

EXPERIMENT 7&8

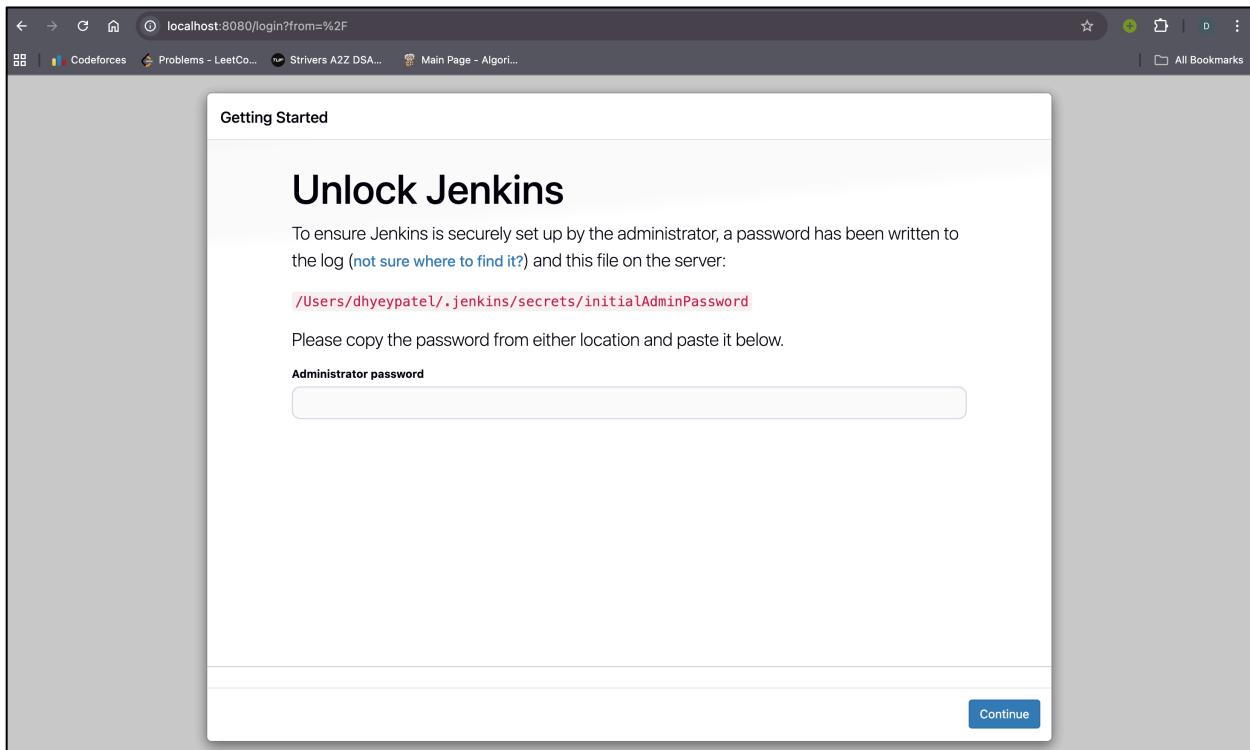
JENKINS PIPELINE SETUP AND PIPELINE TRIGGERING

- JENKINS INSTALLATION

```
[dhyepatel@Dhyeys-MacBook-Air ~ % brew install jenkins-lts
Warning: jenkins-lts 2.516.3 is already installed and up-to-date.
To reinstall 2.516.3, run:
  brew reinstall jenkins-lts
dhyepatel@Dhyeys-MacBook-Air ~ % ]
```

