->8080/tcp, 0.0.0.0:50000->50000/tcp, [::]:50000->50000/tcp
pes2ug23cs125@pes2ug23cs125:~$ docker exec jenkins cat /var/jenkins_home/secrets/initialAdminPassword
fa9e93e57098481a8059d5d9c5ab032f
pes2ug23cs125@pes2ug23cs125:~$
```

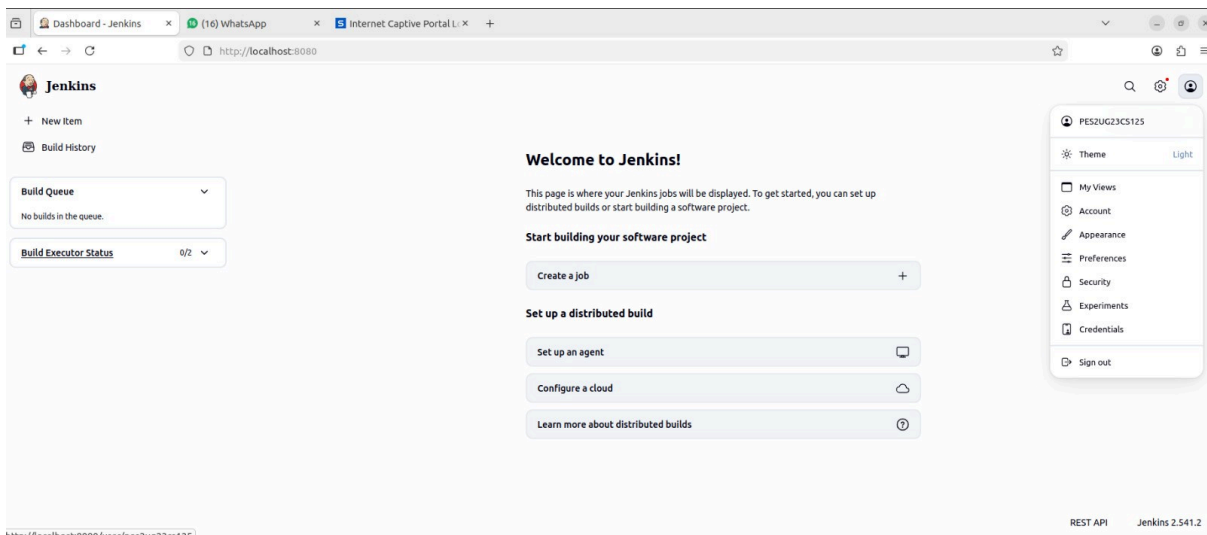
### Getting Started

# Getting Started

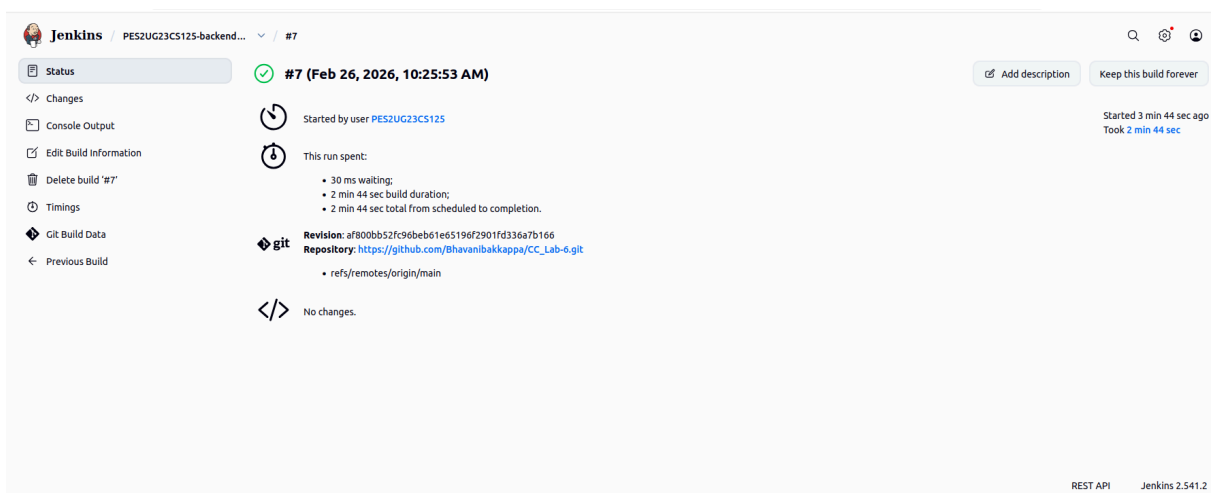
✓ Folders	✓ OWASP Markup Formatter	✓ Build Timeout	✓ Credentials Binding	** commons-lang3 v3.x Jenkins API ** Ionicons API
✓ Timestampers	⌚ Workspace Cleanup	⌚ Ant	⌚ Gradle	Folders
⌚ Pipeline	⌚ GitHub Branch Source	⌚ Pipeline: GitHub Groovy Libraries	⌚ Pipeline Graph View	OWASP Markup Formatter
⌚ Git	⌚ SSH Build Agents	⌚ Matrix Authorization Strategy	⌚ LDAP	** ASM API
⌚ Email Extension	⌚ Mailer	⌚ Dark Theme		** JSON Path API
				** Struts
				** Pipeline: Step API
				** commons-text API
				** Token Macro
				Build Timeout
				** bouncecast API
				** Credentials
				** Plain Credentials
				** Variant
				** SSH Credentials
				Credentials Binding
				** SCM API
				** Pipeline: API
				Timestampers
				** Caffeine API
				** Script Security
				** JavaBeans Activation Framework (JAF) API
				** - required dependency



SS2)



Task 2:  
SS3)



Jenkins

PES2UG23CS125-backend...

#7

Status

Changes

Console Output

Edit Build Information

Delete build '#7'

Timings

Git Build Data

Previous Build

Console

Download

Copy

View as plain text

Started by user PES2UG23CS125

Running as SYSTEM

Building in workspace /var/jenkins\_home/workspace/PES2UG23CS125-backend-build

The recommended git tool is: NONE

No credentials specified

> git rev-parse --resolve-git-dir /var/jenkins\_home/workspace/PES2UG23CS125-backend-build/.git # timeout=10

Fetching changes from the remote Git repository

> git config remote.origin.url https://github.com/Bhavanibakkappa/CC\_Lab-6.git # timeout=10

Fetching upstream changes from https://github.com/Bhavanibakkappa/CC\_Lab-6.git

> git --version # timeout=10

> git --version # 'git version 2.47.3'

> git fetch --tags --force --progress -- https://github.com/Bhavanibakkappa/CC\_Lab-6.git +refs/heads/\*:refs/remotes/origin/\* # timeout=10

> git rev-parse refs/remotes/origin/main # timeout=10

Checking out Revision af800bb52fc96beb61e65196f2901fd336a7b166 (refs/remotes/origin/main)

> git config core.sparsecheckout # timeout=10

> git checkout -f af800bb52fc96beb61e65196f2901fd336a7b166 # timeout=10

Commit message: "Initial Jenkins lab setup"

> git rev-list --no-walk af800bb52fc96beb61e65196f2901fd336a7b166 # timeout=10

[PES2UG23CS125-backend-build] \$ /bin/sh -xe /tmp/jenkins3481517135096741139.sh

+ docker build -t backend-app backend

#0 building with "default" instance using docker driver

#1 [internal] load build definition from Dockerfile

#1 transferring dockerfile: 185B 0.0s done

#1 DONE 0.0s

Jenkins

PES2UG23CS125-backend...

#7

Status

Changes

Console Output

Edit Build Information

Delete build '#7'

Timings

Git Build Data

Previous Build

Console

Download

Copy

View as plain text

#7 [3/5] WORKDIR /app

#7 DONE 0.3s

#8 [4/5] COPY app.cpp .

#8 DONE 0.1s

#9 [5/5] RUN g++ app.cpp -o app

#9 DONE 3.4s

#10 exporting to image

#10 exporting layers

#10 exporting layers 46.6s done

#10 exporting manifest sha256:424464b1a6c45629bd8f40282d6334f58375d1ee8a8307cda73cbf387cd14a8a

#10 exporting manifest sha256:424464b1a6c45629bd8f40282d6334f58375d1ee8a8307cda73cbf387cd14a8a 0.0s done

#10 exporting config sha256:71390bb03f92f3d3a112a0bc1ff83bb2b52f573bac8d224fddb089c700d9 0.0s done

#10 exporting attestation manifest sha256:5b075146557c4a1a097c2bf5f02d3d303ebb4795677c019d2315f46d16abaf 0.0s done

#10 exporting manifest list sha256:9f37b08a484db61b3b62bcbca3d12b91fed02e72cccec267f378bd68ea86f28a

#10 exporting manifest list sha256:9f37b08a484db61b3b62bcbca3d12b91fed02e72cccec267f378bd68ea86f28a 0.0s done

#10 naming to docker.io/library/backend-app:latest 0.0s done

#10 unpacking to docker.io/library/backend-app:latest

#10 unpacking to docker.io/library/backend-app:latest 17.8s done

#10 DONE 64.7s

Finished: SUCCESS

Jenkins 2.541.2

