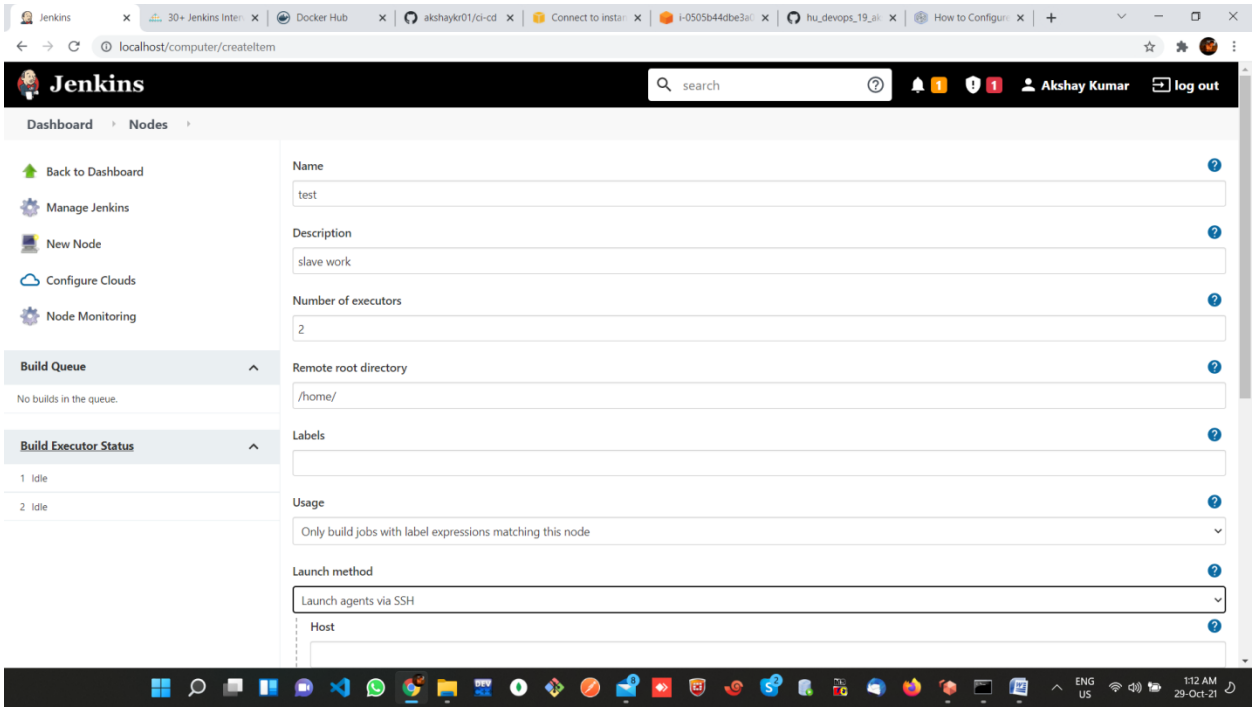
1. **Create a master / slave configuration.**

