

Cloud Computing Assignment 2 Jenkins

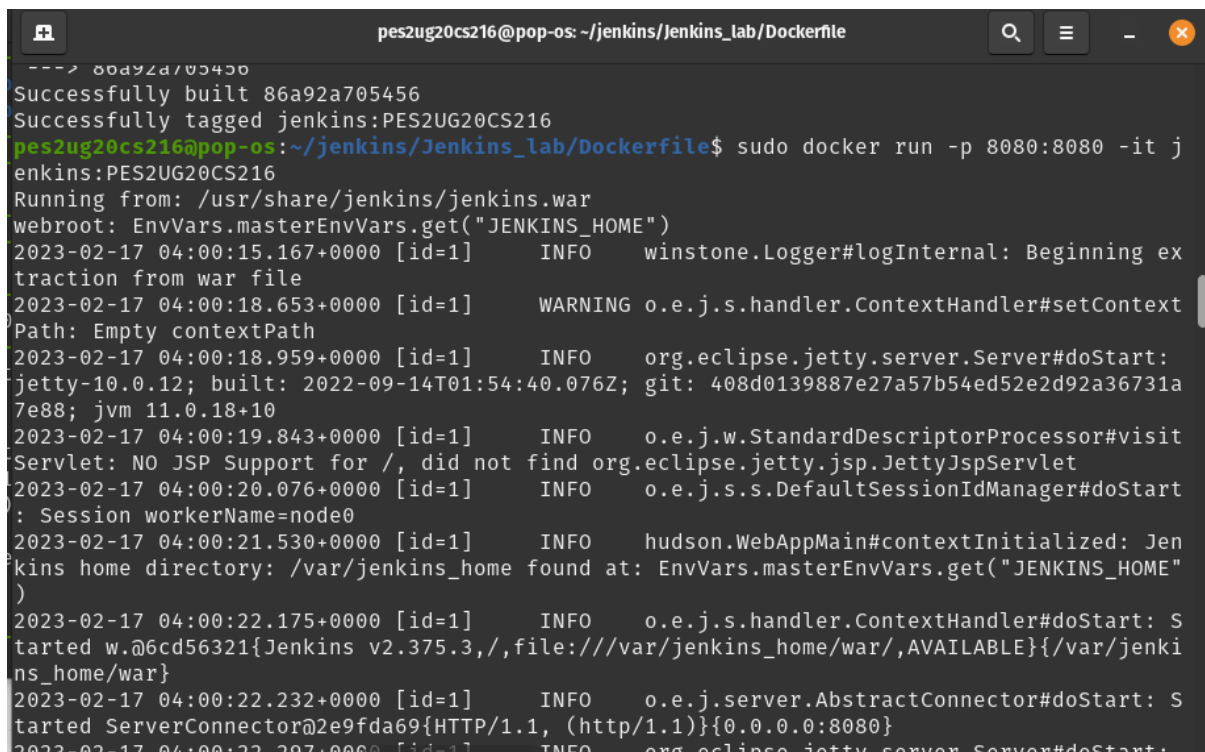
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SRN: PES2UG20CS216