```
pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$ docker images
```

IMAGE	ID	DISK USAGE	CONTENT SIZE	EXTRA
backend-app:latest	9f37b08a484	557MB	166MB	
jenkins-docker:latest	a7c35368a468	1.83GB	560MB	U
ubuntu:22.04	3ba65aa20f86	119MB	31.5MB	

```
pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$
```

Jenkins

PES2UG23CS125-backend...

#7

Status

Changes

Workspace

Build Now

Configure

Delete Project

Git Polling Log

Rename

PES2UG23CS125-backend-build

Permalinks

- Last build (#7), 9 min 58 sec ago
- Last stable build (#7), 9 min 58 sec ago
- Last successful build (#7), 9 min 58 sec ago
- Last failed build (#6), 18 min ago
- Last unsuccessful build (#6), 18 min ago
- Last completed build (#7), 9 min 58 sec ago

Builds >

Filter

Today

#7 10:25 AM

#6 10:17 AM

#5 10:17 AM

#4 10:15 AM

#3 9:53 AM

#2 9:49 AM

SS4)

```
pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$ docker images
IMAGE                                ID                                DISK USAGE  CONTENT SIZE  EXTRA
backend-app:latest                  9f37b0a8a484                      557MB       166MB
jenkins-docker:latest               a7c35368a468                      1.83GB      560MB
ubuntu:22.04                        3ba65aa20f86                      119MB       31.5MB
pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$ docker run -d -p 5000:5000 --name backend-container backend-app
2694f6ede513dc52e99ab4119c4a3ce9603aaf4e02da8f181140689293b3a24a
pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$ docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED    STATUS    PORTS
2694f6ede513   backend-app   "/app"                  15 seconds ago   Up 14 seconds    0.0.0.0:5000->5000/tcp, [::]:5000->5000/tcp, 8080/tcp
02dd47f93379   jenkins-docker   "/usr/bin/tini -- /u..." 35 minutes ago   Up 35 minutes    0.0.0.0:8080->8080/tcp, [::]:8080->8080/tcp, 0.0.0.0:50000->50000/tcp, [::]:50000->50000/tcp
pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$
```

```
pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$ nano nginx/Dockerfile
pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$ docker build -t custom-nginx ./nginx
[+] Building 11.7s (8/8) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 104B
=> [internal] load metadata for docker.io/library/nginx:latest
=> [auth] library/nginx:pull token for registry-1.docker.io
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [internal] load build context
=> => transferring context: 216B
=> [1/2] FROM docker.io/library/nginx:latest@sha256:0236ee02dcfce00b9bd83e0f5fbc51069e7e1161bd59d99885b3ae1734f3392e
=> => resolve docker.io/library/nginx:latest@sha256:0236ee02dcfce00b9bd83e0f5fbc51069e7e1161bd59d99885b3ae1734f3392e
=> => sha256:d0b66c867e491634d63f065ef5ea556cba20a97761039f9e9d5af71442f8fbf 1.40kB / 1.40kB
=> => sha256:17d0911eaf62f5c434e54943d30dbb0d86b8ad614c80ef5ee0249ff54a3373e 1.21kB / 1.21kB
=> => sha256:eadda9fd87862df4b2eccd3da9f2e38122124dec2e4217b530bd48d809b3840b 954B / 954B
=> => sha256:35ff83c394d65bf2c49f844ba18fe2e8121fe07e1f3f92325c05246319b98f7e 405B / 405B
=> => sha256:b47f187216b68c3f90b7fb9a947a76d4bd2981a8f469cb6092e7da5d9fea014 33.14MB / 33.14MB
=> => sha256:1ad233904a1166fd3832d9657b163937f66c906795a517a87b516bc3f2481695 626B / 626B
=> => sha256:206356c42440674ecbdf1070cf70cebef7885ac2e5c56f1ecf800b758f6b0419 29.78MB / 29.78MB
=> => extracting sha256:206356c42440674ecbdf1070cf70cebef7885ac2e5c56f1ecf800b758f6b0419
=> => extracting sha256:b47f187216b68c3f90b7fb9a947a76d4bd2981a8f469cb6092e7da5d9fea014
=> => extracting sha256:1ad233904a1166fd3832d9657b163937f66c906795a517a87b516bc3f2481695
=> => extracting sha256:eadda9fd87862df4b2eccd3da9f2e38122124dec2e4217b530bd48d809b3840b
=> => extracting sha256:35ff83c394d65bf2c49f844ba18fe2e8121fe07e1f3f92325c05246319b98f7e
=> => extracting sha256:17d0911eaf62f5c434e54943d30dbb0d86b8ad614c80ef5ee0249ff54a3373e
=> => extracting sha256:d0b66c867e491634d63f065ef5ea556cba20a97761039f9e9d5af71442f8fbf
=> [2/2] COPY default.conf /etc/nginx/conf.d/default.conf
=> exporting to image
=> => exporting layers
=> => exporting manifest sha256:77a7337ae17cad16949746812ec549eeca115b6289b3899705b8e70e0ce1443e
=> => exporting config sha256:1f3757d0be23f63d75bac7c9eebc70c49a72fb77e94d9d0a6aa69e7641217396
=> => exporting attestation manifest sha256:7bbb1f1dc9d525c98d7529c14afde96ebd1ca03542b363e0c1f3aaab3b214cc
=> => exporting manifest list sha256:45086cf9d385b1158c6e58c19bb5347f5cf4c2896968cf0690b6ab723806d23e
=> => naming to docker.io/library/custom-nginx:latest
=> => unpacking to docker.io/library/custom-nginx:latest
pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$
```

```
pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$ docker images
In Use
IMAGE                                ID                                DISK USAGE  CONTENT SIZE  EXTRA
backend-app:latest                  9f37b0a8a484                      557MB       166MB      U
custom-nginx:latest                1e0a2c9fa7ec                      237MB       62.9MB      U
jenkins-docker:latest               a7c35368a468                      1.83GB      560MB      U
ubuntu:22.04                        3ba65aa20f86                      119MB       31.5MB
pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$
```