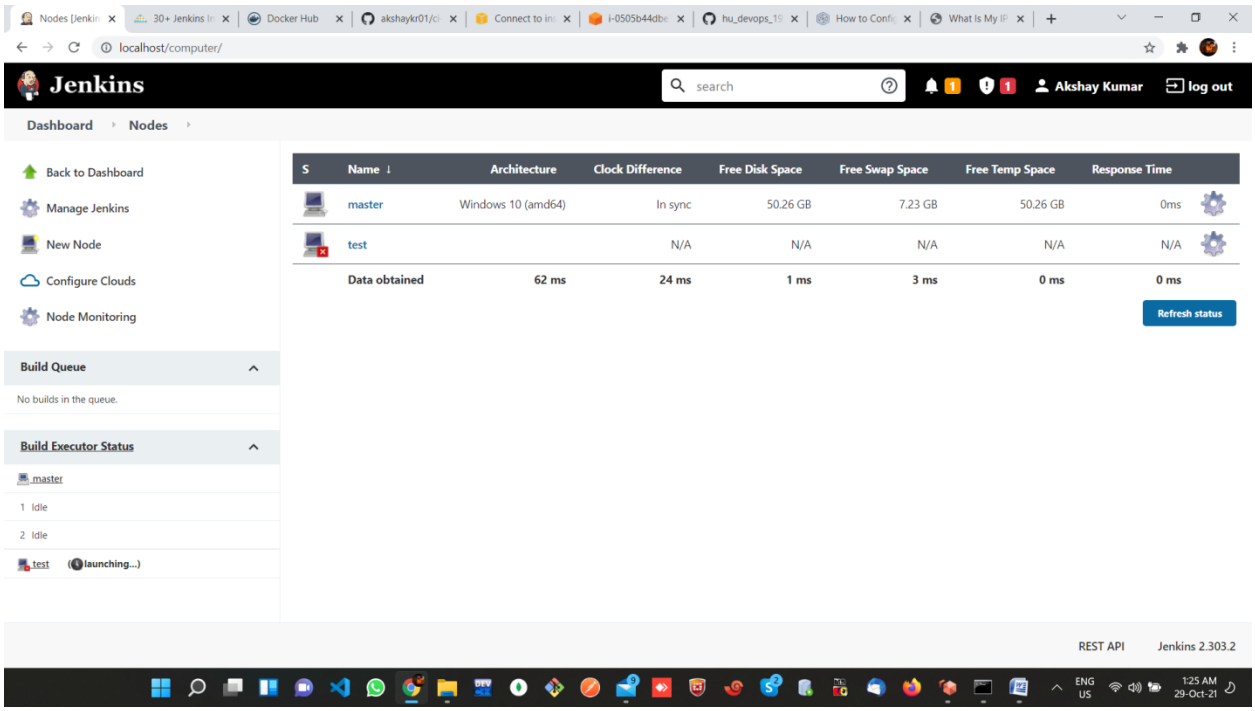
   Install docker on the workspace.

