

CLOUD COMPUTING ASSIGNMENT -02

NAME: SAHANA RAO

SRN: PES1UG20CS588

SECTION: J

TASK 1:

```
C:\Windows\System32\cmd.exe
C:\Users\Sahana Rao\Desktop\PES1UG20CS588\SEM6\CC\A2\Jenkins_lab-main\Dockerrfile>docker run -p 8080:8080 -p 5000:5000 -it jenkins:PES1UG20CS588
Running from: /usr/share/jenkins/jenkins.war
webroot: EnvVars.masterEnvVars.get("JENKINS_HOME")
2023-02-16 12:56:51.745+0000 [id=1] INFO winstone.Logger#logInternal: Beginning extraction from war file
2023-02-16 12:56:52.341+0000 [id=1] WARNING o.e.j.s.handler.ContextHandler#setContextPath: Empty contextPath
2023-02-16 12:56:52.388+0000 [id=1] INFO org.eclipse.jetty.server.Server#doStart: jetty-10.0.12; built: 2022-09-14T01:54:40.076Z; git: 408d0139887e27a57b54ed52e2d92a36731a7e88; jvm 11.0.18+10
2023-02-16 12:56:52.594+0000 [id=1] INFO o.e.j.w.StandardDescriptorProcessor#visitServlet: NO JSP Support for /, did not find org.eclipse.jetty.jsp.JettyJspServlet
2023-02-16 12:56:52.638+0000 [id=1] INFO o.e.j.s.s.DefaultSessionIdManager#doStart: Session workerName=node0
2023-02-16 12:56:52.974+0000 [id=1] INFO hudson.WebAppMain#contextInitialized: Jenkins home directory: /var/jenkins_home found at: EnvVars.masterEnvVars.get("JENKINS_HOME")
2023-02-16 12:56:53.092+0000 [id=1] INFO o.e.j.s.handler.ContextHandler#doStart: Started w.@6cd56321{Jenkins v2.375.3,,file:///var/jenkins_home/war/,AVAILABLE}{/var/jenkins_home/war}
2023-02-16 12:56:53.107+0000 [id=1] INFO o.e.j.server.AbstractConnector#doStart: Started ServerConnector@2e9fda69{HTTP/1.1, (http/1.1)}{0.0.0.0:8080}
2023-02-16 12:56:53.117+0000 [id=1] INFO org.eclipse.jetty.server.Server#doStart: Started Server@40f70521{STARTING}[10.0.12,sto=0] @1776ms
2023-02-16 12:56:53.121+0000 [id=25] INFO winstone.Logger#logInternal: Winstone Servlet Engine running: controlPort=disabled
2023-02-16 12:56:53.310+0000 [id=32] INFO jenkins.InitReactorRunner$1#onAttained: Started initialization
2023-02-16 12:56:53.359+0000 [id=52] INFO jenkins.InitReactorRunner$1#onAttained: Listed all plugins
2023-02-16 12:56:53.901+0000 [id=52] INFO jenkins.InitReactorRunner$1#onAttained: Prepared all plugins
2023-02-16 12:56:53.906+0000 [id=35] INFO jenkins.InitReactorRunner$1#onAttained: Started all plugins
2023-02-16 12:56:53.910+0000 [id=48] INFO jenkins.InitReactorRunner$1#onAttained: Augmented all extensions
2023-02-16 12:56:54.084+0000 [id=45] INFO jenkins.InitReactorRunner$1#onAttained: System config loaded
2023-02-16 12:56:54.085+0000 [id=45] INFO jenkins.InitReactorRunner$1#onAttained: System config adapted
2023-02-16 12:56:54.085+0000 [id=50] INFO jenkins.InitReactorRunner$1#onAttained: Loaded all jobs
2023-02-16 12:56:54.087+0000 [id=39] INFO jenkins.InitReactorRunner$1#onAttained: Configuration for all jobs updated
2023-02-16 12:56:54.107+0000 [id=66] INFO hudson.util.Retrier#start: Attempt #1 to do the action check updates server
WARNING: An illegal reflective access operation has occurred
WARNING: Illegal reflective access by org.codehaus.groovy.vmplugin.v7.Java7$1 (file:/var/jenkins_home/war/WEB-INF/lib/groovy-all-2.4.21.jar) to constructor java.lang.invoke.MethodHandles$Lookup(java.lang.Class,int)
WARNING: Please consider reporting this to the maintainers of org.codehaus.groovy.vmplugin.v7.Java7$1
WARNING: Use --illegal-access=warn to enable warnings of further illegal reflective access operations
WARNING: All illegal access operations will be denied in a future release
2023-02-16 12:56:54.487+0000 [id=52] INFO jenkins.install.SetupWizard#init:

*****
*****
*****
```