```
pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$ docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED    STATUS    PORTS
04c31ad62566   custom-nginx   "/docker-entrypoint..." 10 minutes ago   Up 10 minutes    0.0.0.0:80->80/tcp, [::]:80->80/tcp
bd7a5599e66b   backend-app   "/app"                  14 minutes ago   Up 14 minutes    8080/tcp
a1ner
02dd47f93379   jenkins-docker   "/usr/bin/tini -- /u..." About an hour ago   Up About an hour    0.0.0.0:8080->8080/tcp, [::]:8080->8080/tcp, 0.0.0.0:50000->50000/tcp, [::]:50000->50000/tcp
pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$
```

Internet Captiv... Personal Acce... Console - #6... New Tab... Internet Captiv... Problem loadin... 502 Bad Gateway... localhost/

← → ↻ http://localhost

Served by backend: bd7a5599e66b

Jenkins

+ New Item

Build History

Build Queue

No builds in the queue.

Build Executor Status

0/2

All

S

W

Name ↓

Last Success

Last Failure

Last Duration

✓ PES2UG23CS125-backend-build 44 min #7 52 min #6 2 min 44 sec

Icon: S M L

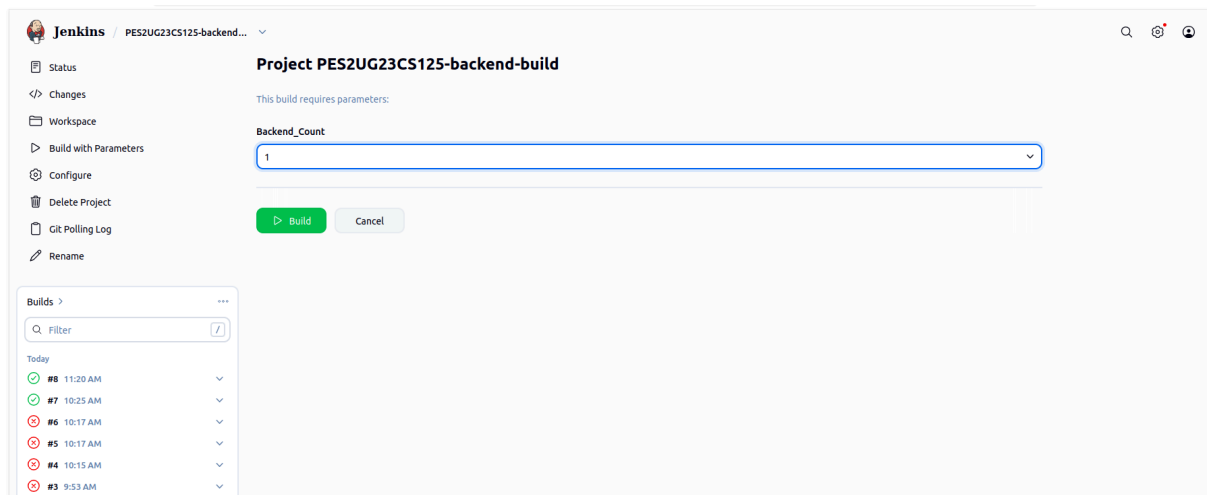
```

pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$ docker run -d --name backend-container --network lab-network backend-app
bd7a5599e66bb906e901ea35f7ad884632f45a526fb0875141b8b5f9f613445b
pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$ docker run -d -p 80:80 --name nginx-container --network lab-network custom-nginx
82b681d073d61373054395bd2a5afb5161dec3079b325f8949b09b51e51db217
pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$ docker inspect backend-container | grep NetworkMode
    "NetworkMode": "lab-network",
pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$ docker inspect nginx-container | grep NetworkMode
    "NetworkMode": "lab-network",
pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$ docker logs backend-container
Server listening on port 8080 (hostname: bd7a5599e66b)
pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$ nano nginx/default.conf
pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$ docker build -t custom-nginx ./nginx
[+] Building 2.2s (8/8) FINISHED
=> [internal] load build definition from Dockerfile
=> ==> transferring dockerfile: 104B
=> [internal] load metadata for docker.io/library/nginx:latest
=> [auth] library/nginx:pull token for registry-1.docker.io
=> [internal] load .dockerignore
=> ==> transferring context: 2B
=> [internal] load build context
=> ==> transferring context: 139B
=> CACHED [1/2] FROM docker.io/library/nginx:latest@sha256:0236ee02dcbce00b9bd83e0f5fbc51069e7e1161bd59d99885b3ae1734f3392e
=> ==> resolve docker.io/library/nginx:latest@sha256:0236ee02dcbce00b9bd83e0f5fbc51069e7e1161bd59d99885b3ae1734f3392e
=> [2/2] COPY default.conf /etc/nginx/conf.d/default.conf
=> exporting to image
=> ==> exporting layers
=> ==> exporting manifest sha256:3edea09a467430e107fbb0b0c9685e6b6e2f7b71fe104a936585fa4a344d2cea
=> ==> exporting config sha256:4a889154a85cd3d7558c53ad0f84a558a590ade999a78473e605305833fb3442
=> ==> exporting attestation manifest sha256:e5254f9d38d65aef5cc2423d79a6a6be25b9a65cbe2387f89726a24c46d2cc22
=> ==> exporting manifest list sha256:1e0a2c9fa7ec5c8e94abac84f0aa1f8183f66a284026da6cdb7fe855df9eb3a9
=> ==> naming to docker.io/library/custom-nginx:latest
=> ==> unpacking to docker.io/library/custom-nginx:latest
pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$ docker ctup nginx-container

```

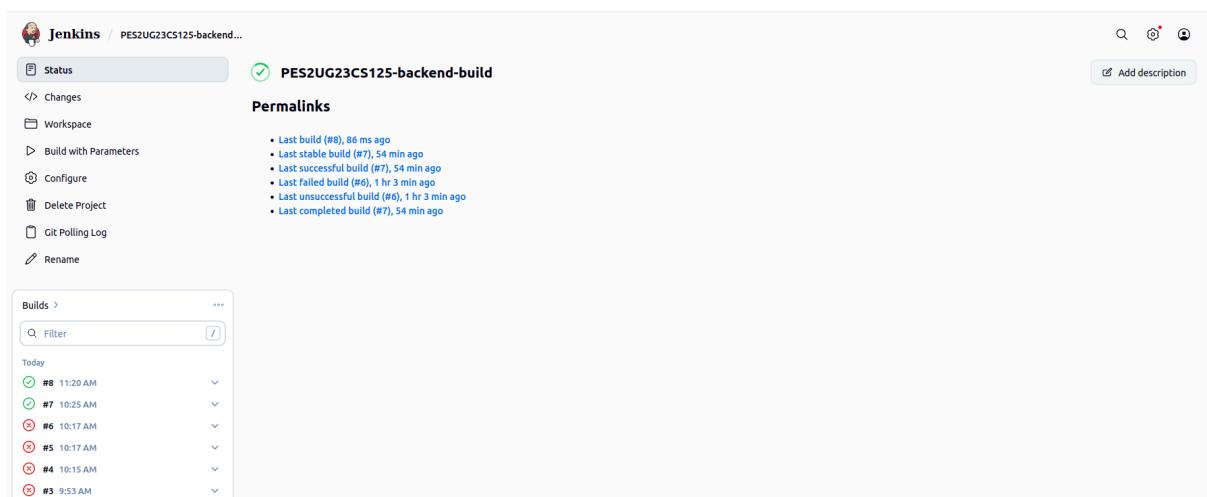
## Task 3:

### SS5)



The image shows the Jenkins configuration page for the project **PES2UG23CS125-backend-build**. The left sidebar contains navigation links: Status, Changes, Workspace, Build with Parameters, Configure, Delete Project, Git Polling Log, and Rename. The main content area shows the configuration for the **Backend\_Count** parameter, which is a dropdown menu set to **1**. Below the dropdown are **Build** and **Cancel** buttons. On the left, there is a **Builds** section with a filter and a list of recent builds:

Build Number	Status	Time
#8	Success	11:20 AM
#7	Success	10:25 AM
#6	Failure	10:17 AM
#5	Failure	10:17 AM
#4	Failure	10:15 AM
#3	Failure	9:53 AM



The image shows the Jenkins status page for the project **PES2UG23CS125-backend-build**. The left sidebar is the same as in the previous image. The main content area shows the **Permalinks** section, which lists links to various build artifacts:

- Last build (#8), 86 ms ago
- Last stable build (#7), 54 min ago
- Last successful build (#7), 54 min ago
- Last failed build (#6), 1 hr 3 min ago
- Last unsuccessful build (#6), 1 hr 3 min ago
- Last completed build (#7), 54 min ago

Below the permalinks, there is a **Builds** section with a filter and a list of recent builds, identical to the one in the previous image.

Jenkins

PES2UG23CS125-backend...

#8

Search

Settings

Help

Status

Changes

Console Output