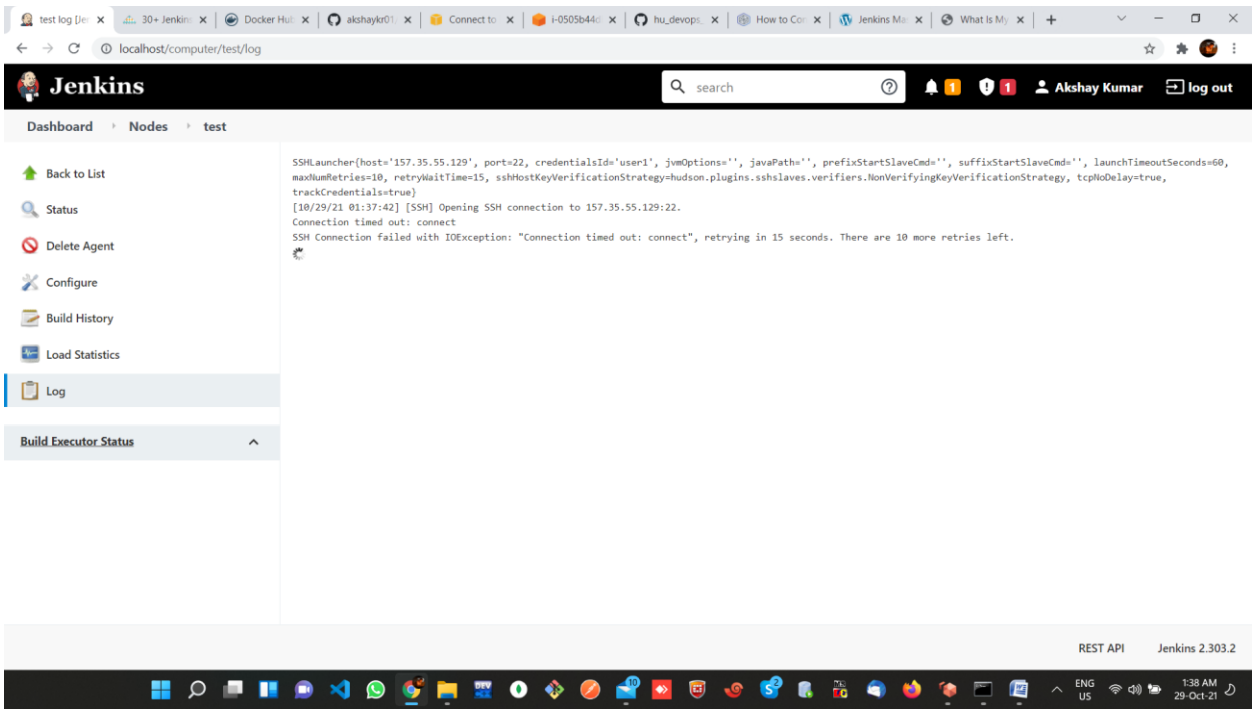
   Install Jenkins on the workspace

   Answer: Create a simple pipeline that executes on the slave.

   Following are the steps are done:




Jenkins
search
Akshay Kumar
log out
Dashboard
Nodes
Back to Dashboard
Manage Jenkins
New Node
Configure Clouds
Node Monitoring
Build Queue
No builds in the queue.
Build Executor Status
master
1 Idle
2 Idle
test (launching...)
S
Name
Architecture
Clock Difference
Free Disk Space
Free Swap Space
Free Temp Space
Response Time
master
Windows 10 (amd64)
In sync
50.26 GB
7.23 GB
50.26 GB
0ms
test
N/A
N/A
N/A
N/A
N/A
Data obtained
62 ms
24 ms
1 ms
3 ms
0 ms
0 ms
Refresh status
REST API
Jenkins 2.303.2


Jenkins
search
Akshay Kumar
log out
Dashboard
Nodes
test
Back to List
Status
Delete Agent
Configure
Build History
Load Statistics
Log
Build Executor Status
SSHLauncher{host='157.35.55.129', port=22, credentialsId='user1', jvmOptions='', javaPath='', prefixStartSlaveCmd='', suffixStartSlaveCmd='', launchTimeoutSeconds=60, maxNumRetries=10, retryWaitTime=15, sshHostKeyVerificationStrategy=hudson.plugins.sshslaves.verifiers.NonVerifyingKeyVerificationStrategy, tcpNoDelay=true, trackCredentials=true}
[10/29/21 01:37:42] [SSH] Opening SSH connection to 157.35.55.129:22.
Connection timed out: connect
SSH Connection failed with IOException: "Connection timed out: connect", retrying in 15 seconds. There are 10 more retries left.
REST API
Jenkins 2.303.2

Pipeline for slave used as:

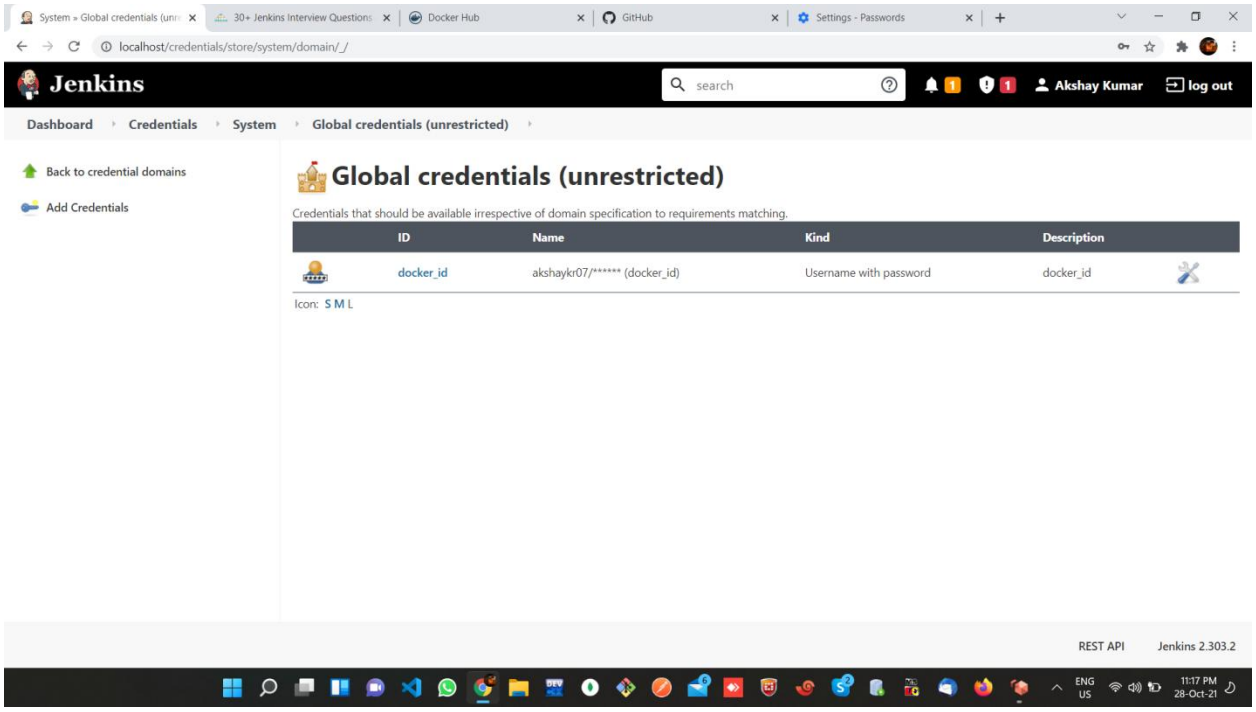
```
node('test'){
        stage('stage1') {
                sh '''echo  stage1 steps'''
        }
        stage('stage2') {
                sh '''echo stage2 steps'''
        }
        stage('stage3') {
        sh '''echo stage3 steps'''
        }
}
```