Section: D

Task 1

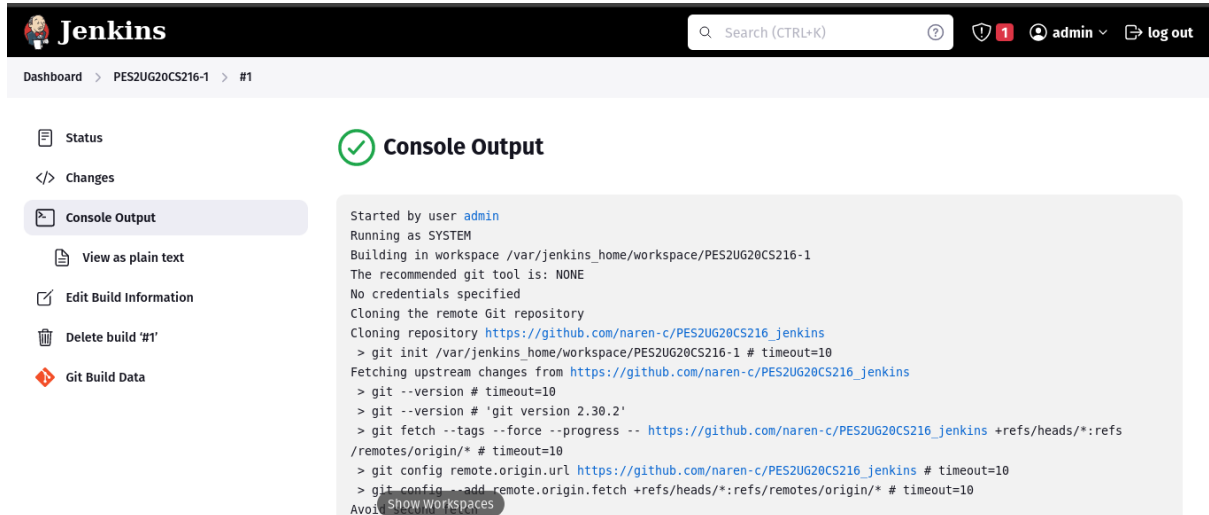
1. Screenshot of the running Docker Container after installing Jenkins



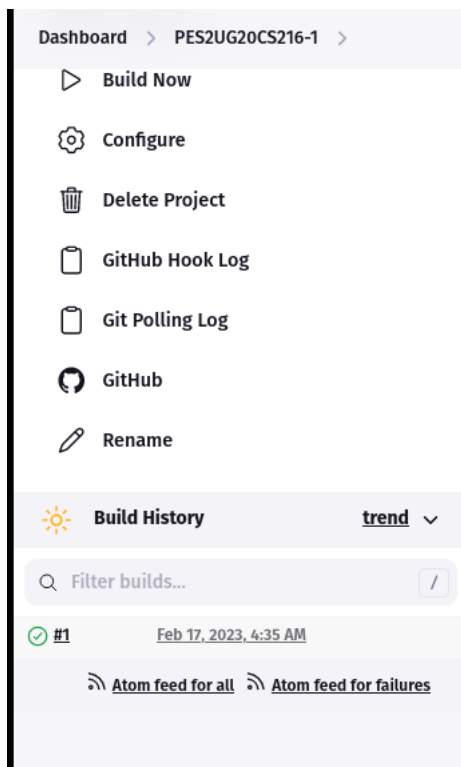
```
pes2ug20cs216@pop-os: ~/jenkins/jenkins_lab/Dockerfile
---? 86a92a705456
Successfully built 86a92a705456
Successfully tagged jenkins:PES2UG20CS216
pes2ug20cs216@pop-os:~/jenkins/Jenkins_lab/Dockerfile$ sudo docker run -p 8080:8080 -it j
enkins:PES2UG20CS216
Running from: /usr/share/jenkins/jenkins.war
webroot: EnvVars.masterEnvVars.get("JENKINS_HOME")
2023-02-17 04:00:15.167+0000 [id=1] INFO winstone.Logger#logInternal: Beginning ex
traction from war file
2023-02-17 04:00:18.653+0000 [id=1] WARNING o.e.j.s.handler.ContextHandler#setContext
Path: Empty contextPath
2023-02-17 04:00:18.959+0000 [id=1] INFO org.eclipse.jetty.server.Server#doStart:
jetty-10.0.12; built: 2022-09-14T01:54:40.076Z; git: 408d0139887e27a57b54ed52e2d92a36731a
7e88; jvm 11.0.18+10
2023-02-17 04:00:19.843+0000 [id=1] INFO o.e.j.w.StandardDescriptorProcessor#visit
Servlet: NO JSP Support for /, did not find org.eclipse.jetty.jsp.JettyJspServlet
2023-02-17 04:00:20.076+0000 [id=1] INFO o.e.j.s.s.DefaultSessionIdManager#doStart
: Session workerName=node0
2023-02-17 04:00:21.530+0000 [id=1] INFO hudson.WebAppMain#contextInitialized: Jen
kins home directory: /var/jenkins_home found at: EnvVars.masterEnvVars.get("JENKINS_HOME"
)
2023-02-17 04:00:22.175+0000 [id=1] INFO o.e.j.s.handler.ContextHandler#doStart: S
tarted w.@6cd56321{Jenkins v2.375.3,/,file:///var/jenkins_home/war/,AVAILABLE}{/var/jenki
ns_home/war}
2023-02-17 04:00:22.232+0000 [id=1] INFO o.e.j.server.AbstractConnector#doStart: S
tarted ServerConnector@2e9fda69{HTTP/1.1, (http/1.1)}{0.0.0.0:8080}
2023-02-17 04:00:22.297+0000 [id=1] INFO org.eclipse.jetty.server.Server#doStart:
```