Edit Build Information

Delete build '#8'

Parameters

Timings

Git Build Data

Previous Build

Next Build

Download

Copy

View as plain text

Console

Started by user PES2UG23CS125  
Running as SYSTEM  
Building in workspace /var/jenkins\_home/workspace/PES2UG23CS125-backend-build  
The recommended git tool is: NONE  
No credentials specified  
> git rev-parse --resolve-git-dir /var/jenkins\_home/workspace/PES2UG23CS125-backend-build/.git # timeout=10  
Fetching changes from the remote Git repository  
> git config remote.origin.url https://github.com/Bhavanibakkappa/CC\_Lab-6.git # timeout=10  
Fetching upstream changes from https://github.com/Bhavanibakkappa/CC\_Lab-6.git  
> git --version # timeout=10  
> git --version # 'git version 2.47.3'  
> git fetch --tags --force --progress -- https://github.com/Bhavanibakkappa/CC\_Lab-6.git +refs/heads/\*:refs/remotes/origin/\* # timeout=10  
> git rev-parse refs/remotes/origin/main{commit} # timeout=10  
Checking out Revision af800bb52fc96beb61e65196f2901fd336a7b166 (refs/remotes/origin/main)  
> git config core.sparsecheckout # timeout=10  
> git checkout -f af800bb52fc96beb61e65196f2901fd336a7b166 # timeout=10  
Commit message: "Initial Jenkins lab setup"  
> git rev-list --no-walk af800bb52fc96beb61e65196f2901fd336a7b166 # timeout=10  
[PES2UG23CS125-backend-build] \$ /bin/sh -xe /tmp/jenkins5870377957281336373.sh  
+ docker rm -f backend1 backend2  
Error response from daemon: No such container: backend1  
Error response from daemon: No such container: backend2  
+ [ 1 = 1 ]  
+ docker run -d --name backend1 backend-app  
2db411b046631508638e66f5d5327c89d6f50c12b6b71733681763636caa32d

Changes

Console Output

Edit Build Information

Delete build '#8'

Parameters

Timings

Git Build Data

Previous Build

Next Build

Started by user PES2UG23CS125  
Running as SYSTEM  
Building in workspace /var/jenkins\_home/workspace/PES2UG23CS125-backend-build  
The recommended git tool is: NONE  
No credentials specified  
> git rev-parse --resolve-git-dir /var/jenkins\_home/workspace/PES2UG23CS125-backend-build/.git # timeout=10  
Fetching changes from the remote Git repository  
> git config remote.origin.url https://github.com/Bhavanibakkappa/CC\_Lab-6.git # timeout=10  
Fetching upstream changes from https://github.com/Bhavanibakkappa/CC\_Lab-6.git  
> git --version # timeout=10  
> git --version # 'git version 2.47.3'  
> git fetch --tags --force --progress -- https://github.com/Bhavanibakkappa/CC\_Lab-6.git +refs/heads/\*:refs/remotes/origin/\* # timeout=10  
> git rev-parse refs/remotes/origin/main{commit} # timeout=10  
Checking out Revision af800bb52fc96beb61e65196f2901fd336a7b166 (refs/remotes/origin/main)  
> git config core.sparsecheckout # timeout=10  
> git checkout -f af800bb52fc96beb61e65196f2901fd336a7b166 # timeout=10  
Commit message: "Initial Jenkins lab setup"  
> git rev-list --no-walk af800bb52fc96beb61e65196f2901fd336a7b166 # timeout=10  
[PES2UG23CS125-backend-build] \$ /bin/sh -xe /tmp/jenkins5870377957281336373.sh  
+ docker rm -f backend1 backend2  
Error response from daemon: No such container: backend1  
Error response from daemon: No such container: backend2  
+ [ 1 = 1 ]  
+ docker run -d --name backend1 backend-app  
2db411b046631508638e66f5d5327c89d6f50c12b6b71733681763636caa32d  
Finished: SUCCESS

Jenkins

PES2UG23CS125-backend...

Search

Settings

Help

Status

Changes

Workspace

Build with Parameters

Configure

Delete Project

Git Polling Log

Rename

Project PES2UG23CS125-backend-build

This build requires parameters:

Backend\_Count  
2

Build Cancel

Builds

Filter

Today  
#8 11:20 AM  
#7 10:25 AM  
#6 10:17 AM  
#5 10:17 AM  
#4 10:15 AM  
#3 9:53 AM

Parameters

Timings


Git Build Data

Previous Build

2

▼