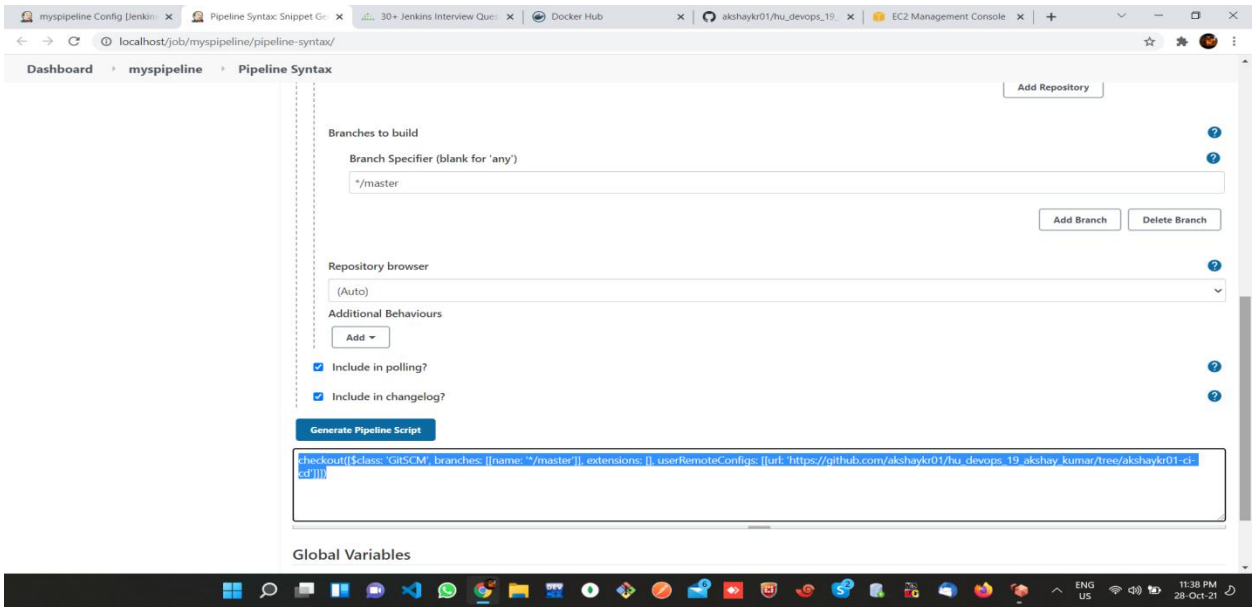
2. Create a declarative pipeline to build docker images and push to Dockerhub.