TASK 2:

1) Console output

```
Started by user admin
Running as SYSTEM
Building in workspace /var/jenkins_home/workspace/PES1UG20CS588-1
The recommended git tool is: NONE
No credentials specified
Cloning the remote Git repository
Cloning repository https://github.com/Sahana-L-Rao-M/PES1UG20CS588_Jenkins
> git init /var/jenkins_home/workspace/PES1UG20CS588-1 # timeout=10
Fetching upstream changes from https://github.com/Sahana-L-Rao-M/PES1UG20CS588_Jenkins
> git --version # timeout=10
> git --version # 'git version 2.30.2'
> git fetch --tags --force --progress -- https://github.com/Sahana-L-Rao-M/PES1UG20CS588_Jenkins +refs/heads/*:refs/remotes/origin/* # timeout=10
> git config remote.origin.url https://github.com/Sahana-L-Rao-M/PES1UG20CS588_Jenkins # timeout=10
> git config --add remote.origin.fetch +refs/heads/*:refs/remotes/origin/* # timeout=10
Avoid second fetch
Seen branch in repository origin/main
Seen 1 remote branch
> git show-ref --tags -d # timeout=10
Checking out Revision d2dfa6bc9153029c2e8527b90b08b3fdbac4f42a (origin/main)
> git config core.sparsecheckout # timeout=10
> git checkout -f d2dfa6bc9153029c2e8527b90b08b3fdbac4f42a # timeout=10
Commit message: "Add files via upload"
First time build. Skipping changelog.
Finished: SUCCESS
```

2) Stable state of the task

The screenshot shows the Jenkins dashboard for Project PES1UG20CS588-1. The left sidebar contains links for Status, Changes, Workspace, Build Now, Configure, Delete Project, GitHub, and Rename. The main area displays the project name and a 'Permalinks' section with a list of build links: Last build (#1), Last stable build (#1), Last successful build (#1), and Last completed build (#1), all dated 2 min 2 sec ago. Below this is the 'Build History' section, which shows a single build (#1) from 16-Feb-2023, 1:22 PM. The build status is 'Success' (green checkmark). The bottom right corner shows 'REST API' and 'Jenkins 2.375.3'.

The screenshot shows the details page for Build #1 (16-Feb-2023, 1:22:26 PM). The left sidebar contains links for Status, Changes, Console Output, Edit Build Information, Delete build '#1', and Git Build Data. The main area displays the build status as 'Success' (green checkmark) and a 'Keep this build forever' button. The build was started by user 'admin' and took 4.4 sec. The console output shows 'No changes.' and the build was started by user 'admin'. The build is linked to a Git repository: https://github.com/Sahana-L-Rao-M/PES1UG20CS588_Jenkins, with revision d2dfa6bc9153029c2e8527b90b08b3fdabc4f42a. The bottom right corner shows 'REST API' and 'Jenkins 2.375.3'.

TASK 3

1) Console output of second job

PESTUG20CS588-2 #1 Console | x Sahana-L-Rao-M/PESTUG20CS588-2 | +

localhost:8080/job/PESTUG20CS588-2/lastStableBuild/console

Apply Now - HRES... M.Sc Computer Sci... MATLAB Engineering Mecha... Download Ubuntu... Anaconda Nucleus DSA_J - Google Drive

Jenkins Search (CTRL+K) admin log out

Dashboard > PESTUG20CS588-2 > #1

Status

Changes

Console Output

View as plain text

Edit Build Information

Delete build '#1'

Console Output

```
Started by upstream project "PESTUG20CS588-1" build number 2
originally caused by:
Started by user admin
Running as SYSTEM
Building in workspace /var/jenkins_home/workspace/PESTUG20CS588-2
[PESTUG20CS588-2] $ /bin/sh -xe /tmp/jenkins15706124258943722764.sh
+ /var/jenkins_home/workspace/PESTUG20CS588-1/main/hello_exec
Hello, World
Hello, Jenkins
I have successfully built and run
Finished: SUCCESS
```