```
> git rev-parse --resolve-git-dir /var/jenkins_home/workspace/PE5UG2G3CS125-backend-build/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/Bhavanibakkappa/CC_Lab-6.git # timeout=10
Fetching upstream changes from https://github.com/Bhavanibakkappa/CC_Lab-6.git
> git --version # timeout=10
> git --version # 'git version 2.47.3'
> git fetch --tags --force --progress -- https://github.com/Bhavanibakkappa/CC_Lab-6.git +refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/main^(commit) # timeout=10
Checking out Revision af800bb52fc96beb61e65196f2901fd336a7b166 (refs/remotes/origin/main)
> git config core.sparsecheckout # timeout=10
> git checkout -f af800bb52fc96beb61e65196f2901fd336a7b166 # timeout=10
Commit message: "Initial Jenkins lab setup"
> git rev-list --no-walk af800bb52fc96beb61e65196f2901fd336a7b166 # timeout=10
[PESUG2G3CS125-backend-build] $ /bin/sh -xe /tmp/jenkins3375357238799057643.sh
+ docker rm -f backend1 backend2
backend1
Error response from daemon: No such container: backend2
+ [ 2 = 1 ]
+ docker run -d --name backend1 backend-app
ea3ca889b7fa9ba97039fcc295303c17d4e14bdcaf410ea4b03fcd59bb675
+ docker run -d --name backend2 backend-app
44809ac2e3f2c4937a8a67d173cf6583fe157b3c73029df8624ad6ca8e267439
Finished: SUCCESS
```



The screenshot shows a web browser window with the address bar displaying 'http://localhost'. The page content indicates a successful connection to a backend service, with the message 'Served by backend: 4365c9e5a3fd'.

Jenkins

LAB6-PIPELINE-NGINX

Q

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Status

<> Changes

▶ Build Now

⚙️ Configure

🗑️ Delete Pipeline

📁 Stages

✎ Rename

📖 Pipeline Syntax

Builds >

Filter

Today

🟢 #3 12:47 PM

🔴 #2 11:45 AM

🔴 #1 11:37 AM

🟢 LAB6-PIPELINE-NGINX

🔗 Add description

Permalinks

- Last build (#3), 12 min ago
- Last stable build (#3), 12 min ago
- Last successful build (#3), 12 min ago
- Last failed build (#2), 1 hr 14 min ago
- Last unsuccessful build (#2), 1 hr 14 min ago
- Last completed build (#3), 12 min ago

REST APIJenkins 2.541.2

Jenkins

LAB6-PIPELINE-NGINX

#3

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Status

<> Changes

📄 Console Output

📄 Edit Build Information

🗑️ Delete build '#3'

🕒 Timings

🔍 Git Build Data

📊 Pipeline Overview

🔄 Restart from Stage

🔄 Replay

📋 Pipeline Steps

📁 Workspaces

⬅️ Previous Build

Download

Copy

View as plain text

Console