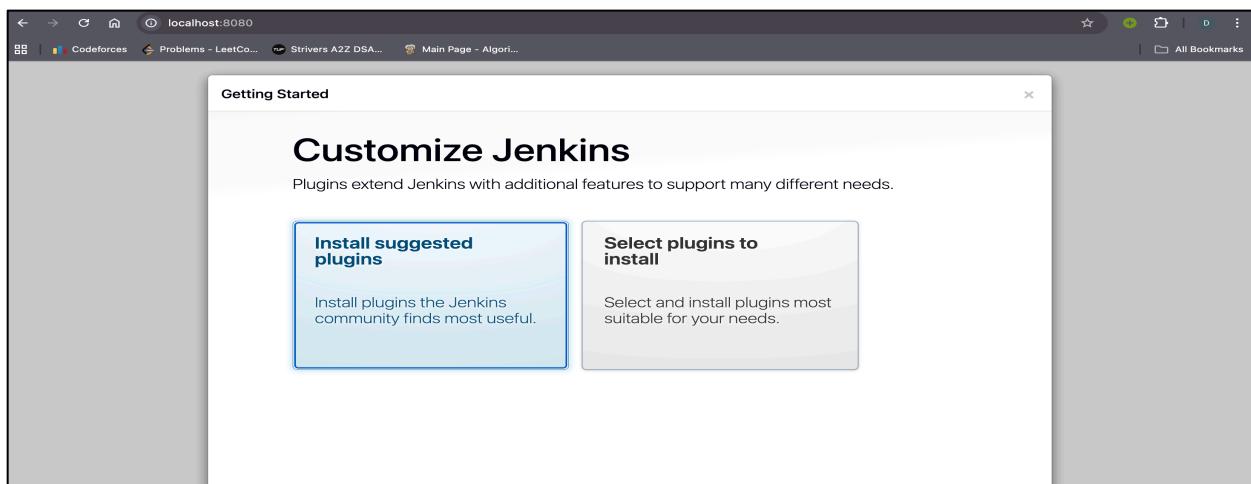
- START JENKINS SERVICE

```
[dhyepatel@Dhyeys-MacBook-Air ~ % brew services start jenkins-lts
==> Successfully started `jenkins-lts` (label: homebrew.mxcl.jenkins-lts)
dhyepatel@Dhyeys-MacBook-Air ~ % ]
```