REST API Jenkins 2.375.3

2) Status page of first job

PESTUG20CS588-1 [Jenkins] x Sahana-L-Rao-M/PESTUG20CS588-1 | +

localhost:8080/job/PESTUG20CS588-1/

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Jenkins Search (CTRL+K) admin log out

Dashboard > PESTUG20CS588-1 >

Status

Changes

Workspace

Build Now

Configure

Delete Project

Git Polling Log

GitHub

Rename

Project PESTUG20CS588-1

Add description

Disable Project

Downstream Projects

PESTUG20CS588-2

Permalinks

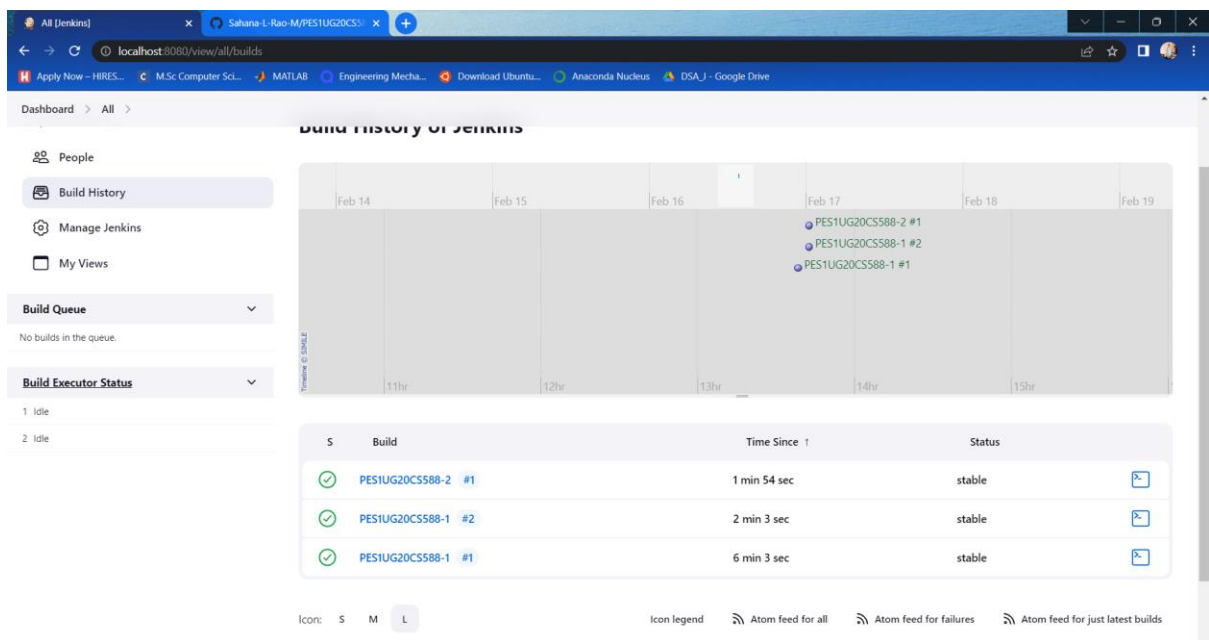
- Last build (#2), 1 min 17 sec ago
- Last stable build (#2), 1 min 17 sec ago
- Last successful build (#2), 1 min 17 sec ago
- Last completed build (#2), 1 min 17 sec ago