Task2

1. Picture showing the console output after the build is successful



2. Picture showing the Stable state of the task in Build History of Jenkins



Task 3

1. Console output of second job

Console Output

```
Started by upstream project "PES2UG20CS216-1" build number 2
originally caused by:
  Started by user admin
Running as SYSTEM
Building in workspace /var/jenkins_home/workspace/PES2UG20CS216-2
[PES2UG20CS216-2] $ /bin/sh -xe /tmp/jenkins14513054914931237865.sh
+ /var/jenkins_home/workspace/PES2UG20CS216-1/main/hello_exec
Hello, World
Hello, Jenkins
I have successfully built and run
Finished: SUCCESS
```

2. Status page of first job

Project PES2UG20CS216-1

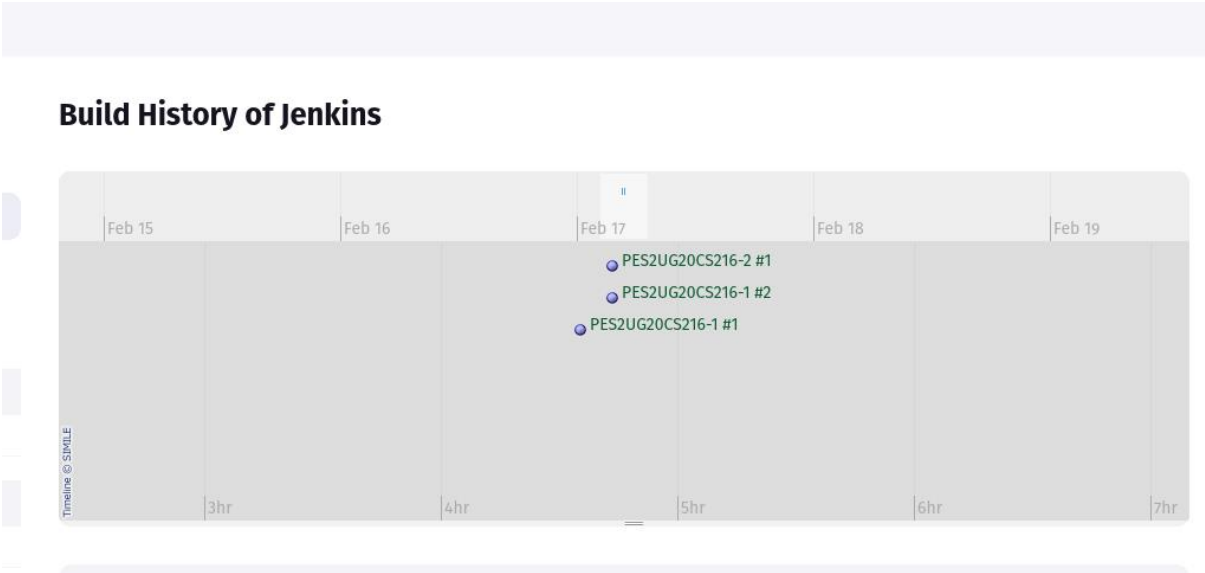
Downstream Projects

 [PES2UG20CS216-2](#)

