

**(21CC505PC)**  
**SOFTWARE ENGINEERING LAB**  
**LAB EXERCISE - 6**

**CONTINUOUS INTEGRATION TOOLS**  
**TOPIC -1**

**BUILDING THE CI/CD FREESTYLE PIPELINE  
USING JENKINS FOR MAVEN JAVA PROJECT**

## List of Experiments:

Do the following exercises for any one project given in the list of sample projects or any other projects?

1. Development of problem statement.
2. Preparation of Software Requirement Specification Document, Design Documents and Testing Phase related documents.
3. Study and usage of any Design phase CASE tool
4. Creating the project and committing using Git and GitHub
5. Creating Maven Java and Maven Web project using Eclipse and Push them to GitHub.
6. Building the CI/CD pipeline using Jenkins for the project in the previous experiment.
7. Local Deployment of project using Docker, Kubernetes and Monitoring using Nagios tool.
8. Cloud Deployment of a project in the AWS Cloud using EC2 instance.



# Open Jenkins in local host:8080 and create a new item

budarajumadhurika/PresentProj Dashboard [Jenkins] +

localhost:8080

## Jenkins

Search

MADHURIKA log out

### Dashboard

- New Item
- People
- Build History
- Project Relationship
- Check File Fingerprint
- Manage Jenkins
- My Views
- Lockable Resources
- New View

#### Build Queue

No builds in the queue.

#### Build Executor Status

1 Idle  
2 Idle

[Add description](#)

All demo\_pipeline web\_pipeline +

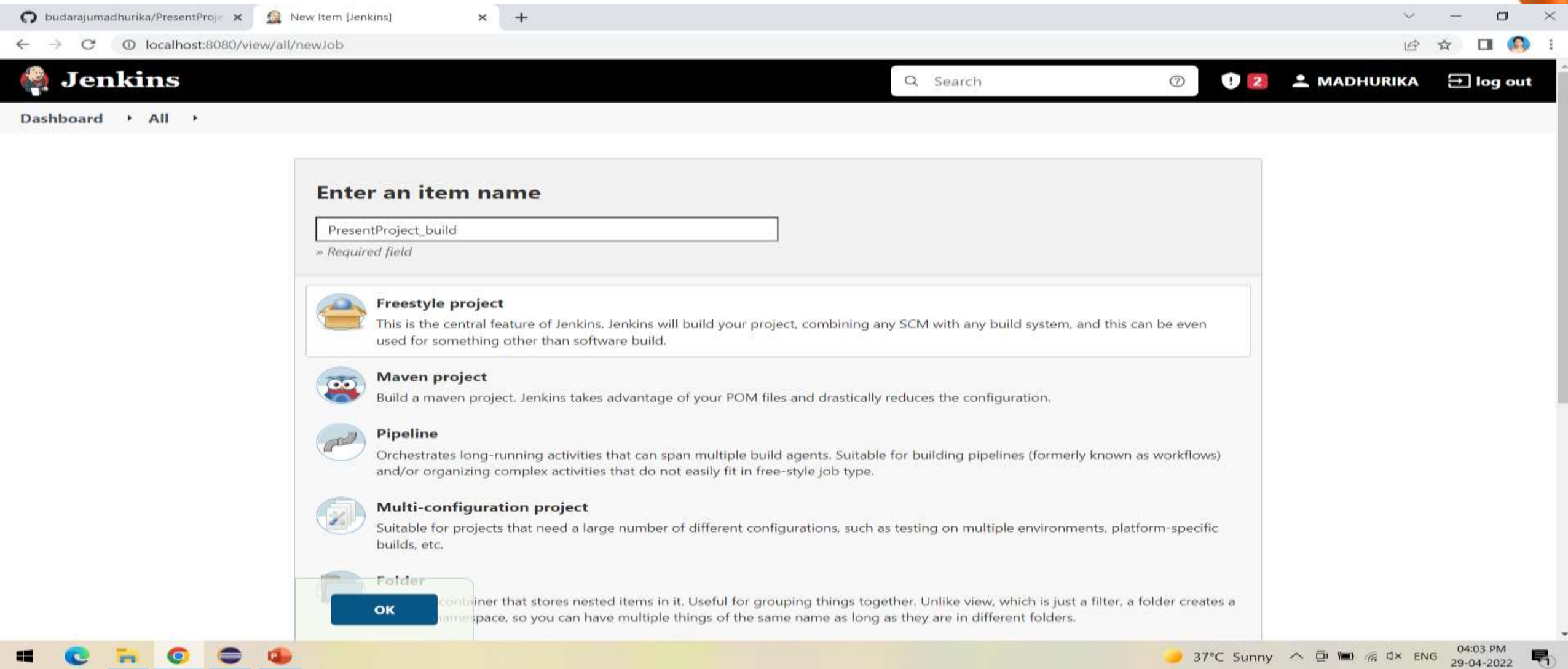
S	W	Name ↓	Last Success	Last Failure	Last Duration
✓	⚙	demo_devops_build	9 days 1 hr #2	N/A	16 sec ▶
✓	⚙	demo_devops_test	9 days 1 hr #1	N/A	8.1 sec ▶
✓	⚙	web_r1_build	3 hr 57 min #19	N/A	8.7 sec ▶
✓	⚙	web_r1_deploy	3 hr 57 min #24	4 hr 18 min #19	1.6 sec ▶
✓	⚙	web_r1_test	3 hr 57 min #18	N/A	3.1 sec ▶

Icon: S M L

Icon legend Atom feed for all Atom feed for failures Atom feed for just latest builds

04:01 PM 29-04-2022 37°C Sunny

# Create a new Freestyle Project and click ok



The screenshot shows the Jenkins web interface in a browser window. The address bar indicates the URL is `localhost:8080/view/all/newJob`. The Jenkins logo and name are in the top left of the page header. A search bar and user information (MADHURIKA) are in the top right. The main content area is titled 'Enter an item name' and contains a text input field with the value 'PresentProject\_build'. Below the input field is a note '» Required field'. Underneath, there are four project type options, each with an icon and a description:

- Freestyle project**: This is the central feature of Jenkins. Jenkins will build your project, combining any SCM with any build system, and this can be even used for something other than software build.
- Maven project**: Build a maven project. Jenkins takes advantage of your POM files and drastically reduces the configuration.
- Pipeline**: Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type.
- Multi-configuration project**: Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific builds, etc.