Build History trend ^

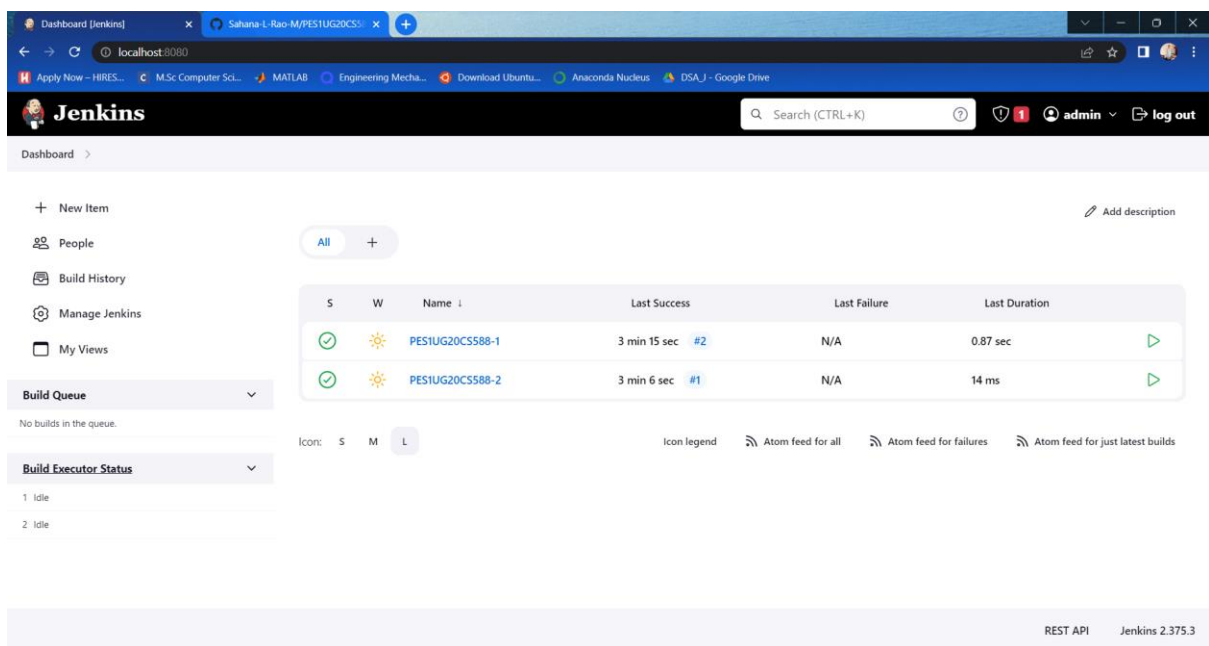
Atom feed for all Atom feed for failures