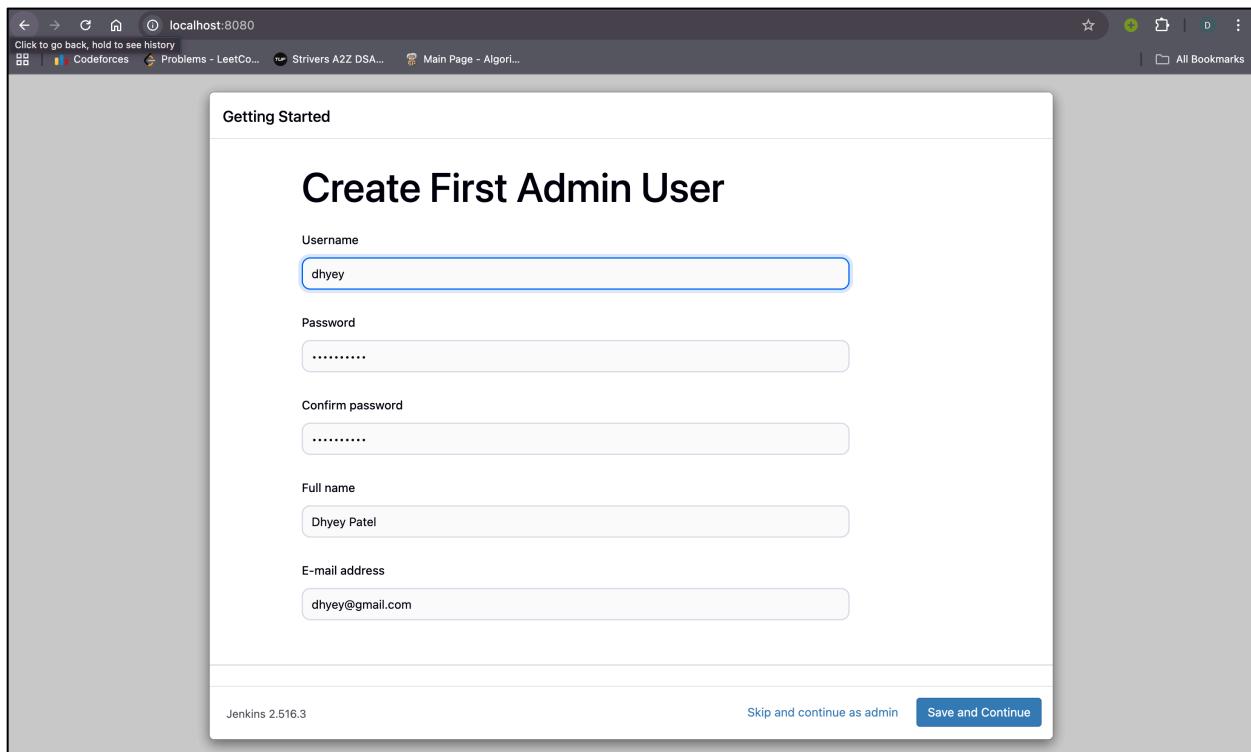


- INITIAL PASSOWRD FROM TERMINAL

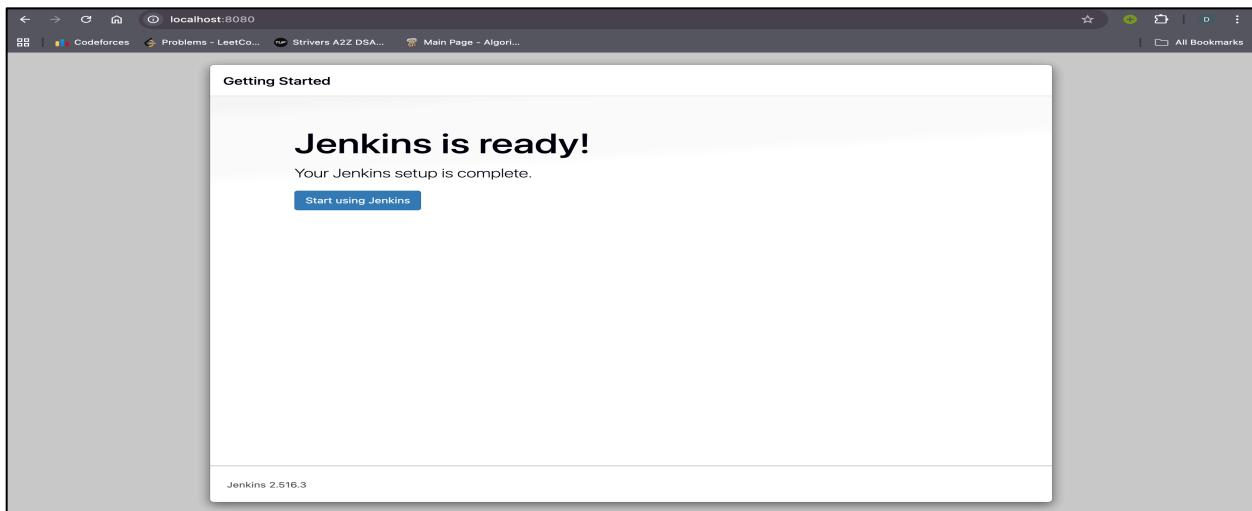
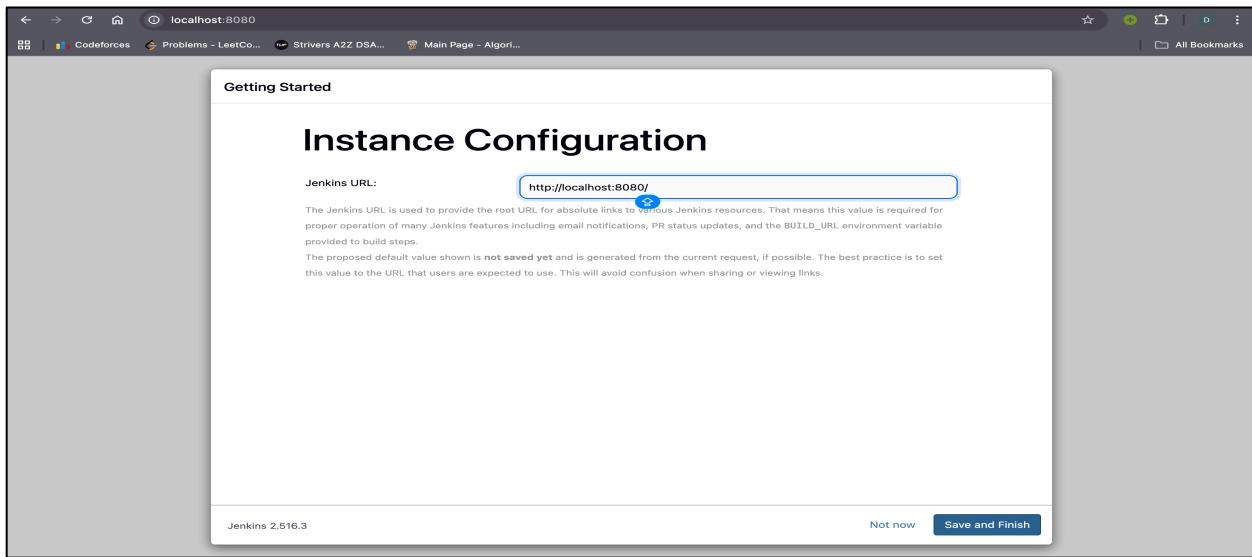
```
Last login: Fri Sep 26 11:43:58 on console
[dhyeypatel@Dhyeys-MacBook-Air ~ % cat ~/.jenkins/secrets/initialAdminPassword
3da1b93d926648e4b093e2[REDACTED]
dhyeypatel@Dhyeys-MacBook-Air ~ %
```