At the bottom of the list, there is a partially visible 'Folder' option with a description: 'container that stores nested items in it. Useful for grouping things together. Unlike view, which is just a filter, a folder creates a namespace, so you can have multiple things of the same name as long as they are in different folders.' A blue 'OK' button is visible at the bottom left of the project type list.

The Windows taskbar at the bottom shows the time as 04:03 PM on 29-04-2022, with a temperature of 37°C and weather as Sunny.



# The next step is to give the Git repository URL of the project to be built

The screenshot shows the Jenkins configuration page for a job named 'PresentProject\_build'. The browser address bar indicates the URL is 'localhost:8080/job/PresentProject\_build/configure'. The page has a navigation bar with tabs: 'General', 'Source Code Management', 'Build Triggers', 'Build Environment', 'Build', and 'Post-build Actions'. The 'General' tab is active. Under the 'Description' section, there is a text area containing 'Demo for our team' and a '[Plain text] Preview' link. Below this is a list of checkboxes for build options: 'Discard old builds', 'GitHub project', 'Permission to Copy Artifact', 'This build requires lockable resources', 'This project is parameterized', 'Throttle builds', 'Disable this project', and 'Execute concurrent builds if necessary'. An 'Advanced...' button is located to the right of these options. The 'Source Code Management' section shows 'Git' selected as the provider, with a 'Repositories' section containing a 'Repository URL' text field. At the bottom of the configuration area are 'Save' and 'Apply' buttons. The Windows taskbar at the bottom shows the system clock as 04:03 PM on 29-04-2022, with a weather widget indicating 37°C Sunny.

Dashboard ▸ PresentProject\_build ▸

**General** Source Code Management Build Triggers Build Environment Build Post-build Actions

**Description**

Demo for our team

[Plain text] [Preview](#)

☐ Discard old builds ?  
☐ GitHub project  
☐ Permission to Copy Artifact  
☐ This build requires lockable resources  
☐ This project is parameterized ?  
☐ Throttle builds ?  
☐ Disable this project ?  
☐ Execute concurrent builds if necessary ?

[Advanced...](#)

**Source Code Management**

☐ None  
☒ Git ?

**Repositories** ?

Repository URL ?

[Save](#) [Apply](#)



# After adding the repository URL, Specify the Branch as either Master/Main as it is in the GitHub

The screenshot shows the Jenkins web interface for configuring a job named 'PresentProject\_build'. The 'Source Code Management' tab is active, showing the 'Git' option selected. The 'Repository URL' field contains 'https://github.com/budarajumadhurika/PresentProject.git'. The 'Credentials' dropdown is set to '- none -'. The 'Branches to build' section has a 'Branch Specifier (blank for 'any')' field containing '\*/master'. The 'Add Repository' button is visible. The bottom of the page shows 'Save' and 'Apply' buttons. The browser's address bar shows 'localhost:8080/job/PresentProject\_build/configure'. The Windows taskbar at the bottom shows the time as 04:05 PM on 29-04-2022, with a temperature of 37°C and weather 'Sunny'.

Dashboard > PresentProject\_build >

General **Source Code Management** Build Triggers Build Environment Build Post-build Actions

### Source Code Management

☐ None  
☒ Git ?

**Repositories** ?

**Repository URL** ?

https://github.com/budarajumadhurika/PresentProject.git

**Credentials** ?

- none - Add

Advanced...

Add Repository

**Branches to build** ?

**Branch Specifier (blank for 'any')** ?

\*/master

Save Apply





# My project is in main branch so I have mentioned main

budarajumadhurika/PresentProj... x PresentProject\_build Config [Jenl... x +

localhost:8080/job/PresentProject\_build/configure

Dashboard ▸ PresentProject\_build ▸

General **Source Code Management** Build Triggers Build Environment Build Post-build Actions

<https://github.com/budarajumadhurika/PresentProject.git>

**Credentials** ?

- none - Add

Advanced...

Add Repository

**Branches to build** ?

Branch Specifier (blank for 'any') ?