REST API Jenkins 2.375.3

3) Build history of Jenkins

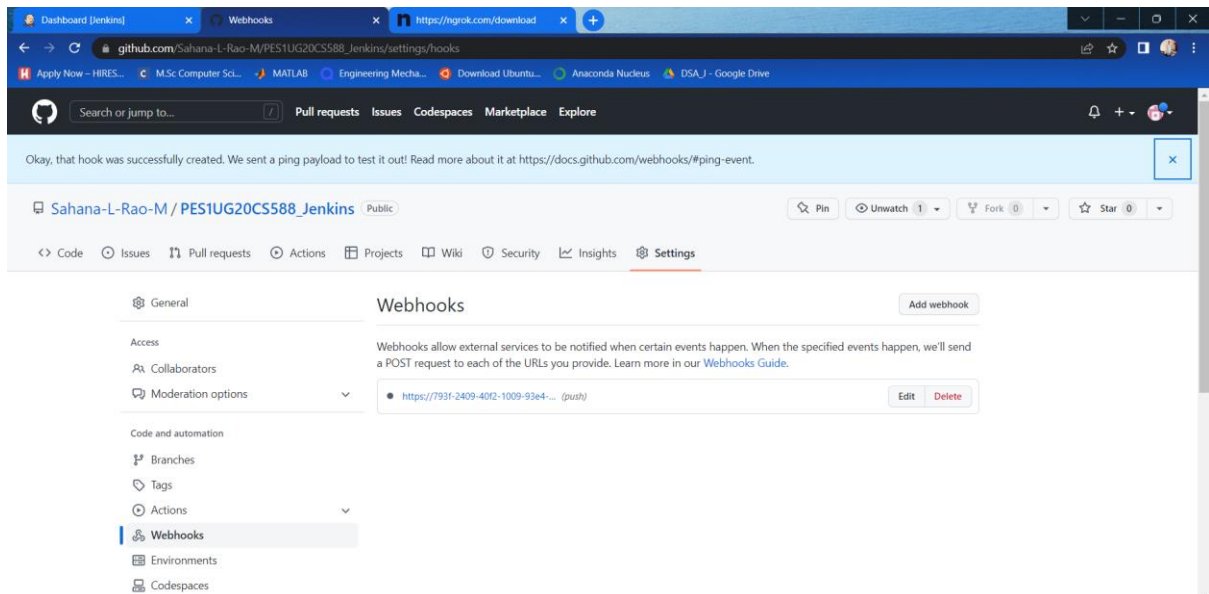


4) Jenkins Dashboard

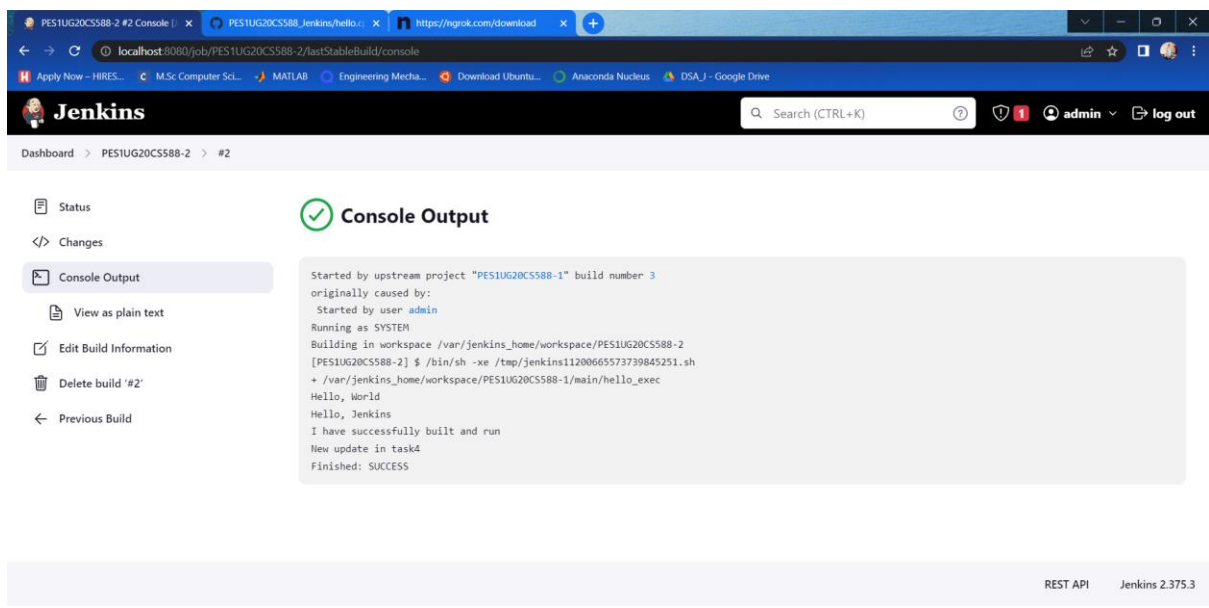


TASK 4:

1)Webhook added to GitHub Repositories

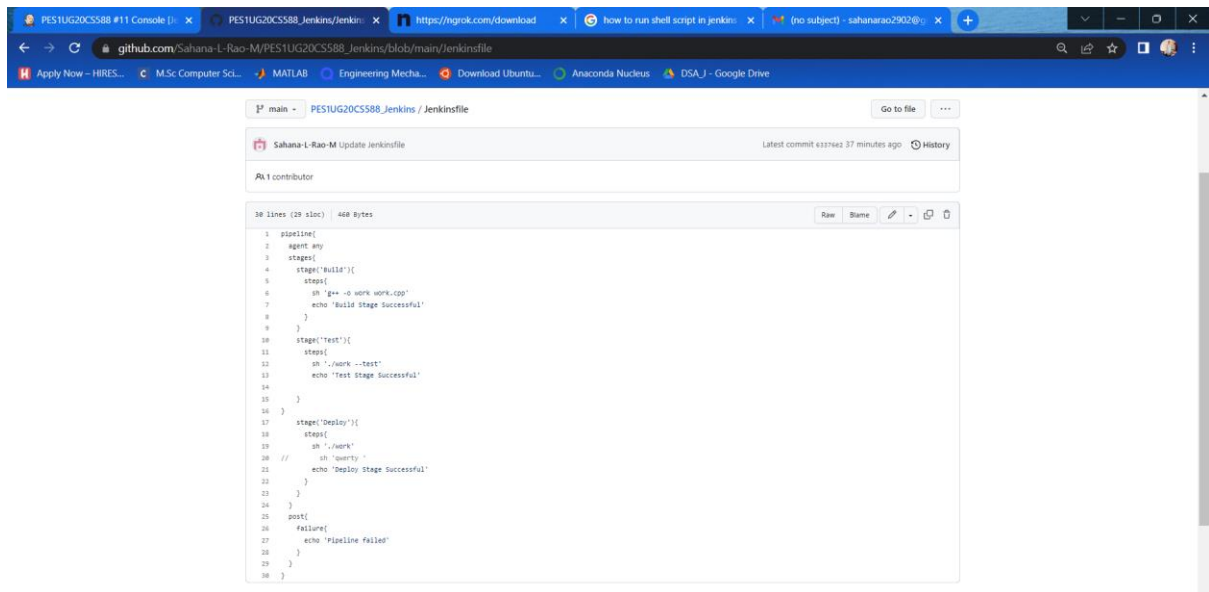


2)Console output of second job displaying change in hello.cpp:



Task 5:

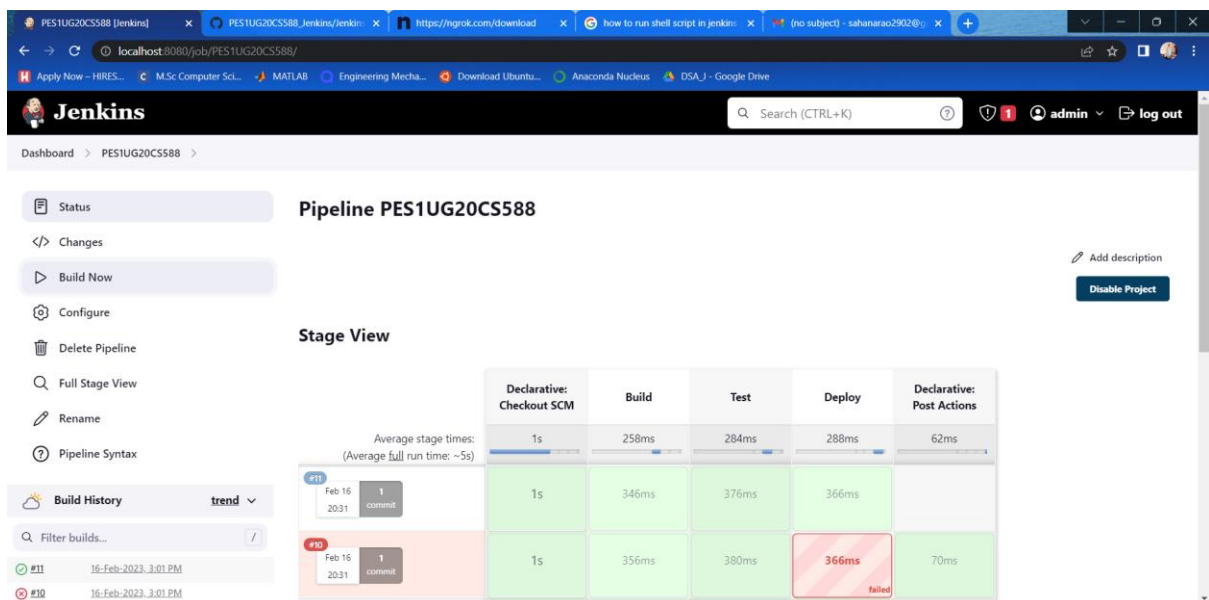
1)Code to create basic pipeline using GitHub repository:



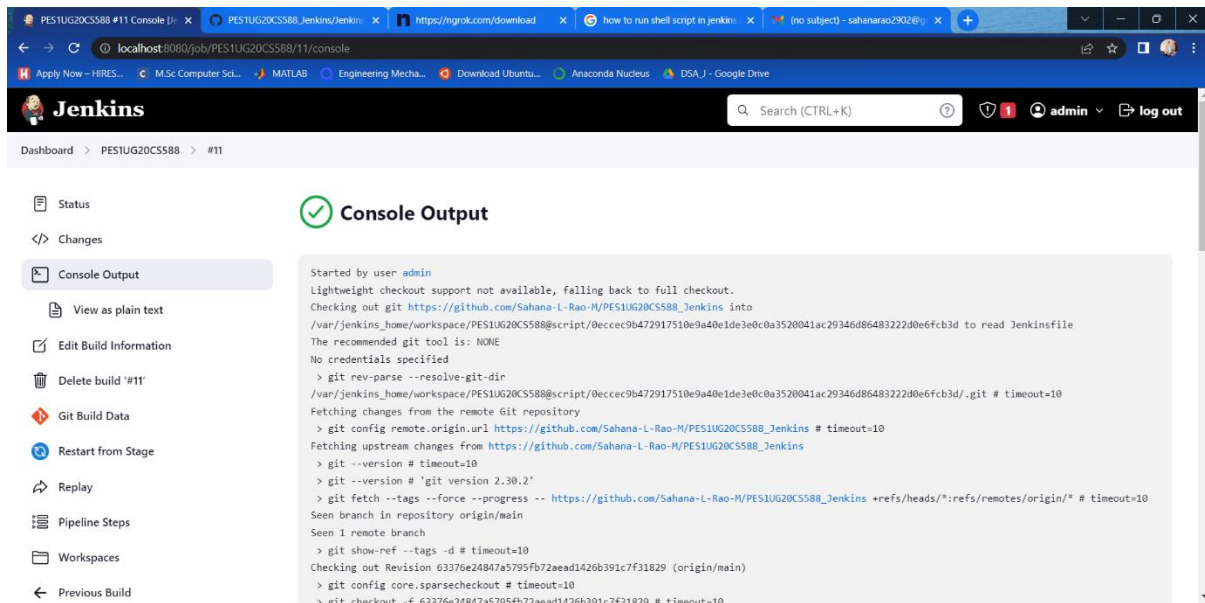
The screenshot shows a GitHub repository named 'Sahana-L-Rao-M/PESTUG20CS588_Jenkins' with a file named 'Jenkinsfile'. The file contains a declarative pipeline with three stages: 'Build', 'Test', and 'Deploy'. The 'Build' stage runs 'g++ -o work work.cpp'. The 'Test' stage runs './work --test'. The 'Deploy' stage runs 'curl -X GET http://localhost:8080/job/PESTUG20CS588/'. The pipeline also includes a 'post' section that runs 'echo "Pipeline failed"' if the pipeline fails.

```
1 pipeline{
2   agent any
3   stages{
4     stage('Build'){
5       steps{
6         sh 'g++ -o work work.cpp'
7       }
8       echo 'Build Stage Successful'
9     }
10    stage('Test'){
11      steps{
12        sh './work --test'
13      }
14      echo 'Test Stage Successful'
15    }
16  }
17  stage('Deploy'){
18    steps{
19      sh 'curl -X GET http://localhost:8080/job/PESTUG20CS588/'
20    }
21    echo 'Deploy Stage Successful'
22  }
23 }
24 post{
25   failure{
26     echo 'Pipeline failed'
27   }
28 }
29 }
```

2)Output of working created pipeline:



3) Console Output of the pipeline



The screenshot shows the Jenkins web interface in a browser. The address bar indicates the URL is `localhost:8080/job/PES1UG20CS588/11/console`. The Jenkins logo and search bar are at the top. The left sidebar shows the navigation menu with 'Console Output' selected. The main area displays the console output for build #11, which is titled 'Console Output' with a green checkmark icon. The output text is as follows:

```
Started by user admin
Lightweight checkout support not available, falling back to full checkout.
Checking out git https://github.com/Sahana-L-Rao-M/PES1UG20CS588_Jenkins into
/var/jenkins_home/workspace/PES1UG20CS588@script/0ecce9b472917510e9a40e1de3e0ca3520041ac29346d86483222d0e6fcb3d/ to read Jenkinsfile
The recommended git tool is: NONE
No credentials specified
> git rev-parse --resolve-git-dir
/var/jenkins_home/workspace/PES1UG20CS588@script/0ecce9b472917510e9a40e1de3e0ca3520041ac29346d86483222d0e6fcb3d/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/Sahana-L-Rao-M/PES1UG20CS588_Jenkins # timeout=10
Fetching upstream changes from https://github.com/Sahana-L-Rao-M/PES1UG20CS588_Jenkins
> git --version # timeout=10
> git --version # 'git version 2.30.2'
> git fetch --tags --force --progress -- https://github.com/Sahana-L-Rao-M/PES1UG20CS588_Jenkins +refs/heads/*:refs/remotes/origin/* # timeout=10
Seen branch in repository origin/main
Seen 1 remote branch
> git show-ref --tags -d # timeout=10
Checking out Revision 63376e24847a5795fb72aeed1426b391c7f31829 (origin/main)
> git config core.sparsecheckout # timeout=10
> git checkout -f 63376e24847a5795fb72aeed1426b391c7f31829 # timeout=10
```

4) Link to the created Github Repository

https://github.com/Sahana-L-Rao-M/PES1UG20CS588_Jenkins