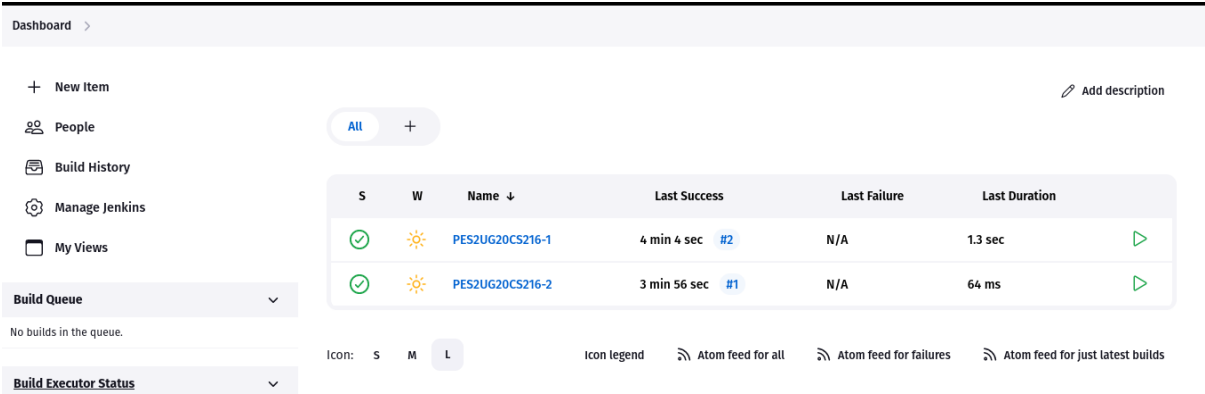
Permalinks

- [Last build \(#2\), 2 min 25 sec ago](#)
- [Last stable build \(#2\), 2 min 25 sec ago](#)
- [Last successful build \(#2\), 2 min 25 sec ago](#)
- [Last completed build \(#2\), 2 min 25 sec ago](#)