\*/main

Add Branch

**Repository browser** ?

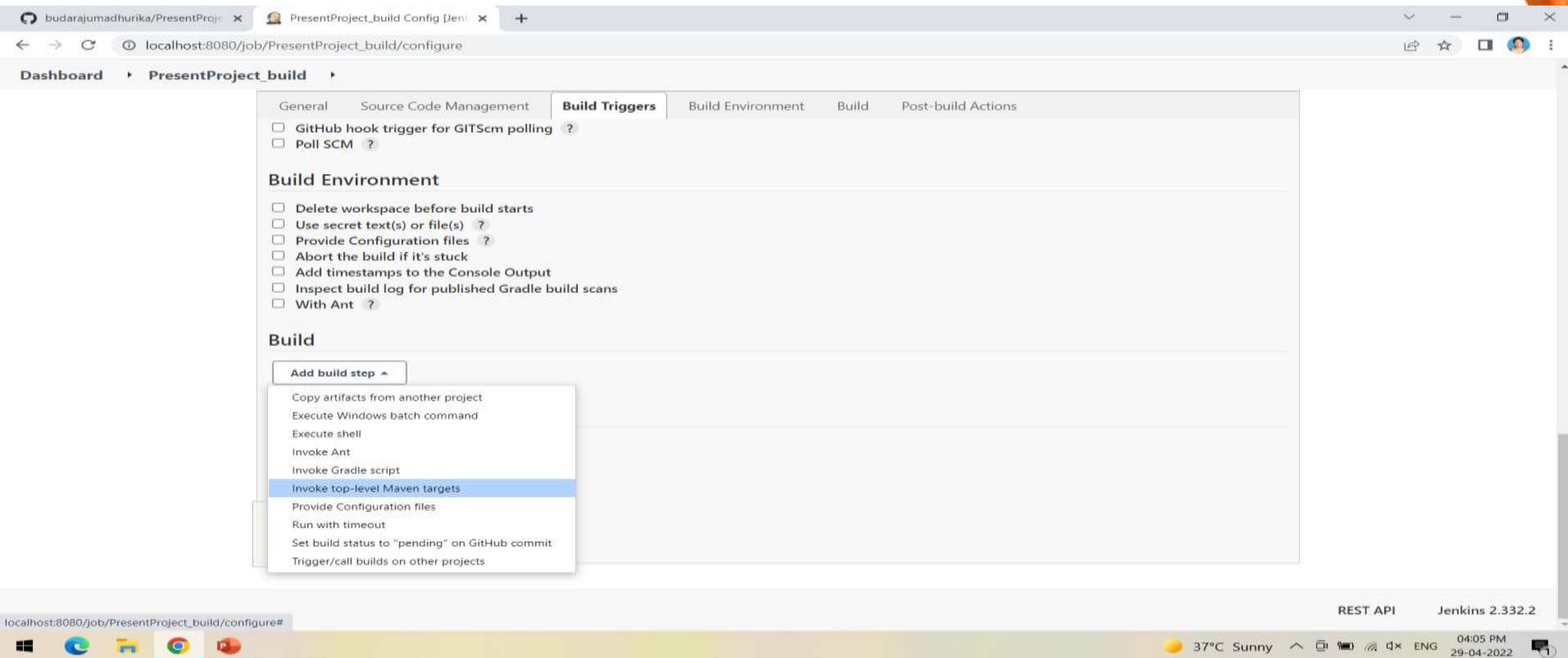
(Auto)

**Additional Behaviours**

Save Apply

37°C Sunny 04:05 PM 29-04-2022

# Now in Build, Invoke top-level Maven targets



The screenshot shows the Jenkins configuration page for a job named 'PresentProject\_build'. The browser address bar indicates the URL is 'localhost:8080/job/PresentProject\_build/configure'. The page has several tabs: 'General', 'Source Code Management', 'Build Triggers', 'Build Environment', 'Build', and 'Post-build Actions'. The 'Build' tab is currently selected. Under the 'Build' tab, there is a section titled 'Add build step' with a dropdown menu open. The dropdown menu lists several options, with 'Invoke top-level Maven targets' highlighted in blue. Other options include 'Copy artifacts from another project', 'Execute Windows batch command', 'Execute shell', 'Invoke Ant', 'Invoke Gradle script', 'Provide Configuration files', 'Run with timeout', 'Set build status to "pending" on GitHub commit', and 'Trigger/call builds on other projects'. The bottom of the screen shows a Windows taskbar with various icons and a system tray displaying the date and time as '04:05 PM 29-04-2022'.

Dashboard ▸ PresentProject\_build ▸

General Source Code Management **Build Triggers** Build Environment Build Post-build Actions

☐ GitHub hook trigger for GITScm polling ?  
☐ Poll SCM ?

**Build Environment**

☐ Delete workspace before build starts  
☐ Use secret text(s) or file(s) ?  
☐ Provide Configuration files ?  
☐ Abort the build if it's stuck  
☐ Add timestamps to the Console Output  
☐ Inspect build log for published Gradle build scans  
☐ With Ant ?

**Build**

Add build step ▾

- Copy artifacts from another project
- Execute Windows batch command
- Execute shell
- Invoke Ant
- Invoke Gradle script
- Invoke top-level Maven targets**
- Provide Configuration files
- Run with timeout
- Set build status to "pending" on GitHub commit
- Trigger/call builds on other projects

localhost:8080/job/PresentProject\_build/configure#

REST API Jenkins 2.332.2

37°C Sunny 04:05 PM 29-04-2022





# Select the Maven path which is already set in the global credentials in Jenkins

budarajumadhurika/PresentProj... PresentProject\_build Config [Jeni... +

localhost:8080/job/PresentProject\_build/configure

Dashboard > PresentProject\_build >

General Source Code Management **Build Triggers** Build Environment Build Post-build Actions

☐ GitHub hook trigger for GITScm polling ?  
☐ Poll SCM ?

**Build Environment**

☐ Delete workspace before build starts  
☐ Use secret text(s) or file(s) ?  
☐ Provide Configuration files ?  
☐ Abort the build if it's stuck  
☐ Add timestamps to the Console Output  
☐ Inspect build log for published Gradle build scans  
☐ With Ant ?

**Build**

**Invoke top-level Maven targets** ?

**Maven Version**

(Default) ▼  
(Default)  
**MAVEN\_HOME**

Advanced...

Save Apply

37°C Sunny 04:06 PM 29-04-2022



# Follow the same goals as done in eclipse starting with clean and install

budarajumadhurika/PresentProj... x PresentProject\_build Config [Jenl... x +

localhost:8080/job/PresentProject\_build/configure

Dashboard > PresentProject\_build >

General Source Code Management Build Triggers Build Environment **Build** Post-build Actions

**Invoke top-level Maven targets** [X]

Maven Version

MAVEN HOME

Goals

clean

Advanced...

**Invoke top-level Maven targets** [X]

Maven Version

MAVEN HOME

Goals

install

Advanced...

Save Apply

37°C Sunny 04:06 PM 29-04-2022



Now in post build actions-> select Archive the artifacts, to send the output of build project to the testing team

budarajumadhurika/PresentProj... PresentProject\_build Config (Jenl... +

localhost:8080/job/PresentProject\_build/configure

Dashboard > PresentProject\_build >

General Source Code Management Build Triggers Build Environment **Build** Post-build Actions

clean

Advanced...