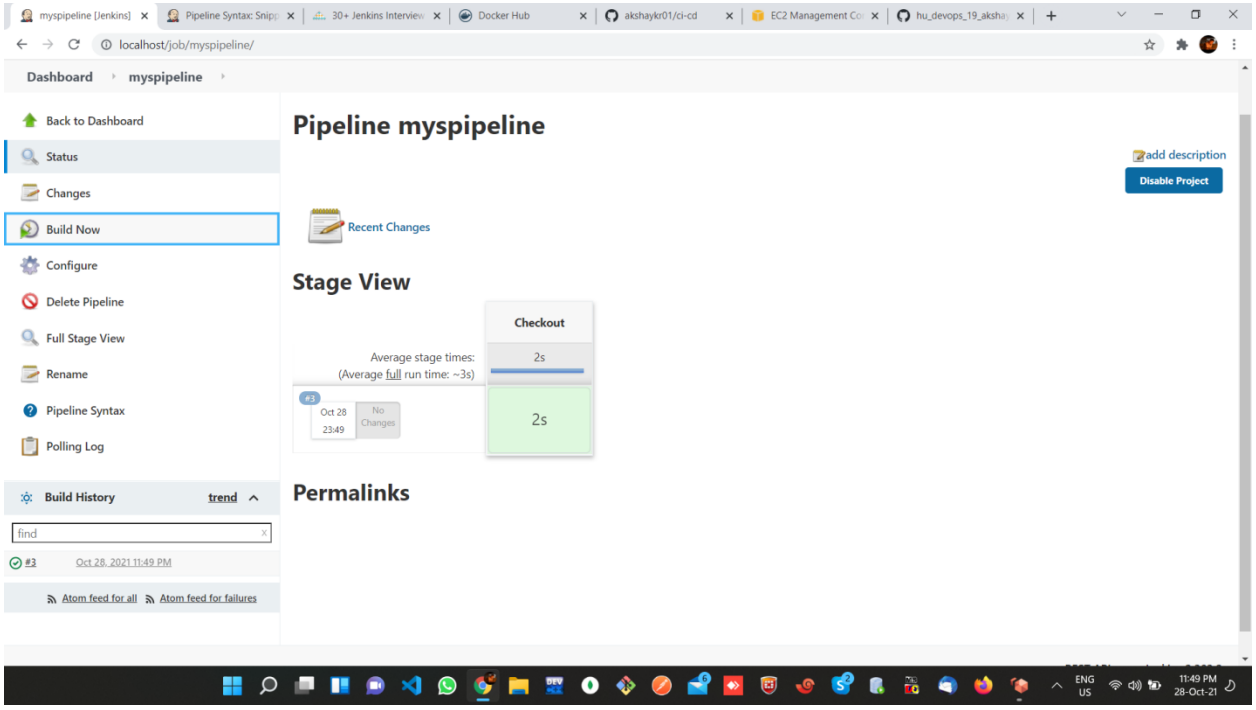
Answer:

Different stages are being done for this. Like creating stages as checkout, build, push.

Showing the above using the screenshots:

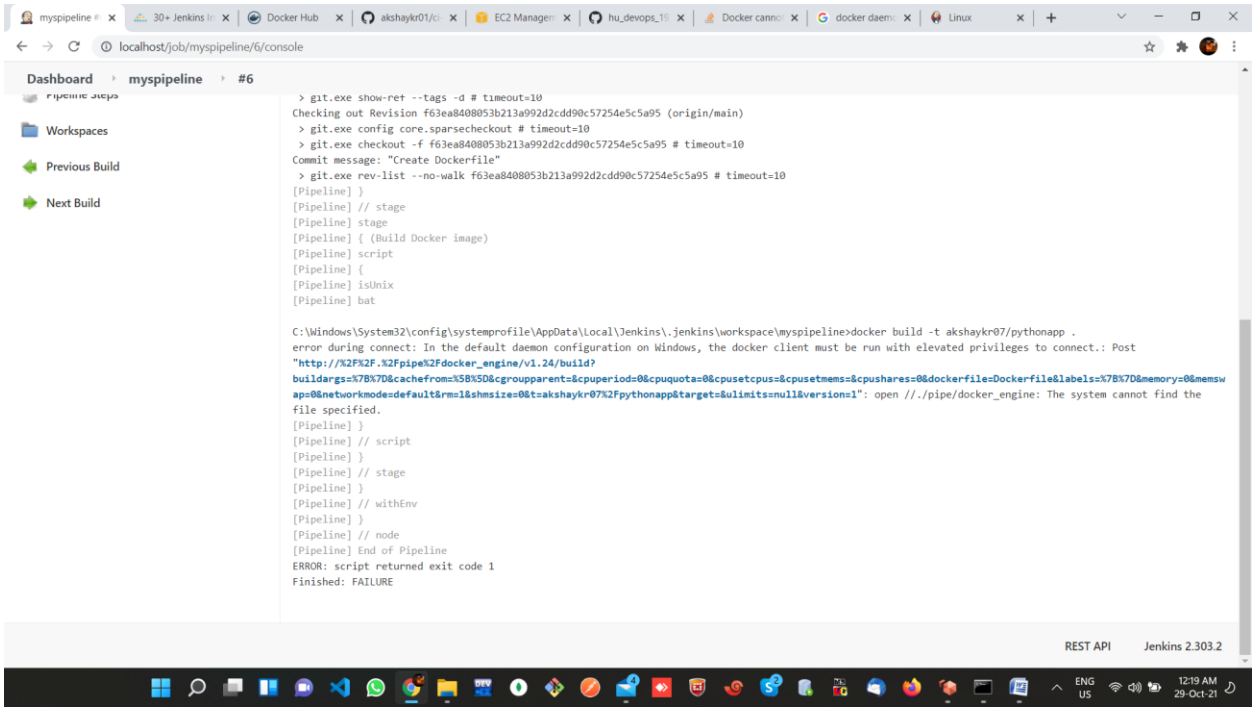






Due to problem in Docker daemon it is not going currently but I have the complete pipeline file.

Showing the problem of docker-daemon in my system.



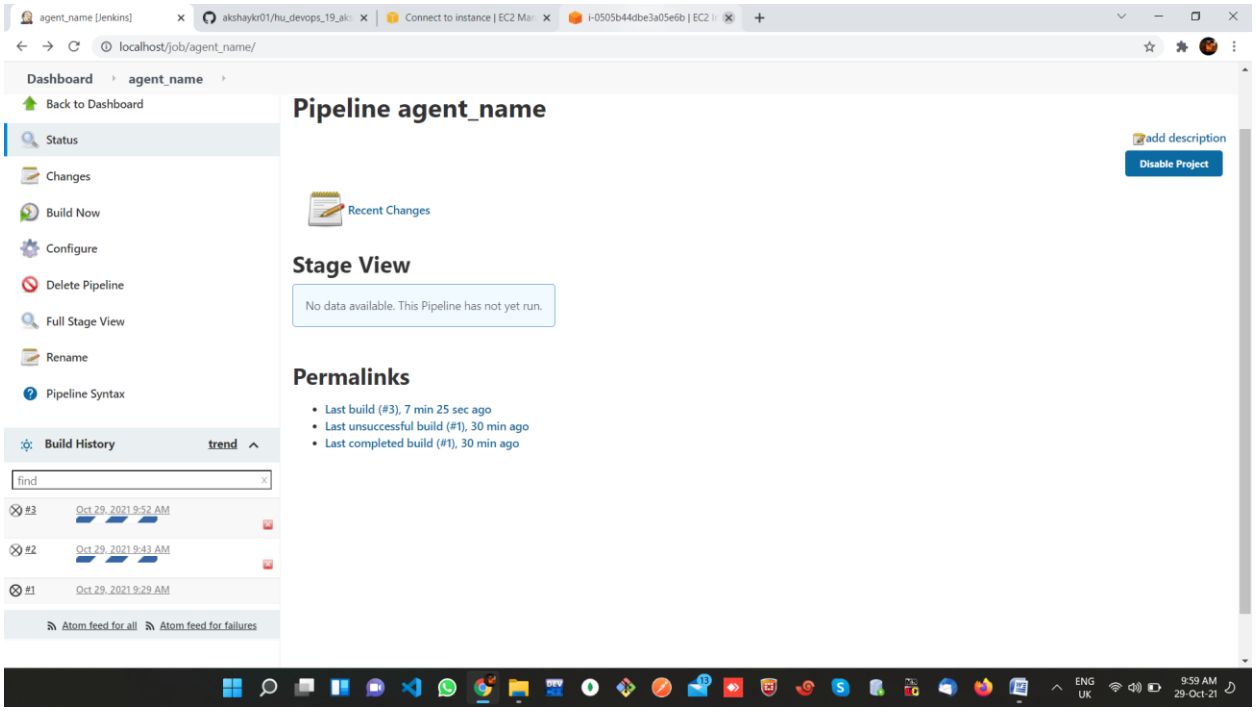
2. **Use an agent name as a label in multi stage pipeline and echo your name in each stage.**