3. Build History of Jenkins

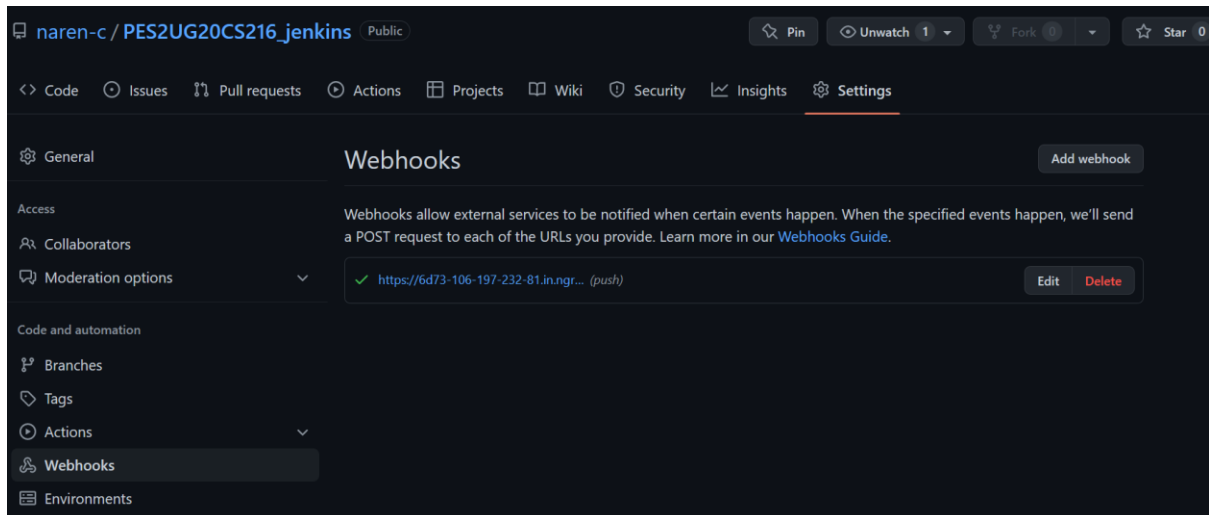


4. Jenkins Dashboard

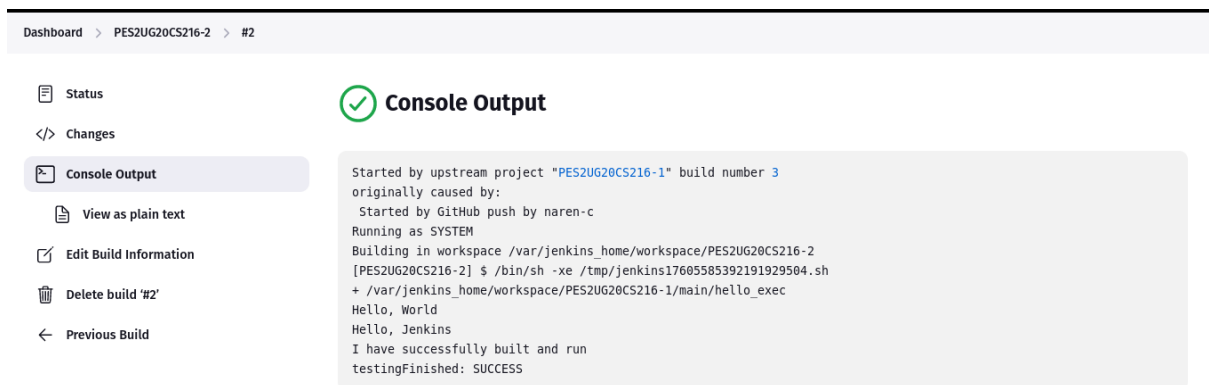


Task 4

1. Webhook added to your GitHub repository



2. Console Output of second job displaying the change made in hello.cpp file.



Task 5

1. Code/script written to create basic pipeline using GitHub repository

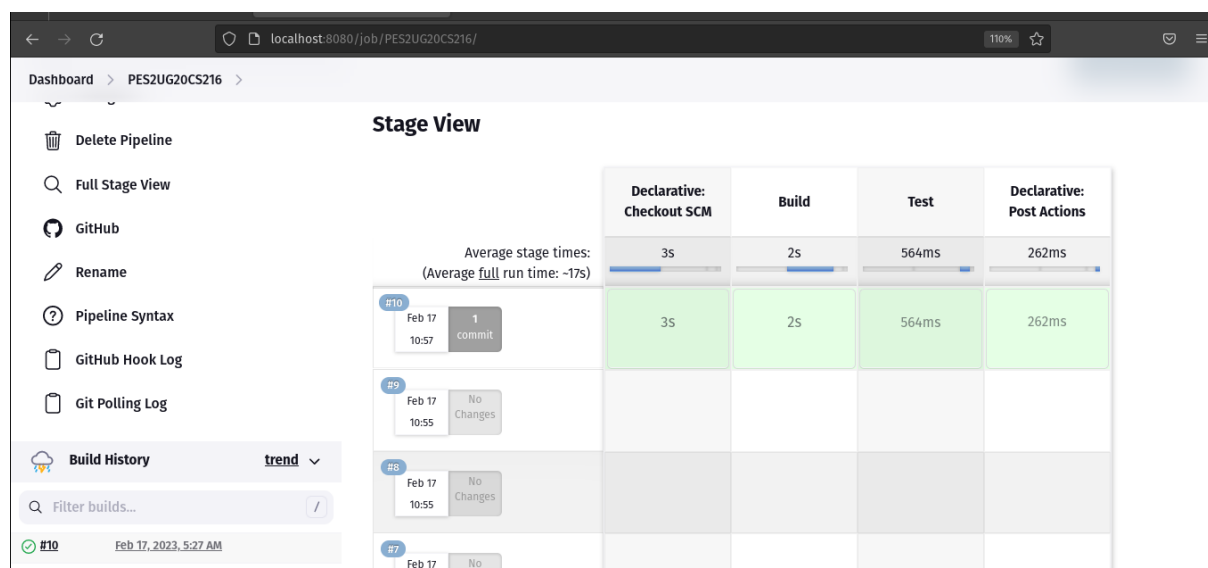
```


24 lines (24 sloc) | 461 Bytes

1  pipeline {
2      agent any
3      stages {
4          stage('Build') {
5              steps {
6                  sh 'g++ -o PES2UG20CS216-1 hello.cpp'
7                  echo "Build Successful"
8              }
9          }
10         stage('Test') {
11             steps {
12                 sh './PES2UG20CS216-1'
13             }
14         }
15     }
16     post {
17         always {
18             echo 'Pipeline completed'
19         }
20         failure {
21             echo 'Pipeline failed'
22         }
23     }
24 }