**Invoke top-level Maven targets**

- Aggregate downstream test results
- Archive the artifacts**
- Build other projects
- Publish JUnit test result report
- Publish Javadoc
- Record fingerprints of files to track usage
- Git Publisher
- Build other projects (manual step)
- Deploy war/ear to a container
- E-mail Notification
- Editable Email Notification
- Set GitHub commit status (universal)
- Set build status on GitHub commit [deprecated]
- Trigger parameterized build on other projects
- Delete workspace when build is done

Add post-build action ^

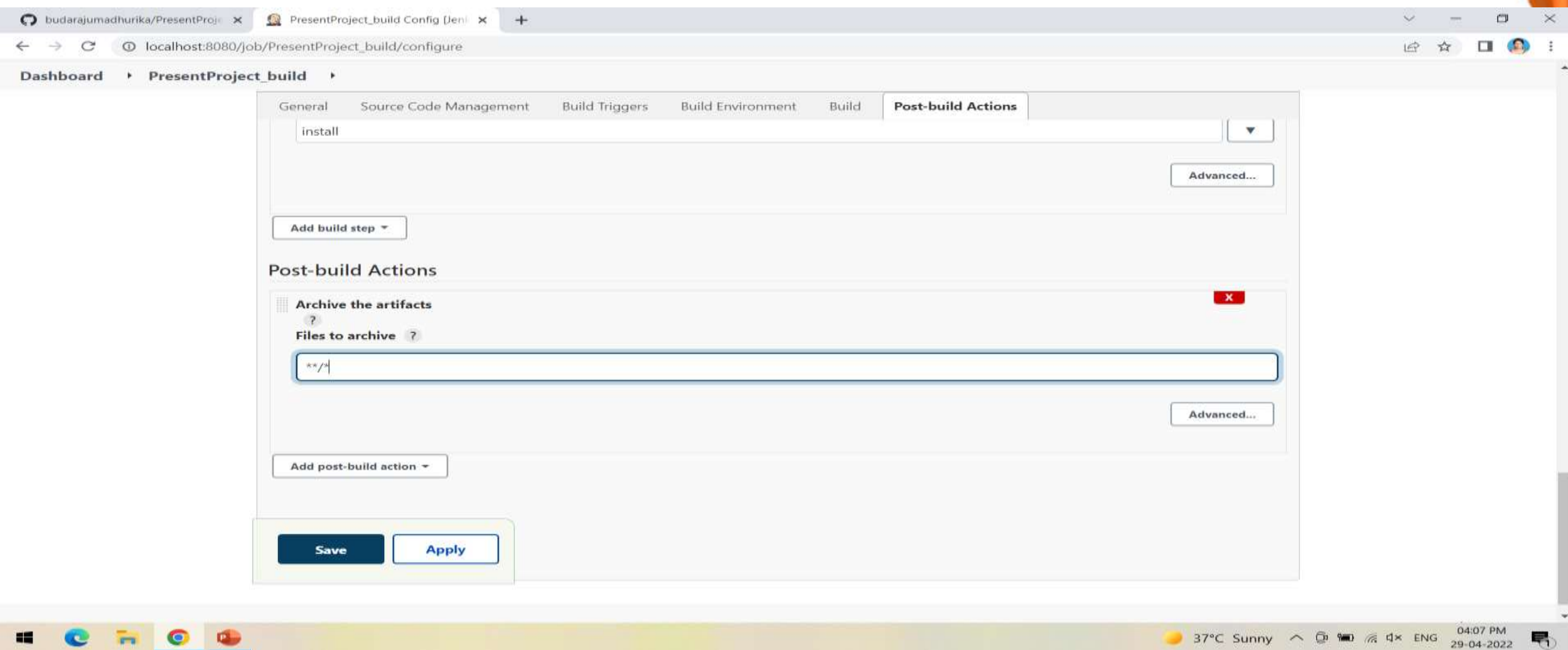
Advanced...

Save Apply

localhost:8080/job/PresentProject\_build/configure#

37°C Sunny 04:06 PM 29-04-2022

If we want to archive all the artifacts type `**/*` as shown



The screenshot shows the Jenkins configuration interface for a job named 'PresentProject\_build'. The 'Post-build Actions' tab is selected, and the 'Archive the artifacts' action is configured. The 'Files to archive' field contains the pattern `**/*`, which is used to archive all files in the workspace. The 'Advanced...' button is visible next to the field. The 'Save' and 'Apply' buttons are at the bottom of the configuration panel.

Dashboard > PresentProject\_build > Post-build Actions

General Source Code Management Build Triggers Build Environment Build Post-build Actions

install

Advanced...

Add build step

Post-build Actions

Archive the artifacts

Files to archive

`**/*`

Advanced...

Add post-build action

Save Apply



Now the next step is to build other projects, where we will create a test project which will be triggered by the build project

budarajumadhurika/PresentProj... PresentProject\_build Config (Jeni... +

localhost:8080/job/PresentProject\_build/configure

Dashboard > PresentProject\_build >

General Source Code Management Build Triggers Build Environment Build **Post-build Actions**

Install

Advanced...

Aggregate downstream test results  
Archive the artifacts  
**Build other projects**  
Publish JUnit test result report  
Publish Javadoc  
Record fingerprints of files to track usage  
Git Publisher  
Build other projects (manual step)  
Deploy war/ear to a container  
E-mail Notification  
Editable Email Notification  
Set GitHub commit status (universal)  
Set build status on GitHub commit [deprecated]  
Trigger parameterized build on other projects  
Delete workspace when build is done

Add post-build action ^

Save Apply

localhost:8080/job/PresentProject\_build/configure#

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# Ignore the red warning, as we have not yet created the test project

budarajumadhurika/PresentProje x PresentProject\_build Config (Jeni x +

localhost:8080/job/PresentProject\_build/configure

✓ Saved

General Source Code Management Build Triggers Build Environment Build Post-build Actions

\*/

Advanced...

**Build other projects** X

?

**Projects to build**

PresentProject\_test

⊘ No such project 'PresentProject\_test'. Did you mean 'PresentProject\_build'?

