

SEPM EXPERIMENT 4

Name: Mohammed Arhaan Ali

Div: T11

Roll No: 02

AIM: To understand Continuous Integration, install and configure Jenkins with Maven/Ant/Gradle to setup a build Job.

THEORY:

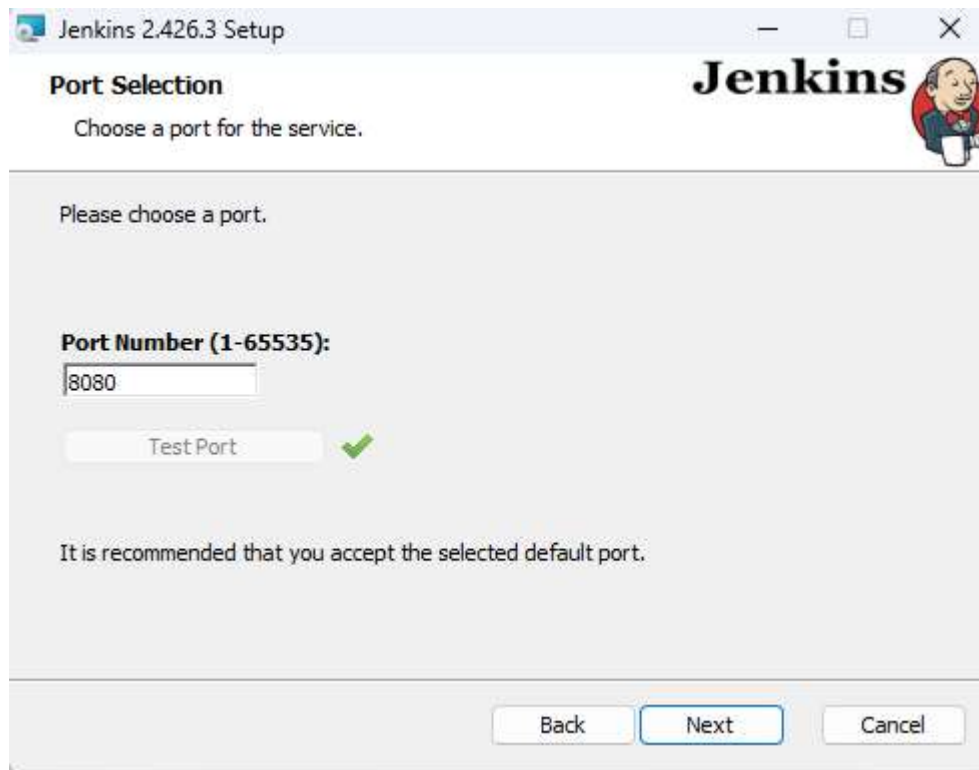
Jenkins is an open-source automation tool written in Java with plugins built for Continuous Integration purpose. Jenkins is used to build and test your software projects continuously making it easier for developers to integrate changes to the project and making it easier for users to obtain a fresh build. It also allows you to continuously deliver your software by integrating with many testing and deployment technologies. Jenkins simplifies and accelerates the software development lifecycle. By automating repetitive tasks, it reduces the chance of errors, provides faster feedback to developers, and enables more frequent software releases. This automation helps teams to deliver software more quickly and with higher quality. It is a valuable tool for any team looking to improve their software development workflow.

The Steps to install Jenkins and implement the jobs are given below as:

Step 1:



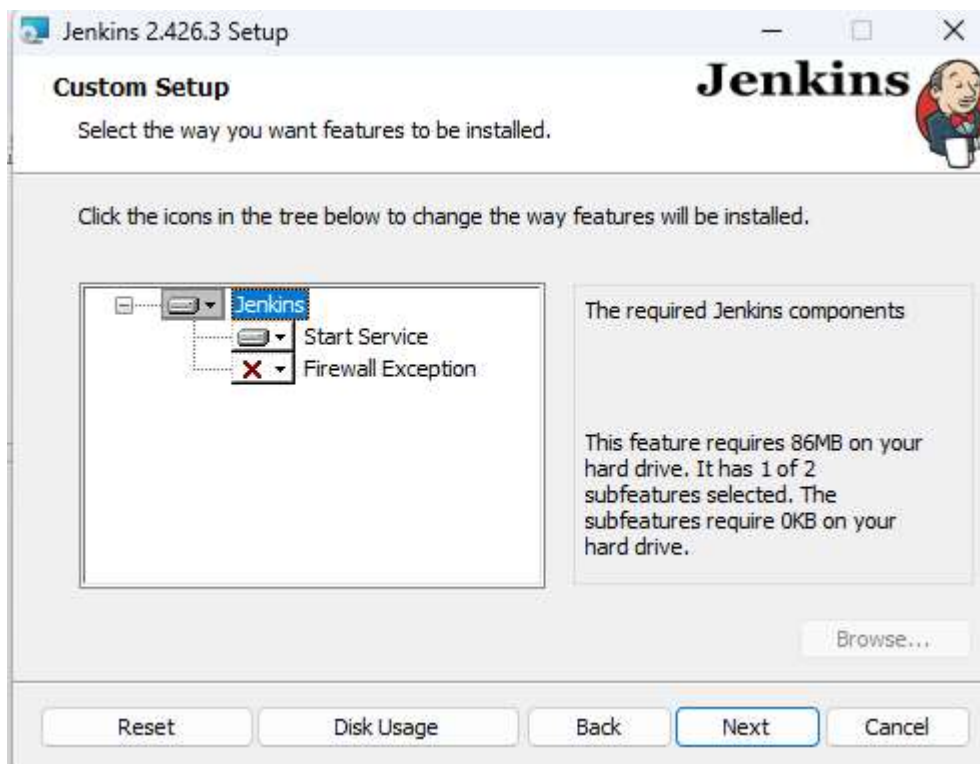
Step 2:



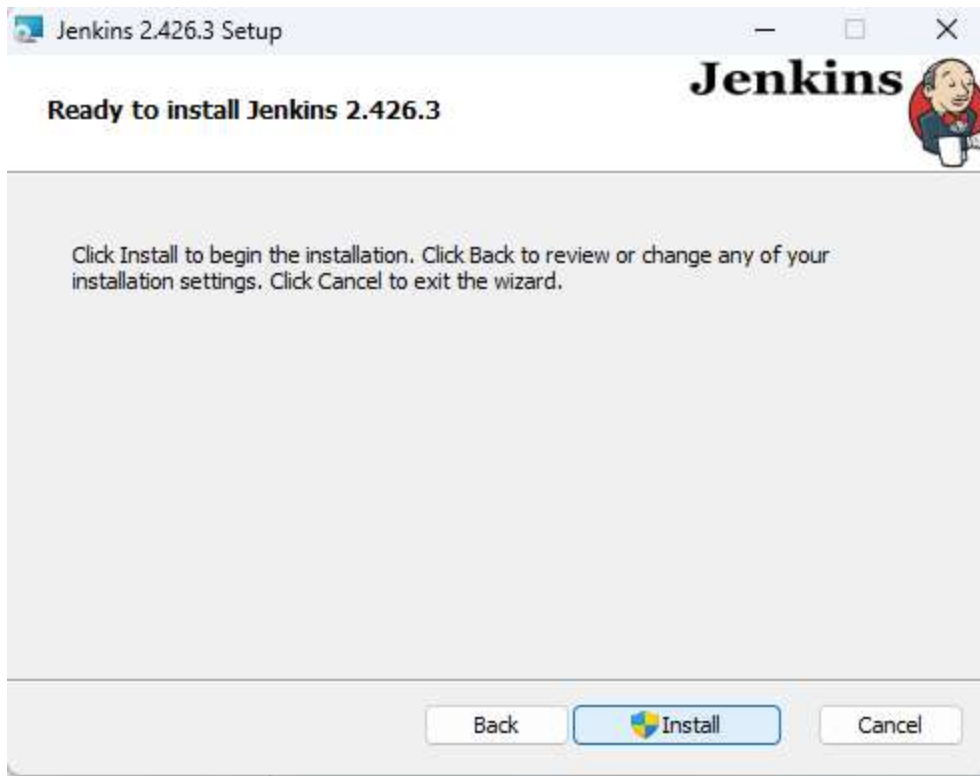
Step 3:



Step 4:



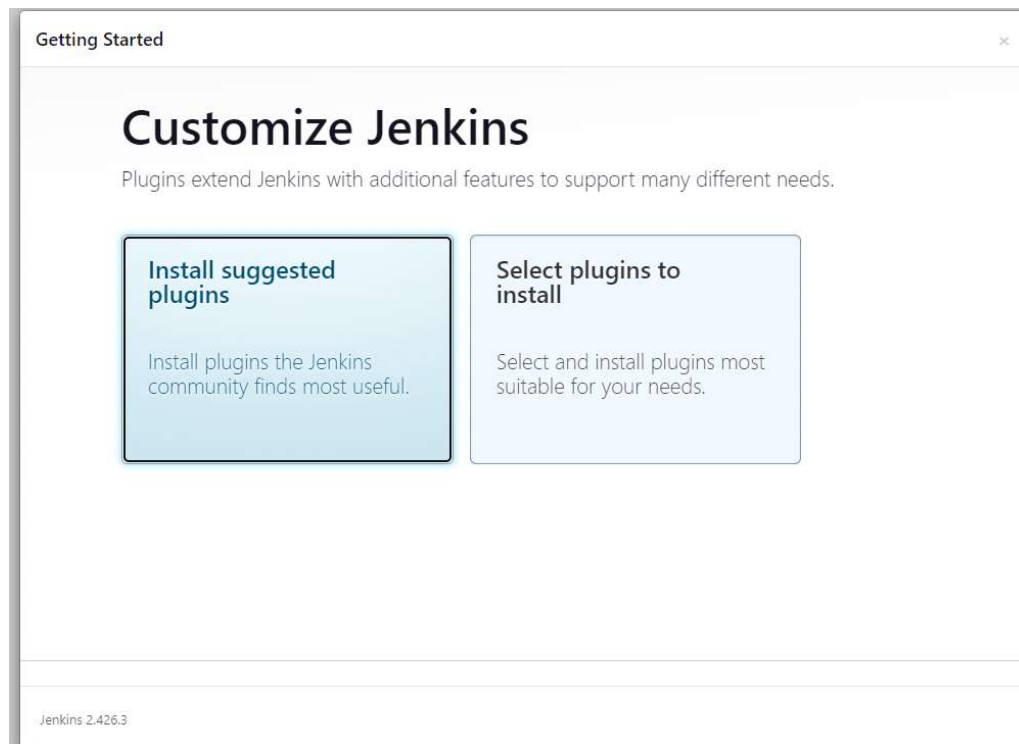
Step 5:



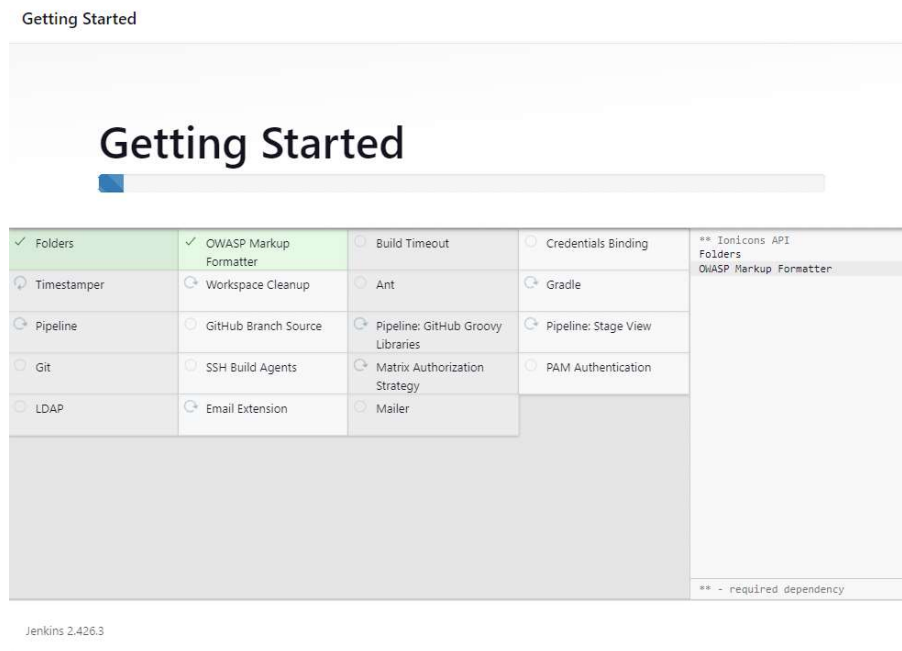
Step 6:



Step 7:



Step 8:



Step 9:

Getting Started

Create First Admin User

Username

Password

Confirm password

Full name


E-mail address

Jenkins 2.426.3

[Skip and continue as admin](#)

Save and Continue

Step 11:

 Jenkins

Aditya Dikonda

log out

Dashboard

+ New Item

Build History

Manage Jenkins

My Views

Build Queue

No builds in the queue.