Answer:

For this given agent name as ‘akshay’ in the declarative pipeline and there used stages ti echo my name.

Here is the pipeline:

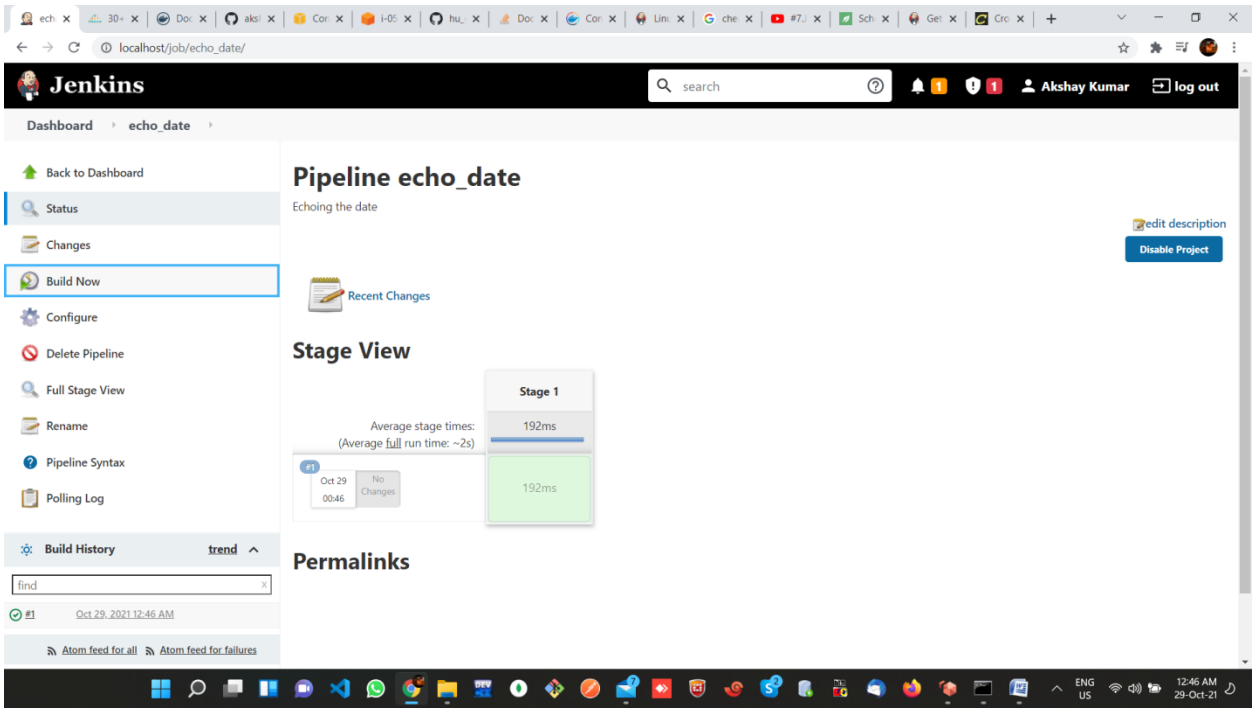
```
pipeline {
   agent { label 'test' }
   stages {
      stage('Dev') {
         steps {
            echo 'Hello World'
         }
      }
      stage('Prod') {
         steps {
            echo 'Hello World'
         }
      }
   }
}
```