☒ Trigger only if build is stable

☐ Trigger even if the build is unstable

☐ Trigger even if the build fails

Add post-build action ▾

Save Apply

Windows Taskbar: 37°C Sunny 04:08 PM 29-04-2022





# Create a new freestyle project test as shown and click ok

budarajumadhurika/PresentProj... x New Item [Jenkins] x +






localhost:8080/view/all/newJob

**Jenkins** Search ? 2 ! MADHURIKA log out

Dashboard ▸ All ▸

### Enter an item name

» Required field

-  **Freestyle project**  
This is the central feature of Jenkins. Jenkins will build your project, combining any SCM with any build system, and this can be even used for something other than software build.
-  **Maven project**  
Build a maven project. Jenkins takes advantage of your POM files and drastically reduces the configuration.
-  **Pipeline**  
Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type.
-  **Multi-configuration project**  
Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific builds, etc.
-  **Folder**  
Container that stores nested items in it. Useful for grouping things together. Unlike view, which is just a filter, a folder creates a namespace, so you can have multiple things of the same name as long as they are in different folders.

**OK**



This time we need not mention the git repository so select None

budarajumadhurika/PresentProje x PresentProject\_test Config [Jenki x +

localhost:8080/job/PresentProject\_test/configure

**Jenkins** Search ? 2 MADHURIKA log out

Dashboard PresentProject\_test

**General** Source Code Management Build Triggers Build Environment Build Post-build Actions

**Description**

Test Demo

[Plain text] [Preview](#)

- ☐ Discard old builds ?
- ☐ GitHub project
- ☐ Permission to Copy Artifact
- ☐ This build requires lockable resources
- ☐ This project is parameterized ?
- ☐ Throttle builds ?
- ☐ Disable this project ?
- ☐ Execute concurrent builds if necessary ?

[Advanced...](#)

**Source Code Management**

☒ None ☐ Git ?

[Source Code Management](#)

[Save](#) [Apply](#)

Build triggers builds remotely (e.g., from scripts) ?

37°C Sunny 04:10 PM 29-04-2022



In Build environment check the box as shown below, this is to discard old builds

budarajumadhurika/PresentProj x PresentProject\_test Config [Jenki x +

localhost:8080/job/PresentProject\_test/configure

Dashboard PresentProject\_test

General **Source Code Management** Build Triggers Build Environment Build Post-build Actions

☐ Throttle builds ?  
☐ Disable this project ?  
☐ Execute concurrent builds if necessary ?

Advanced...

**Source Code Management**

☒ None  
☐ Git ?

**Build Triggers**

☐ Trigger builds remotely (e.g., from scripts) ?  
☐ Build after other projects are built ?  
☐ Build periodically ?  
☐ GitHub hook trigger for GITScm polling ?  
☐ Poll SCM ?

**Build Environment**

☒ Delete workspace before build starts

Advanced...

☐ Use secret text(s) or file(s) ?  
☐ Provide Configuration files ?  
☐ Abort the build if it's stuck  
☐ Add timestamps to the Console Output  
☐ Inspect build log for published Gradle build scans

Build Environment

Save Apply

Windows taskbar: 37°C Sunny 04:10 PM 29-04-2022



To forward the artifacts of the previous project to the current test project, select copy the artifacts from another project in Build as shown

The screenshot shows the Jenkins configuration page for a job named 'PresentProject\_test'. The browser address bar indicates the URL is 'localhost:8080/job/PresentProject\_test/configure'. The page has a navigation bar with tabs: 'General', 'Source Code Management', 'Build Triggers', 'Build Environment', 'Build', and 'Post-build Actions'. The 'Build Environment' tab is currently selected, showing options like 'Delete workspace before build starts' (checked) and 'Advanced...'. Below this is the 'Build' section, which has an 'Add build step' button. A dropdown menu is open from this button, listing various build steps. The first option, 'Copy artifacts from another project', is highlighted in blue. Other options include 'Execute Windows batch command', 'Execute shell', 'Invoke Ant', 'Invoke Gradle script', 'Invoke top-level Maven targets', 'Provide Configuration files', 'Run with timeout', 'Set build status to "pending" on GitHub commit', and 'Trigger/call builds on other projects'. The bottom of the screen shows a Windows taskbar with the date and time as 04:11 PM on 29-04-2022, and the system temperature as 37°C Sunny.

Dashboard > PresentProject\_test >

General Source Code Management Build Triggers **Build Environment** Build Post-build Actions

**Build Environment**

☒ Delete workspace before build starts  
Advanced...

☐ Use secret text(s) or file(s) ?  
☐ Provide Configuration files ?  
☐ Abort the build if it's stuck  
☐ Add timestamps to the Console Output  
☐ Inspect build log for published Gradle build scans  
☐ With Ant ?

**Build**

Add build step ^

- Copy artifacts from another project
- Execute Windows batch command
- Execute shell
- Invoke Ant
- Invoke Gradle script
- Invoke top-level Maven targets
- Provide Configuration files
- Run with timeout
- Set build status to "pending" on GitHub commit
- Trigger/call builds on other projects

localhost:8080/job/PresentProject\_test/configure#

REST API Jenkins 2.332.2

37°C Sunny 04:11 PM 29-04-2022



Give the name of the project from which we want to copy the artifacts and check the box ->stable build only->to copy all the artifacts type \*\*/\*

budarajumadhurika/PresentProj... PresentProject\_test Config [Jenki... +

localhost:8080/job/PresentProject\_test/configure

Dashboard > PresentProject\_test >

General Source Code Management Build Triggers Build Environment **Build** Post-build Actions

**Copy artifacts from another project** [X]

Project name ?  
PresentProject\_build

Which build ?  
Latest successful build

☒ Stable build only

Artifacts to copy ?  
\*\*/\*

Artifacts not to copy ?

Target directory ?

Parameter filters ?

Save Apply

37°C Sunny 04:12 PM 29-04-2022



# Now select Invoke top-level Maven targets in build

budarajumadhurika/PresentProje x PresentProject\_test Config [Jenki x +

localhost:8080/job/PresentProject\_test/configure

Dashboard PresentProject\_test

General Source Code Management Build Triggers Build Environment **Build** Post-build Actions

**Target directory** ?

**Parameter filters** ?

☐ Flatten directories ☐ Optional ☒ Fingerprint Artifacts ?