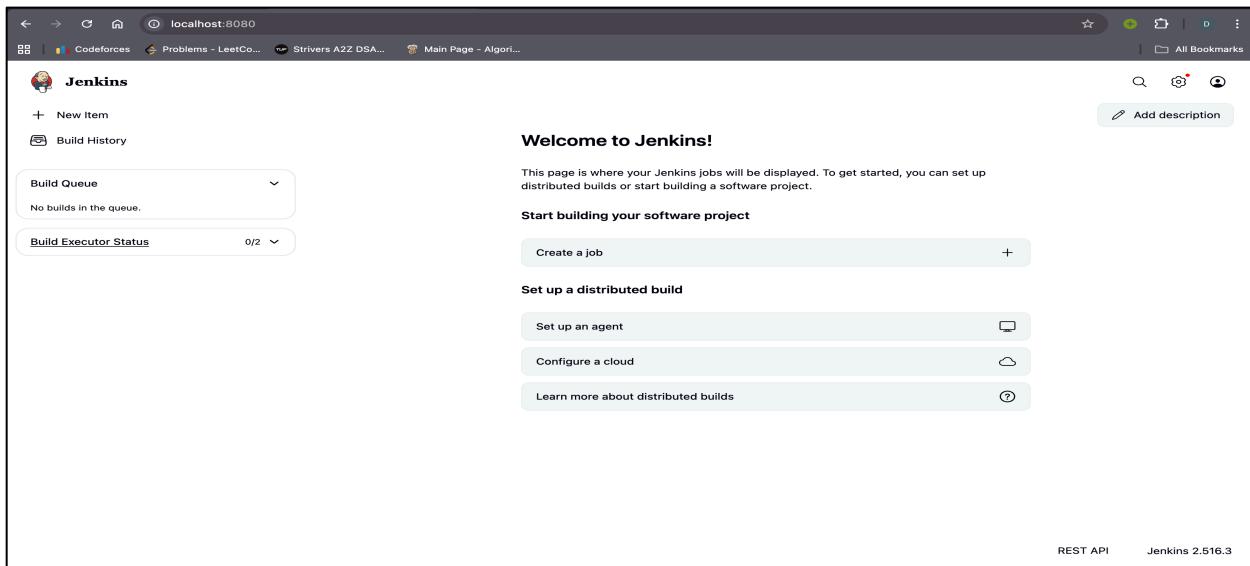
- ADMIN USER SETUP



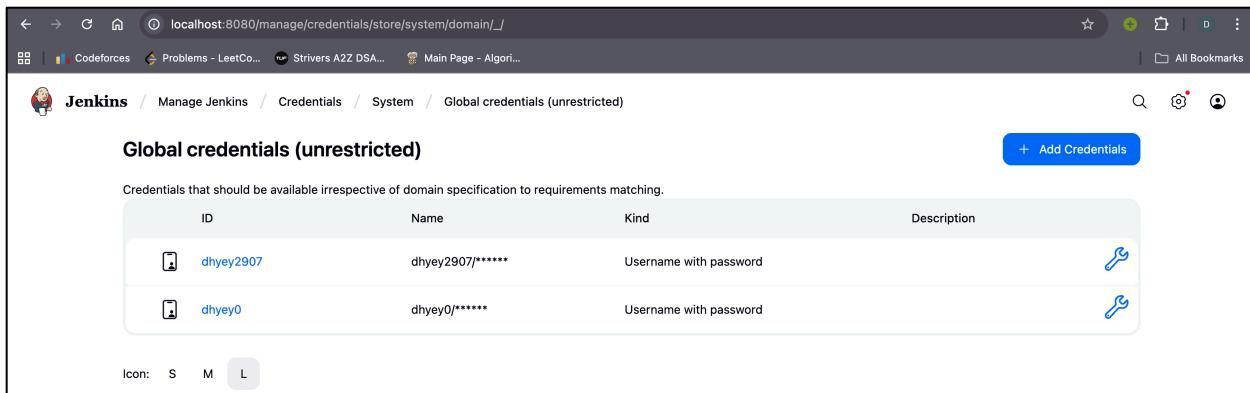
- JENKINS INSTANCE SETUP ON LOCAL HOST



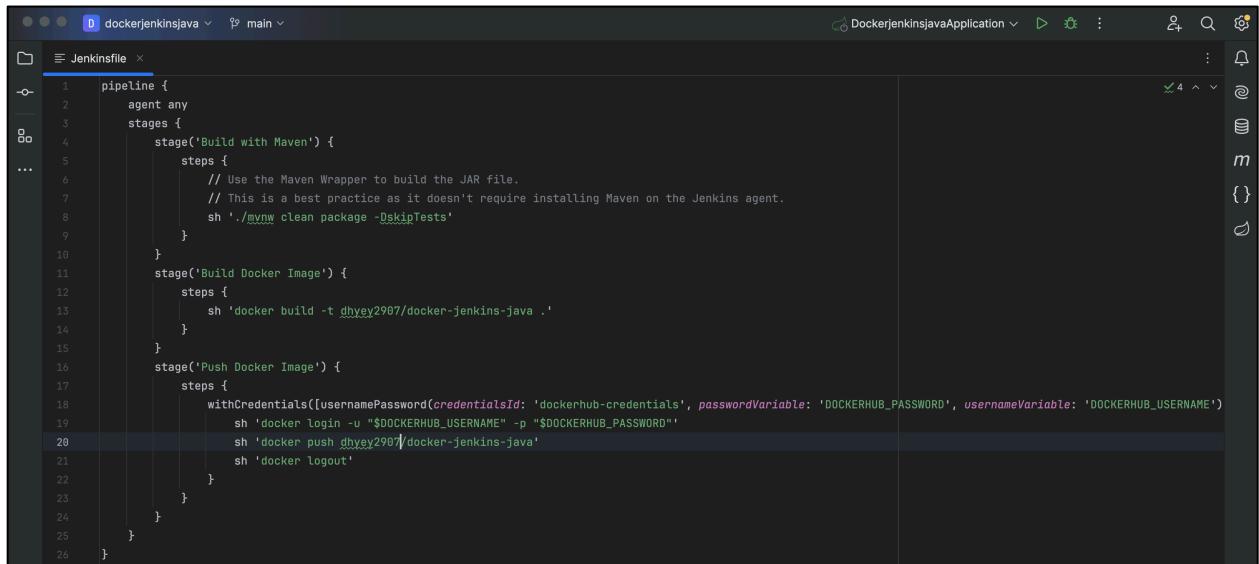
- JENKINS DASHBOARD



- SETUP FOR GITHUB AND DOCKERHUB CREDENTIALS IN JENKINS

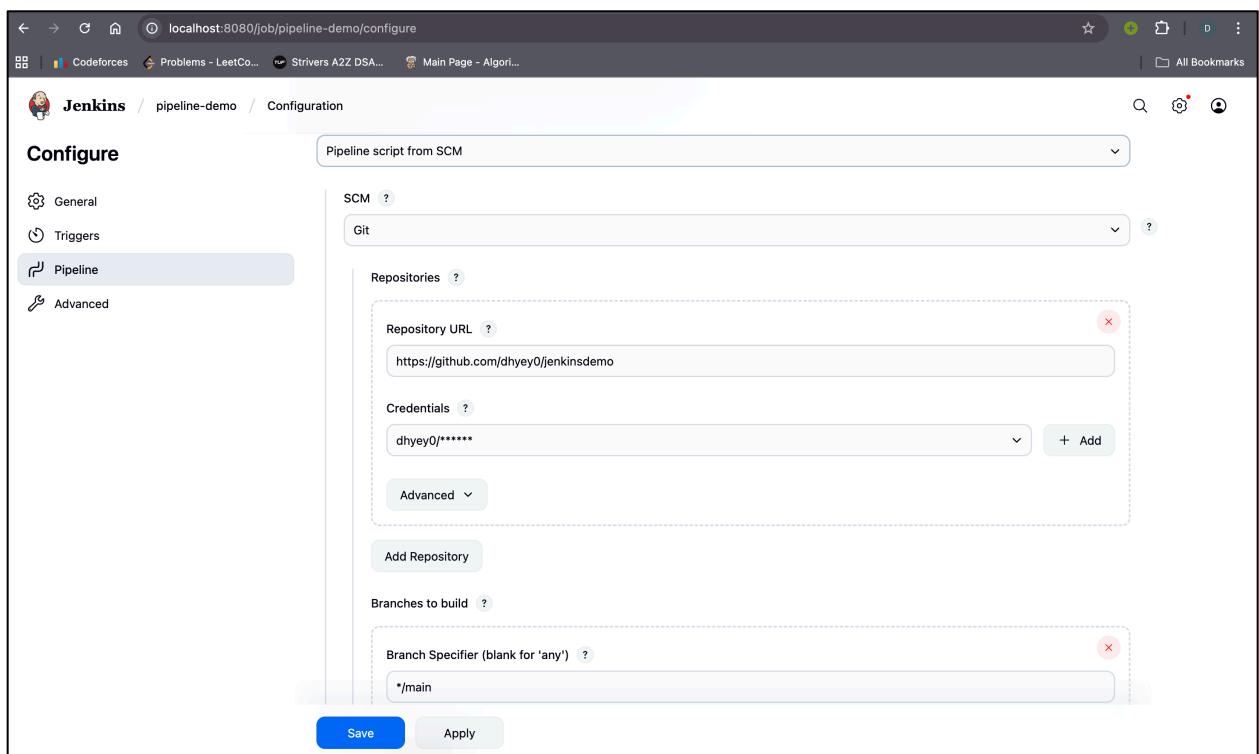


- JENKINSFILE IN PROJECT



```
1 pipeline {
2     agent any
3     stages {
4         stage('Build with Maven') {
5             steps {
6                 // Use the Maven Wrapper to build the JAR file.
7                 // This is a best practice as it doesn't require installing Maven on the Jenkins agent.
8                 sh './mvnw clean package -DskipTests'
9             }
10        }
11        stage('Build Docker Image') {
12            steps {
13                sh 'docker build -t dhyey2907/docker-jenkins-java .'
14            }
15        }
16        stage('Push Docker Image') {
17            steps {
18                withCredentials([usernamePassword(credentialsId: 'dockerhub-credentials', passwordVariable: 'DOCKERHUB_PASSWORD', usernameVariable: 'DOCKERHUB_USERNAME')])
19                sh 'docker login -u "$DOCKERHUB_USERNAME" -p "$DOCKERHUB_PASSWORD"'
20                sh 'docker push dhyey2907/docker-jenkins-java'
21                sh 'docker logout'
22            }
23        }
24    }
25 }
```