agent_name [Jenkins]
localhost/job/agent_name/
Dashboard
agent_name
Back to Dashboard
Status
Changes
Build Now
Configure
Delete Pipeline
Full Stage View
Rename
Pipeline Syntax
Build History
trend
find
#3 Oct 29, 2021 9:52 AM
#2 Oct 29, 2021 9:43 AM
#1 Oct 29, 2021 9:29 AM
Atom feed for all
Atom feed for failures
Pipeline agent_name
add description
Disable Project
Recent Changes
Stage View
No data available. This Pipeline has not yet run.
Permalinks
Last build (#3), 7 min 25 sec ago
Last unsuccessful build (#1), 30 min ago
Last completed build (#1), 30 min ago
ENG
UK
9:59 AM
29-Oct-21

4. Schedule jobs to execute for every 5 hr and echo date.

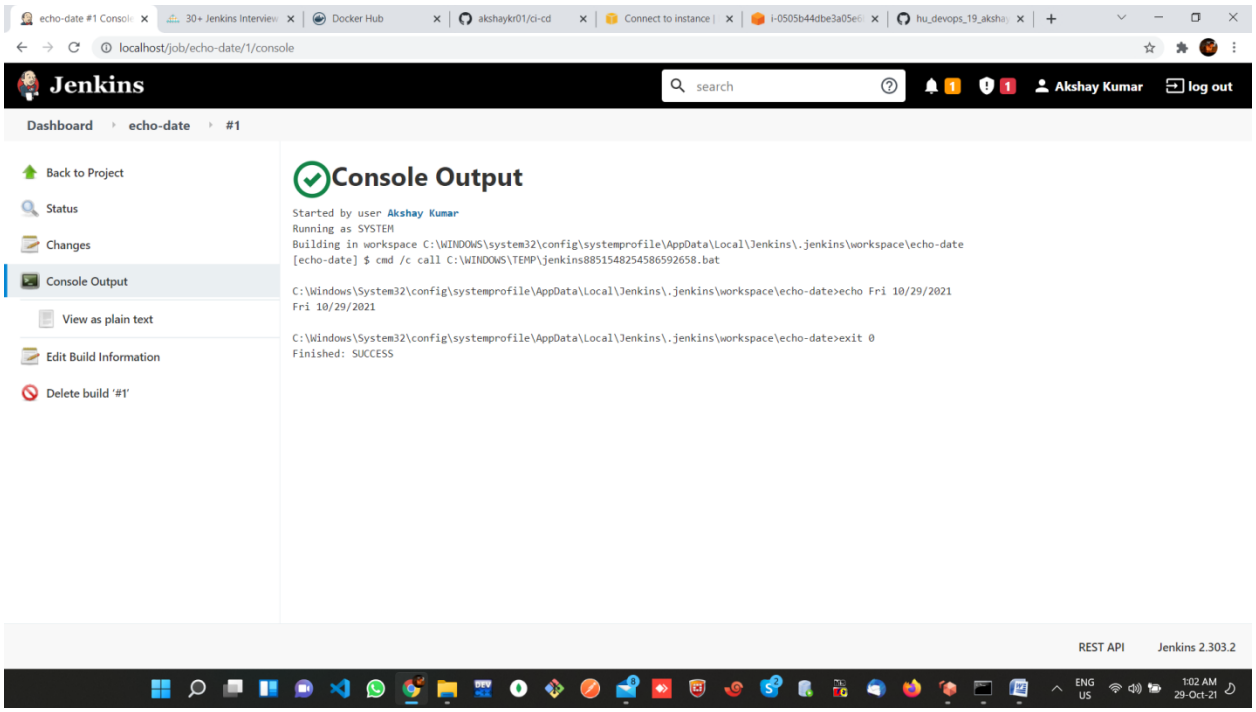
Answer:

Giving screenshot in support of this:



We can see that build is successful.

Now showing the console.



We can see the date in the console output.

Github link: https://github.com/akshaykr01/hu_devops_19_akshay_kumar/tree/akshaykr01-ci-cd