Advanced...

Add build step ^

- Copy artifacts from another project
- Execute Windows batch command
- Execute shell
- Invoke Ant
- Invoke Gradle script
- Invoke top-level Maven targets**
- Provide Configuration files
- Run with timeout
- Set build status to "pending" on GitHub commit
- Trigger/call builds on other projects

localhost:8080/job/PresentProject\_test/configure#

REST API Jenkins 2.332.2

37°C Sunny 04:12 PM 29-04-2022



# This time give the goal as test after selecting the Maven version

The screenshot displays the Jenkins configuration page for a job named 'PresentProject\_test'. The 'Build' tab is selected, showing the following configuration:

- Target directory**: Empty text field.
- Parameter filters**: Empty text field.
- Options**:
  - ☐ Flatten directories
  - ☐ Optional
  - ☒ Fingerprint Artifacts
- Advanced...** button.
- Invoke top-level Maven targets**: Section with a red 'X' icon.
- Maven Version**: Dropdown menu set to 'MAVEN HOME'.
- Goals**: Text field containing 'test'.
- Advanced...** button.
- Save** and **Apply** buttons at the bottom.

The browser address bar shows 'localhost:8080/job/PresentProject\_test/configure'. The system tray at the bottom indicates a temperature of 37°C, sunny weather, and the date 29-04-2022.



# In post-build actions->select Archive the artifacts

budarajumadhurika/PresentProj... PresentProject\_test Config [Jenki... +

localhost:8080/job/PresentProject\_test/configure

Dashboard > PresentProject\_test >

General Source Code Management Build Triggers Build Environment **Build** Post-build Actions

**Invoke top-level Maven targets** [X]

- Aggregate downstream test results
- Archive the artifacts**
- Build other projects
- Publish JUnit test result report
- Publish Javadoc
- Record fingerprints of files to track usage
- Git Publisher
- Build other projects (manual step)
- Deploy war/ear to a container
- E-mail Notification
- Editable Email Notification
- Set GitHub commit status (universal)
- Set build status on GitHub commit [deprecated]
- Trigger parameterized build on other projects
- Delete workspace when build is done

Add post-build action ^

Advanced...

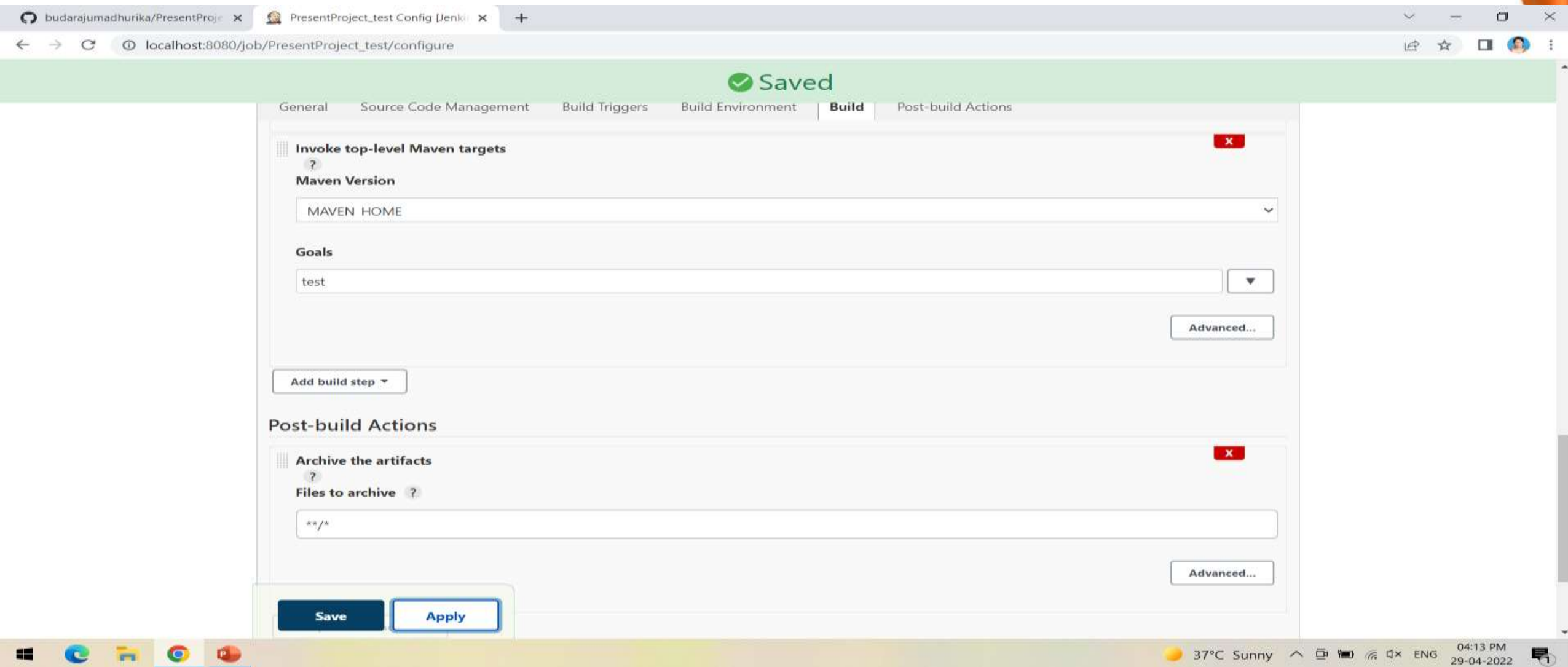
Save Apply

localhost:8080/job/PresentProject\_test/configure#

REST API Jenkins 2.332.2

37°C Sunny 04:13 PM 29-04-2022

# To save all the artifacts->type `**/*` and Apply->Save



The screenshot shows the Jenkins configuration page for a job named 'PresentProject\_test Config'. The 'Build' tab is selected, and the configuration is saved. The 'Invoke top-level Maven targets' step is configured with 'Maven Version' set to 'MAVEN HOME' and 'Goals' set to 'test'. The 'Archive the artifacts' step is configured with 'Files to archive' set to '\*\*/\*'. The 'Save' and 'Apply' buttons are visible at the bottom.