```

2. Output of working created pipeline, the screenshot should include
 - Stage view / Execution status of pipeline with all stages succeeded
 - Verify Declarative: Post Actions stage succeed for handling failures.



 **Jenkins**

Search (CTRL+K) ? 1 admin log out

Dashboard > PES2UG20CS216 > #10

Status

</> Changes

Console Output

Edit Build Information

Delete build '#10'

Polling Log

Git Build Data

Restart from Stage

Build #10 (Feb 17, 2023, 5:27:53 AM)

Keep this build forever

Started 2 min 4 sec ago
Took 17 sec

Add description

Changes


1. Update Jenkinsfile (commit: 30d58a2) (details / githubweb)

Started by GitHub push by naren-c

Revision: 30d58a2ceb1bdf75430e5afd48d759de094ec713
Repository: https://github.com/naren-c/PES2UG20CS216_jenkins

• origin/main

3. Console Output of the Pipeline

 **Jenkins**

Search (CTRL+K) ? 1 admin log out

Dashboard > PES2UG20CS216 > #10

Status

</> Changes

Console Output

View as plain text

Edit Build Information

Delete build '#10'

Polling Log

Git Build Data

Restart from Stage

Console Output

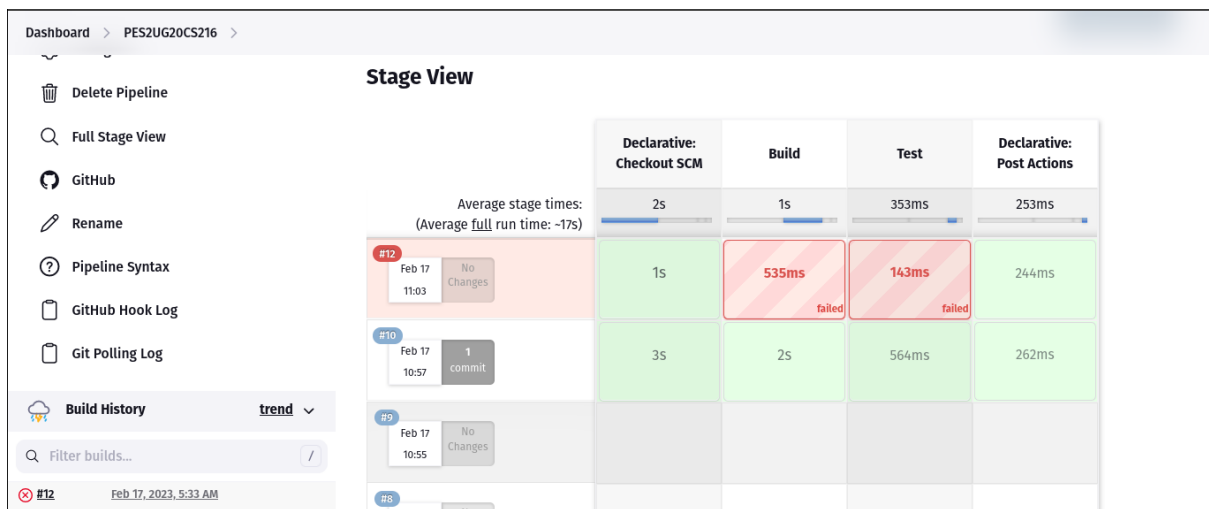
Started by GitHub push by naren-c
Lightweight checkout support not available, falling back to full checkout.
Checking out git https://github.com/naren-c/PES2UG20CS216_jenkins into /var/jenkins_home/workspace/PES2UG20CS216@script/9467c7f1ed64eaf41b62fba93231e76103b4ea16bf4b0c5771783a6a422b6c52 to read Jenkinsfile
The recommended git tool is: NONE
No credentials specified
> git rev-parse --resolve-git-dir /var/jenkins_home/workspace/PES2UG20CS216@script/9467c7f1ed64eaf41b62fba93231e76103b4ea16bf4b0c5771783a6a422b6c52/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/naren-c/PES2UG20CS216_jenkins # timeout=10
Fetching upstream changes from https://github.com/naren-c/PES2UG20CS216_jenkins
> git --version # timeout=10