```
Started by user PES2UG23CS125
Obtained Jenkinsfile from git https://github.com/Bhavanibakkappa/CC_Lab-6.git
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in /var/jenkins_home/workspace/LAB6-PIPELINE-NGINX
[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/jenkins_home/workspace/LAB6-PIPELINE-NGINX/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/Bhavanibakkappa/CC_Lab-6.git # timeout=10
Fetching upstream changes from https://github.com/Bhavanibakkappa/CC_Lab-6.git
> git --version # timeout=10
> git --version # 'git version 2.47.3'
> git fetch --tags --force --progress -- https://github.com/Bhavanibakkappa/CC_Lab-6.git # timeout=10
> git rev-parse refs/remotes/origin/main^{commit} # timeout=10
Checking out Revision b262ba6a7dc6ff0e137b469a0a9d2cc6cc2ae169 (refs/remotes/origin/main)
> git config core.sparsecheckout # timeout=10
> git checkout -f b262ba6a7dc6ff0e137b469a0a9d2cc6cc2ae169 # timeout=10
Commit message: "Update Jenkinsfile"
> git rev-list --no-walk b262ba6a7dc6ff0e137b469a0a9d2cc6cc2ae169 # timeout=10
```

Jenkins

LAB6-PIPELINE-NGINX

#3

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📄 Console Output

📄 Pipeline Script

Deploy NGINX Load Balancer

```
[Pipeline] {
[Pipeline] sh
+ docker rm -f nginx-lb
nginx-lb
+ docker run -d --name nginx-lb --network app-network -p 80:80 nginx
201261b54e16680f53f8af16a52d4540e34bf641bef48de4fbaec3fc6697f14b
+ docker cp nginx/default.conf nginx-lb:/etc/nginx/conf.d/default.conf
+ docker exec nginx-lb nginx -s reload
2026/02/26 12:47:24 [notice] 30#30: signal process started
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Declarative: Post Actions)
[Pipeline] echo
Pipeline executed successfully. NGINX load balancer is running.
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

Jenkins 2.541.2

```
pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$ docker ps
```