General Source Code Management Build Triggers Build Environment **Build** Post-build Actions

**Invoke top-level Maven targets**

Maven Version

MAVEN HOME

Goals

test

Advanced...

Add build step

**Post-build Actions**

**Archive the artifacts**

Files to archive

\*\*/\*

Advanced...

Save Apply



Create a pipeline by clicking on + symbol in the dashboard ->a pipeline is a collection of events or jobs which are interlinked with one another in a sequence

budarajumadhurika/PresentProj Dashboard [Jenkins] +

localhost:8080

# Jenkins

Search

MADHURIKA log out

## Dashboard

- New Item
- People
- Build History
- Project Relationship
- Check File Fingerprint
- Manage Jenkins
- My Views
- Lockable Resources
- New View

### Build Queue

No builds in the queue.

### Build Executor Status

1 Idle

2 Idle

localhost:8080/newView

All demo\_pipeline web\_pipeline +

Add description

S	W	Name ↓	Last Success	Last Failure	Last Duration	
✓	⚙	demo_devops_build	9 days 1 hr #2	N/A	16 sec	▶
✓	⚙	demo_devops_test	9 days 1 hr #1	N/A	8.1 sec	▶
⋮	⚙	PresentProject_build	N/A	N/A	N/A	▶
⋮	⚙	PresentProject_test	N/A	N/A	N/A	▶
✓	⚙	web_r1_build	4 hr 10 min #19	N/A	8.7 sec	▶
✓	⚙	web_r1_deploy	4 hr 9 min #24	4 hr 30 min #19	1.6 sec	▶
✓	⚙	web_r1_test	4 hr 9 min #18	N/A	3.1 sec	▶

Icon: S M L

Icon legend

Atom feed for all

Atom feed for failures

Atom feed for just latest builds

37°C Sunny 04:13 PM 29-04-2022



# Give a name to the pipeline->select Build Pipeline View->create

budarajumadhurika/PresentProje x New view [Jenkins] x +

localhost:8080/newView

**Jenkins** Search ? 2 MADHURIKA log out

Dashboard

- New Item
- People
- Build History
- Project Relationship
- Check File Fingerprint
- Manage Jenkins
- My Views
- Lockable Resources
- New View

**Build Queue** ^

No builds in the queue.

**Build Executor Status** ^

1 Idle

2 Idle

## New view

**Name**

PresentProject\_pipeline

**Type**

- ☒ **Build Pipeline View**  
Shows the jobs in a build pipeline view. The complete pipeline of jobs that a version propagates through are shown as a row in the view.
- ☐ **List View**  
Shows items in a simple list format. You can choose which jobs are to be displayed in which view.
- ☐ **My View**  
This view automatically displays all the jobs that the current user has an access to.

Create

37°C Sunny 04:14 PM 29-04-2022



# Select the first project to trigger the execution->build project

budarajumadhurika/PresentProje x Edit View [Jenkins] x +

localhost:8080/view/PresentProject\_pipeline/configure

Dashboard ▸ PresentProject\_pipeline ▸

New View

**Build Queue** ^

No builds in the queue.

**Build Executor Status** ^

1 Idle

2 Idle

**Pipeline Flow**

Layout

Based on upstream/downstream relationship

This layout mode derives the pipeline structure based on the upstream/downstream trigger relationship between jobs. This is the only out-of-the-box supported layout mode, but is open for extension.

**Upstream / downstream config**

Select Initial Job ?

demo\_devops\_build

demo\_devops\_build

demo\_devops\_test

**PresentProject\_build**

PresentProject\_test

web\_r1\_build

web\_r1\_deploy

web\_r1\_test

Use the default build cards

**Restrict triggers to most recent successful builds** ?

☐ Yes ☒ No

**Always allow manual trigger on pipeline steps** ?

OK Apply

37°C Sunny 04:16 PM 29-04-2022



# Apply->Ok

budarajumadhurika/PresentProje x Edit View [Jenkins] x +

localhost:8080/view/PresentProject\_pipeline/configure

✓ Saved

**Row Headers**

Just the pipeline number

Show just the build pipeline number

**Column Headers**

No header

Do not show any column headers

**Refresh frequency (in seconds) ?**

3

**URL for custom CSS files**

**Console Output Link Style**

Lightbox

OK Apply

REST API Jenkins 2.332.2

37°C Sunny 04:17 PM 29-04-2022



Click on Run -> click on the small black box to open the console to check if the build is success

budarajumadhurika/PresentProj x PresentProject\_pipeline [Jenkins] x +

localhost:8080/view/PresentProject\_pipeline/

**Jenkins** Search 2 MADHURIKA log out

Dashboard PresentProject\_pipeline

### Build Pipeline

Run History Configure Add Step Delete Manage

Pipeline #1

#1 PresentProject\_build

29-Apr-2022 4:17:28 PM

15 sec

budarajumadhurika

PresentProject\_test

N/A

N/A

localhost:8080/view/PresentProject\_pipeline/#

REST API Jenkins 2.332.2

37°C Sunny 04:17 PM 29-04-2022

We can see that the build is success and the test project is also automatically triggered

The screenshot shows the Jenkins web interface. The browser address bar indicates the URL is `localhost:8080/view/PresentProject_pipeline/`. The Jenkins dashboard shows the `PresentProject_pipeline` with a status of `Success`. The console output for `PresentProject_build #1` is displayed, showing the following log entries:

```
[INFO] Building jar: C:\ProgramData\Jenkins\jenkins\workspace\PresentProject_build\target\PresentProject-0.0.1-SNAPSHOT.jar
[INFO]
[INFO] --- maven-install-plugin:2.5.2:install (default-install) @ PresentProject ---
[INFO] Installing C:\ProgramData\Jenkins\jenkins\workspace\PresentProject_build\target\PresentProject-0.0.1-SNAPSHOT.jar to C:\Windows\system32\config\systemprofile\.m2\repository\com\app\demo\PresentProject\0.0.1-SNAPSHOT\PresentProject-0.0.1-SNAPSHOT.jar
[INFO] Installing C:\ProgramData\Jenkins\jenkins\workspace\PresentProject_build\pom.xml to C:\Windows\system32\config\systemprofile\.m2\repository\com\app\demo\PresentProject\0.0.1-SNAPSHOT\PresentProject-0.0.1-SNAPSHOT.pom
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 4.859 s
[INFO] Finished at: 2022-04-29T16:17:44+05:30
[INFO] -----
Archiving artifacts
Triggering a new build of PresentProject\_test
Finished: SUCCESS
```

At the bottom of the console output, it says "Triggering a new build of [PresentProject\\_test](#)". The Jenkins version is 2.332.2.