Dashboard > PES2UG20CS216 > #10

```
Hello, Jenkins
I have successfully built and run
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Declarative: Post Actions)
[Pipeline] echo
Pipeline completed
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

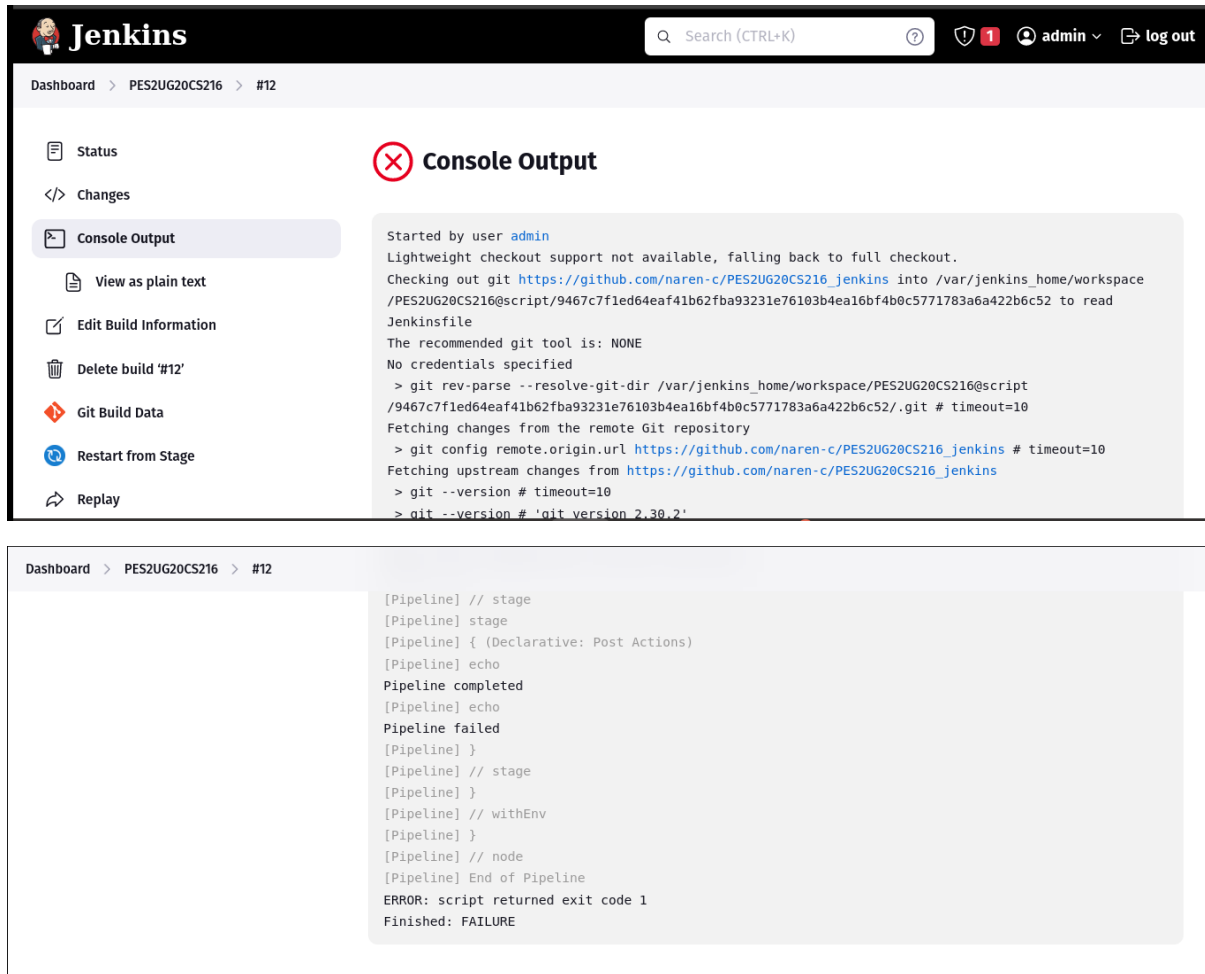
Now edit your Jenkinsfile, make an intentional error in one of the stages and commit. Execute the pipeline again, check if the expected stage fails and declarative post action “pipeline failed” carried out successfully

1. Output of working created pipeline, the screenshot should include
 - Stage view / Execution status of pipeline with all stages succeeded
 - Verify Declarative: Post Actions stage succeed for handling failures.



The screenshot shows the Jenkins 'Build #12 (Feb 17, 2023, 5:33:42 AM)' details page. The page header includes the Jenkins logo, a search bar, and user information (admin). The left sidebar contains navigation options like 'Status', 'Changes', 'Console Output', 'Edit Build Information', 'Delete build #12', 'Git Build Data', 'Restart from Stage', 'Replay', and 'Pipeline Steps'. The main area displays the build status as 'Build #12 (Feb 17, 2023, 5:33:42 AM)' with a red 'X' icon. The build is marked as 'Failed' and 'Started 1 min 46 sec ago'. The build took 5.6 sec. The build was started by user 'admin'. The build revision is 9c4d189285527f9d8ad0e0175b96d7bbca701cdc. The repository is https://github.com/naren-c/PES2UG20CS216_jenkins. The build is on the origin/main branch.

2. Console Output of the Pipeline