Build Executor Status

0/2

Welcome to Jenkins!

This page is where your Jenkins jobs will be displayed. To get started, you can set up distributed builds or start building a software project.

Start building your software project

Create a job

Set up a distributed build

Set up an agent

Configure a cloud

Learn more about distributed builds

REST API

Jenkins 2.492.1

Jenkins

Dashboard

+ New Item

Build History

Manage Jenkins

Build Queue

No builds in the queue.

Build Executor Status

0/2

AllT11_02

Add description

| S | W | Name | Last Success | Last Failure | Last Duration |
|---|---|---------------------|----------------|----------------|---------------|
| | | Example 2 | 4 min 5 sec #6 | 1 day 23 hr #2 | 0.18 sec |
| | | Example1 | 2 days 0 hr #2 | N/A | 0.14 sec |
| | | pipeline | 1 yr 12 mo #7 | 2 yr 0 mo #1 | 1 sec |
| | | PIPELINE DEMO | 1 yr 12 mo #4 | 1 yr 12 mo #3 | 13 sec |
| | | project-test-deploy | N/A | N/A | N/A |

Icons: S M L

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Jenkins

Dashboard

T11_02

Build History

+ New Item

Build History

Edit View

Delete View

Manage Jenkins

Build Queue

No builds in the queue.

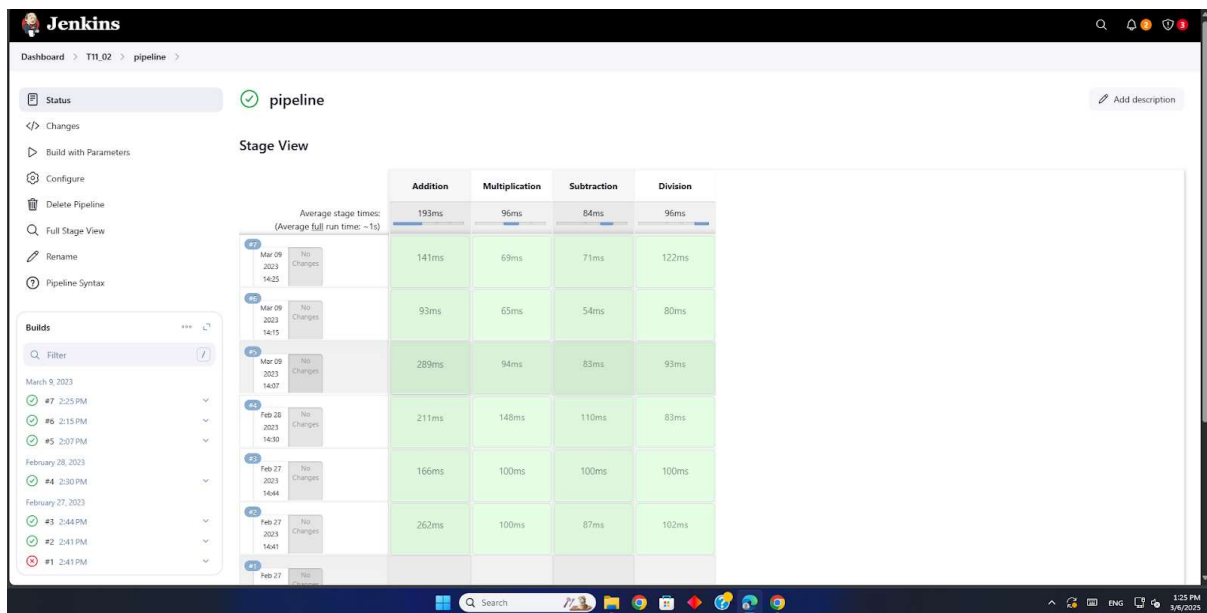
Build Executor Status

0/2

Build History of T11_02

| S | Build | Time Since | Status |
|---|--------------|-------------|-------------------------|
| | Example 2 #6 | 5.8 sec | stable |
| | Example 2 #5 | 1 day 22 hr | stable |
| | Example 2 #4 | 1 day 22 hr | stable |
| | Example 2 #3 | 1 day 23 hr | back to normal |
| | Example 2 #2 | 1 day 23 hr | broken since this build |
| | Example 2 #1 | 1 day 23 hr | stable |
| | pipeline #7 | 1 yr 12 mo | stable |
| | pipeline #6 | 1 yr 12 mo | stable |
| | pipeline #5 | 1 yr 12 mo | stable |
| | pipeline #4 | 2 yr 0 mo | stable |
| | pipeline #3 | 2 yr 0 mo | stable |
| | pipeline #2 | 2 yr 0 mo | back to normal |
| | pipeline #1 | 2 yr 0 mo | broken since this build |

1:22 PM3/6/2025



Import favorites

Cloud Stakeholders...