The pipeline is successful if it is in green color as shown -  
>check the console of the test project

budarajumadhurika/PresentProj x PresentProject\_pipeline [Jenkins] x +

localhost:8080/view/PresentProject\_pipeline/

**Jenkins** Search 2 MADHURIKA log out

Dashboard PresentProject\_pipeline

### Build Pipeline

Run History Configure Add Step Delete Manage

Pipeline #2

#2 PresentProject\_build

29-Apr-2022 4:17:45 PM  
6.8 sec  
budarajumadhurika

#2 PresentProject\_test

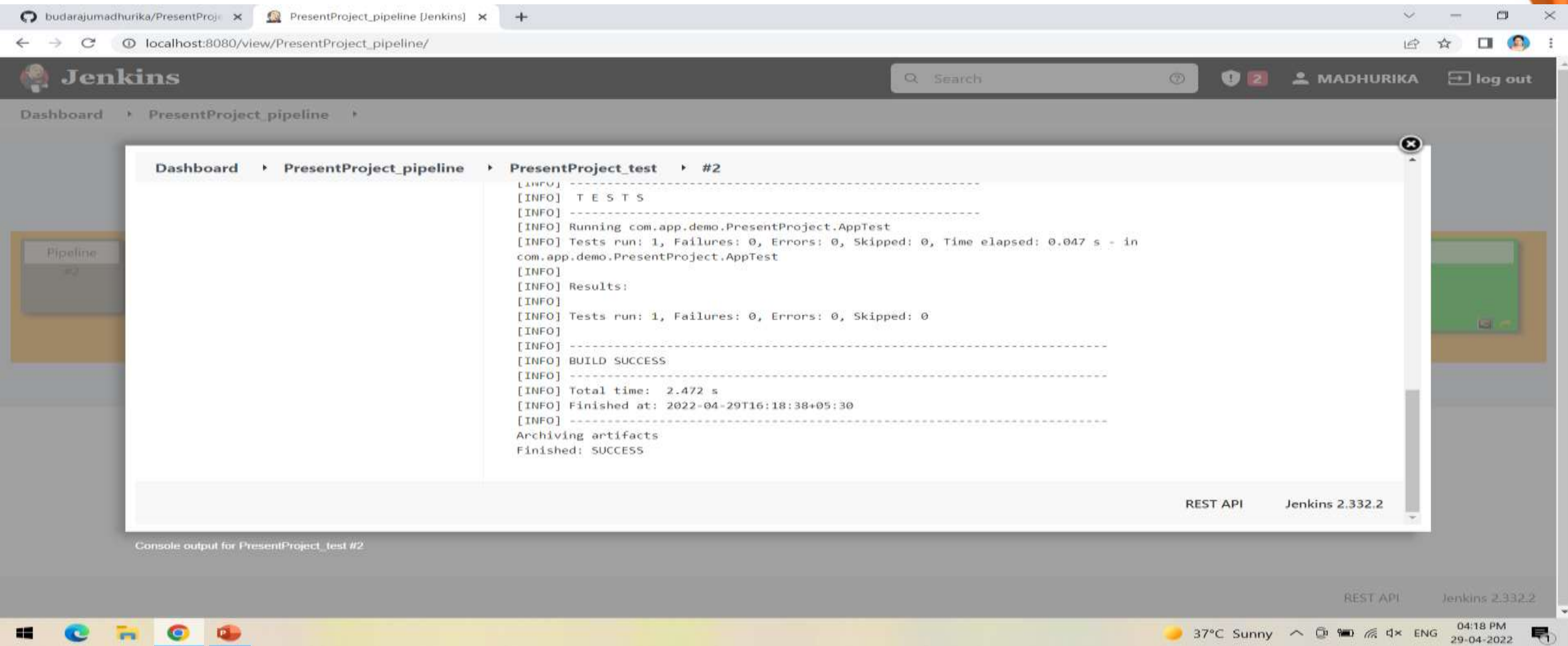
29-Apr-2022 4:18:34 PM  
4.1 sec  
budarajumadhurika

REST API Jenkins 2.332.2

37°C Sunny 04:18 PM 29-04-2022



# The test project is successful and all the artifacts are archived successfully



The screenshot shows the Jenkins web interface. The breadcrumb navigation at the top of the console window reads: Dashboard > PresentProject\_pipeline > PresentProject\_test > #2. The console output is as follows:

```
[INFO] -----  
[INFO] T E S T S  
[INFO] -----  
[INFO] Running com.app.demo.PresentProject.AppTest  
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.047 s - in  
com.app.demo.PresentProject.AppTest  
[INFO]  
[INFO] Results:  
[INFO]  
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0  
[INFO]  
[INFO] -----  
[INFO] BUILD SUCCESS  
[INFO] -----  
[INFO] Total time: 2.472 s  
[INFO] Finished at: 2022-04-29T16:18:38+05:30  
[INFO] -----  
Archiving artifacts  
Finished: SUCCESS
```

At the bottom right of the console window, it says "REST API" and "Jenkins 2.332.2". Below the console window, the text "Console output for PresentProject\_test #2" is visible. The Jenkins top bar shows the user "MADHURIKA" and a "log out" button. The browser address bar shows "localhost:8080/view/PresentProject\_pipeline/".