- PIPELINE SETUP IN JENKINS



The screenshot shows the Jenkins Pipeline configuration page for a job named "pipeline-demo". The "Pipeline" tab is selected in the left sidebar. The main configuration area is titled "Pipeline script from SCM". It specifies "Git" as the source control management (SCM) provider. The "Repositories" section contains one repository with the URL <https://github.com/dhyey0/jenkinsdemo> and a credential named "dhyey0*****". The "Branches to build" section has a single branch specifier `*/main`. At the bottom of the form are "Save" and "Apply" buttons.

- PIPELINE BUILD DEMO

The screenshot shows the Jenkins interface for the 'pipeline-demo' job. The top navigation bar includes links for Codeforces, Problems - LeetCode, Strivers A2Z DSA..., Main Page - Algo..., and All Bookmarks. The main title is 'pipeline-demo' with a green checkmark icon. On the left, a sidebar lists options: Status (selected), Changes, Build Now, Configure, Delete Pipeline, Stages, Rename, Pipeline Syntax, and Credentials. Below the sidebar is a 'Builds' section with a 'Filter' input field and a dropdown showing 'Today' with entry '#11 4:08 pm'. To the right, under 'Permalinks', there is a list of recent builds:

- Last build (#11), 4 min 50 sec ago
- Last stable build (#11), 4 min 50 sec ago
- Last successful build (#11), 4 min 50 sec ago
- Last failed build (#10), 8 min 34 sec ago
- Last unsuccessful build (#10), 8 min 34 sec ago
- Last completed build (#11), 4 min 50 sec ago

The screenshot shows the Jenkins interface for the '#12' build of the 'pipeline-demo' job. The top navigation bar and sidebar are identical to the previous screenshot. The main title is '#12 (28-Sept-2025, 4:14:38 pm)' with a green checkmark icon. The sidebar includes options: Status (selected), Changes, Console Output, Edit Build Information, Timings, Git Build Data, Pipeline Overview, Thread Dump, and Pause/resume. On the right, build details are displayed:

- Started by user [Dhyey Patel](#) (Started 13 sec ago)
- This run spent 3 ms waiting in the queue.
- Git Build Data: Revision: b93732f64aa13ed434d57802c1a81d400e4b7340, Repository: <https://github.com/dhyey0/jenkinsdemo>, refs/remotes/origin/main
- Thread Dump: No changes.

A 'Keep this build forever' button is visible at the top right of the build details area.

- CONSOLE OUTPUT OF BUILD

The screenshot shows the Jenkins interface for a pipeline job named "pipeline-demo". The build number is "#12". The left sidebar has a "Console Output" item selected. The main area is titled "Console Output" and displays the following log output:

```

Started by user Dhyey Patel
Obtained Jenkinsfile from git https://github.com/dhyey0/jenkinsdemo
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in /Users/dhyeypatel/.jenkins/workspace/pipeline-demo
[Pipeline] {
[Pipeline] stage
[Pipeline] {
  (Declarative: Checkout SCM)
[Pipeline] checkout
Selected Git installation does not exist. Using Default
The recommended git tool is: NONE
using credential dhyey0
> git rev-parse --resolve-git-dir /Users/dhyeypatel/.jenkins/workspace/pipeline-demo/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/dhyey0/jenkinsdemo # timeout=10
Fetching upstream changes from https://github.com/dhyey0/jenkinsdemo
> git --version # timeout=10
> git --version # 'git version 2.50.1 (Apple Git-155)'
using GIT_ASKPASS to set credentials
> git fetch --tags --force --progress -- https://github.com/dhyey0/jenkinsdemo +refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/main^{commit} # timeout=10
Checking out Revision b93732f64aa13ed434d57802c1a81d400e4b7340 (refs/remotes/origin/main)
> git config core.sparsecheckout # timeout=10
> git checkout -f b93732f64aa13ed434d57802c1a81d400e4b7340 # timeout=10
Commit message: "Jenkinsfile"
> git rev-list --no-walk b93732f64aa13ed434d57802c1a81d400e4b7340 # timeout=10
[Pipeline] }
[Pipeline] // stage