Other favorites

Dashboard > T11_02 PROJECT > Configuration

Configure

General

Source Code Management

Triggers

Environment

Build Steps

Post-build Actions

Environment

Configure settings and variables that define the context in which your build runs, like credentials, paths, and global parameters.

☐ Delete workspace before build starts

☐ Use secret text(s) or file(s)

☐ Add timestamps to the Console Output

☐ Inspect build log for published build scans

☐ Terminate a build if it's stuck

☐ With Ant

Build Steps

Automate your build process with ordered tasks like code compilation, testing, and deployment.

Execute shell

Command

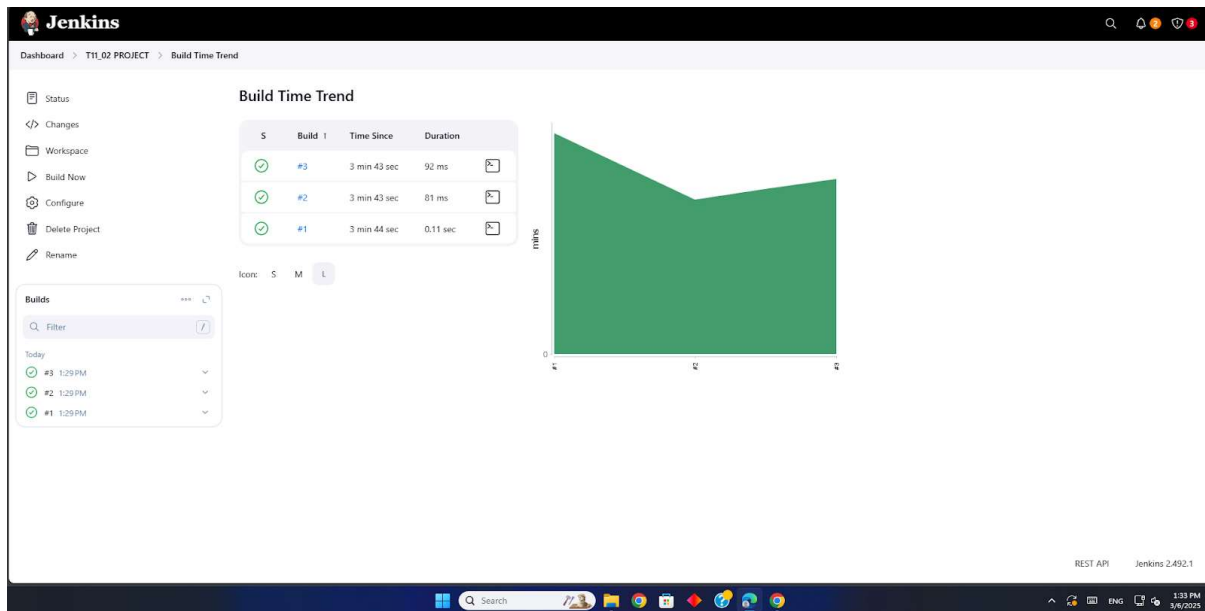
See the list of available environment variables

echo "Hello tsec, arhaan here"

Advanced

Save

Apply



T11_02 PROJECT

Permalinks

- Last build (#3), 3 min 55 sec ago
- Last stable build (#3), 3 min 55 sec ago
- Last successful build (#3), 3 min 55 sec ago
- Last completed build (#3), 3 min 55 sec ago

Builds

| Build | Time |
|-------|---------|
| #3 | 1:29 PM |
| #2 | 1:29 PM |
| #1 | 1:29 PM |

REST API Jenkins 2.492.1

CONCLUSION: Jenkins with Maven simplifies Continuous Integration, automating builds and improving project efficiency for faster development cycles and higher software quality.