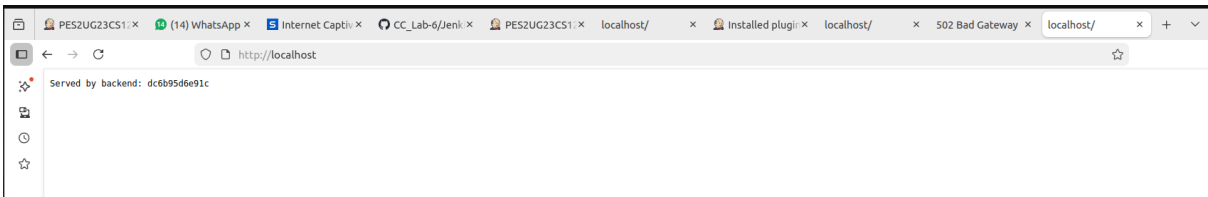
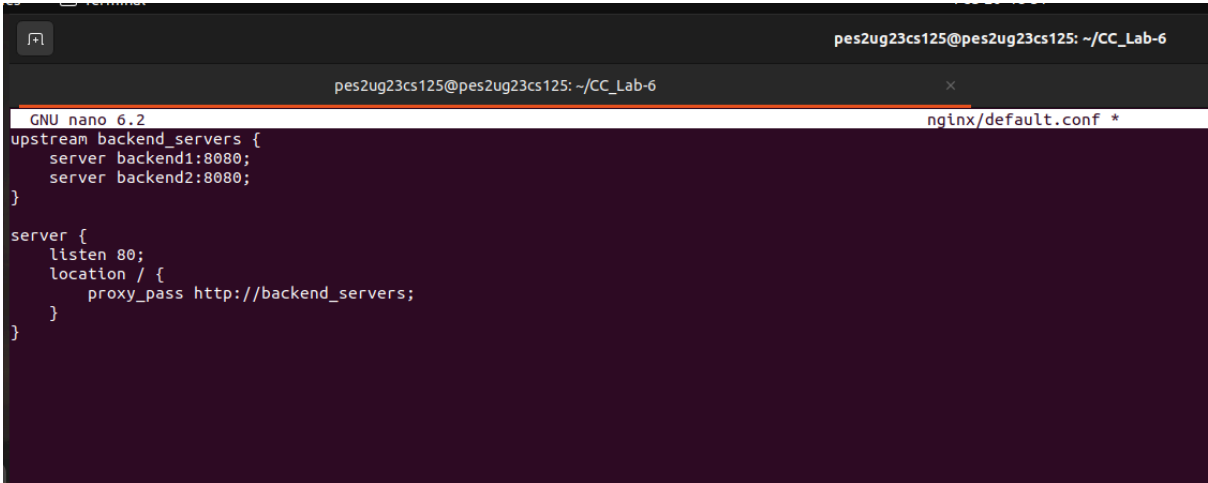
CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
3cb048ded669	backend-app	"/app"	59 minutes ago	Up 59 minutes	8080/tcp	backend2
6567973d21be	backend-app	"/app"	59 minutes ago	Up 59 minutes	8080/tcp	backend1
64c31ad62566	custom-nginx	"/docker-entrypoint..."	2 hours ago	Up 2 hours	0.0.0.0:80->80/tcp, [::]:80->80/tcp	nginx-container
bd7a5599e66b	9f37b0a8a484	"/app"	2 hours ago	Up 2 hours	8080/tcp	backend-container
02dd47f93379	jenkins-docker	"/usr/bin/tini -- /u..."	3 hours ago	Up 3 hours	0.0.0.0:8080->8080/tcp, [::]:8080->8080/tcp, 0.0.0.0:50000->50000/tcp, [::]:50000->50000/tcp	jenkins





## Task 5:

### SS7)



```
pes2ug23cs125@pes2ug23cs125: ~/CC_Lab-6$ docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS                               NAMES
dc6b95d6e91c   backend-app   "./app"                  4 seconds ago Up 4 seconds  8080/tcp                               backend2
bf12a444e157   backend-app   "./app"                  18 minutes ago Up 18 minutes  8080/tcp                               backend1
281261b54e16   nginx         "/docker-entrypoint..." 40 minutes ago Up 40 minutes  0.0.0.0:80->80/tcp, [::]:80->80/tcp   nginx-lb
82dd47f93379   jenkins-docker "/usr/bin/tini -- /u..." 3 hours ago   Up 3 hours    0.0.0.0:8080->8080/tcp, [::]:8080->8080/tcp, 0.0.0.0:50000->50000/tcp, [::]:50000->50000/tcp jenkins
pes2ug23cs125@pes2ug23cs125: ~/CC_Lab-6$
```

```

pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$ git pull origin main --rebase
remote: Enumerating objects: 8, done.
remote: Counting objects: 100% (8/8), done.
remote: Compressing objects: 100% (6/6), done.
remote: Total 6 (delta 4), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (6/6), 1.83 KiB | 936.00 KiB/s, done.
From https://github.com/Bhavanibakkappa/CC_Lab-6
* branch          main          -> FETCH_HEAD
   af800bb..b262ba6 main        -> origin/main
Successfully rebased and updated refs/heads/main.
pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$ git push origin main
Username for 'https://github.com': Bhavanibakkappa
Password for 'https://Bhavanibakkappa@github.com':
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 2 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (4/4), 357 bytes | 357.00 KiB/s, done.
Total 4 (delta 2), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (2/2), completed with 2 local objects.
To https://github.com/Bhavanibakkappa/CC_Lab-6.git
   b262ba6..e689111 main -> main
pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$

```

pes2ug23cs125@pes2ug23cs125: ~/CC\_Lab-6

GNU nano 6.2

```

upstream backend_servers {
    ip_hash;
    server backend1:8080;
    server backend2:8080;
}

server {
    listen 80;
    location / {
        proxy_pass http://backend_servers;
    }
}

```

```

pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$ nano nginx/default.conf
pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$ git add nginx/default.conf
pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$ git commit -m "Changed to ip_hash load balancing"
[main 8c35b5d] Changed to ip_hash load balancing
   1 file changed, 1 insertion(+)
pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$ git push origin main
Username for 'https://github.com': Bhavanibakkappa
Password for 'https://Bhavanibakkappa@github.com':
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 2 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (4/4), 360 bytes | 360.00 KiB/s, done.
Total 4 (delta 2), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (2/2), completed with 2 local objects.
To https://github.com/Bhavanibakkappa/CC_Lab-6.git
   e689111..8c35b5d main -> main
pes2ug23cs125@pes2ug23cs125:~/CC_Lab-6$

```