```

The screenshot shows the Jenkins interface for a pipeline job named "pipeline-demo". The build number is "#12". The left sidebar has a "Console Output" item selected. The main area is titled "Console Output" and displays the following log output, which ends with a failure:

```

bad5339f3cac: Waiting
fdf67ba0bcd: Waiting
4511ef1f8818: Waiting
39db00451036: Waiting
4511ef1f8818: Waiting
39db00451036: Waiting
bad5339f3cac: Layer already exists
fdf67ba0bcd: Waiting
39db00451036: Waiting
fdf67ba0bcd: Layer already exists
4511ef1f8818: Layer already exists
39db00451036: Pushed
latest: digest: sha256:0f814a9af68562cbae0b047b87ef3cdd51b824b80636d9f5a90fed404e4648e size: 856
[Pipeline] sh
+ docker logout
Removing login credentials for https://index.docker.io/v1/
[Pipeline] }
[Pipeline] // withCredentials
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS

```

- IMAGE PUSHED ON DOCKERHUB AS RESULT OF PIPELINE TRIGGER

Docker Hub - hub.docker.com/repositories/dhyey2907

Repositories

All repositories within the dhyey2907 namespace.

Name	Last Pushed	Contains	Visibility	Scout
dhyey2907/docker-jenkins-java	5 minutes ago	IMAGE	Public	Inactive
dhyey2907/my-java-app	21 days ago	IMAGE	Public	Inactive
dhyey2907/hello-world-nodeapp	about 1 month ago	IMAGE	Public	Inactive
dhyey2907/cause-connect-backend	7 months ago	IMAGE	Public	Inactive

1–4 of 4

- PIPELINE AUTO TRIGGER SETUP

localhost:8080/job/pipeline-demo/configure

Configure

Triggers

- General
- Triggers
- Pipeline
- Advanced

Set up automated actions that start your build based on specific events, like code changes or scheduled times.

Poll SCM ?
Schedule : H/1 * * * *

Would last have run at Sunday, September 28, 2025, 4:28:00 PM India Standard Time; would next run at Sunday, September 28, 2025, 5:28:00 PM India Standard Time.

Ignore post-commit hooks ?

Trigger builds remotely (e.g., from scripts) ?

Pipeline

Define your Pipeline using Groovy directly or pull it from source control.

Definition

Pipeline script from SCM

Save **Apply**

- IMAGE PUSHED AFTER PIPELINE AUTO TRIGGER

The screenshot shows a web browser window displaying the Docker Hub interface. The URL in the address bar is `hub.docker.com/repositories/dhrey2907`. The page title is "Repositories". On the left, there is a sidebar with the user's profile picture and name "dhrey2907" under "Docker Personal". The sidebar also includes links for "Repositories", "Collaborations", "Settings", "Default privacy", "Notifications", "Billing", "Usage", "Pulls", and "Storage". The main content area is titled "Repositories" and displays a list of repositories within the "dhrey2907" namespace. The table has columns for "Name", "Last Pushed", "Contains", "Visibility", and "Scout". There are four entries:

Name	Last Pushed	Contains	Visibility	Scout
dhrey2907/docker-jenkins-java	less than a minute ago	IMAGE	Public	Inactive
dhrey2907/my-java-app	21 days ago	IMAGE	Public	Inactive
dhrey2907/hello-world-nodeapp	about 1 month ago	IMAGE	Public	Inactive
dhrey2907/cause-connect-backend	7 months ago	IMAGE	Public	Inactive

At the bottom of the table, it says "1–4 of 4".