The screenshot shows the Jenkins web interface. At the top, the Jenkins logo and a search bar are visible. The breadcrumb navigation indicates the current view is 'Dashboard > PES2UG20CS216 > #12'. On the left sidebar, the 'Console Output' tab is selected, showing options like 'View as plain text', 'Edit Build Information', 'Delete build #12', 'Git Build Data', 'Restart from Stage', and 'Replay'. The main area displays the console output for build #12, which includes the following text:

```
Started by user admin
Lightweight checkout support not available, falling back to full checkout.
Checking out git https://github.com/naren-c/PES2UG20CS216_jenkins into /var/jenkins_home/workspace/
/PES2UG20CS216@script/9467c7f1ed64eaf41b62fba93231e76103b4ea16bf4b0c5771783a6a422b6c52 to read
Jenkinsfile
The recommended git tool is: NONE
No credentials specified
> git rev-parse --resolve-git-dir /var/jenkins_home/workspace/PES2UG20CS216@script
/9467c7f1ed64eaf41b62fba93231e76103b4ea16bf4b0c5771783a6a422b6c52/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/naren-c/PES2UG20CS216_jenkins # timeout=10
Fetching upstream changes from https://github.com/naren-c/PES2UG20CS216_jenkins
> git --version # timeout=10
> git --version # 'git version 2.30.2'
```

Below the console output, the pipeline script is visible, showing stages and actions. The output indicates that the pipeline completed successfully, but then failed with an error: 'ERROR: script returned exit code 1' and 'Finished: FAILURE'.

3. Link to the repository

[naren-c/PES2UG20CS216_jenkins \(github.com\)](https://github.com/naren-c/PES2UG20CS216_jenkins)