Name: Manas Mulchandani

Batch: T13

Roll no:64

Experiment 4

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.
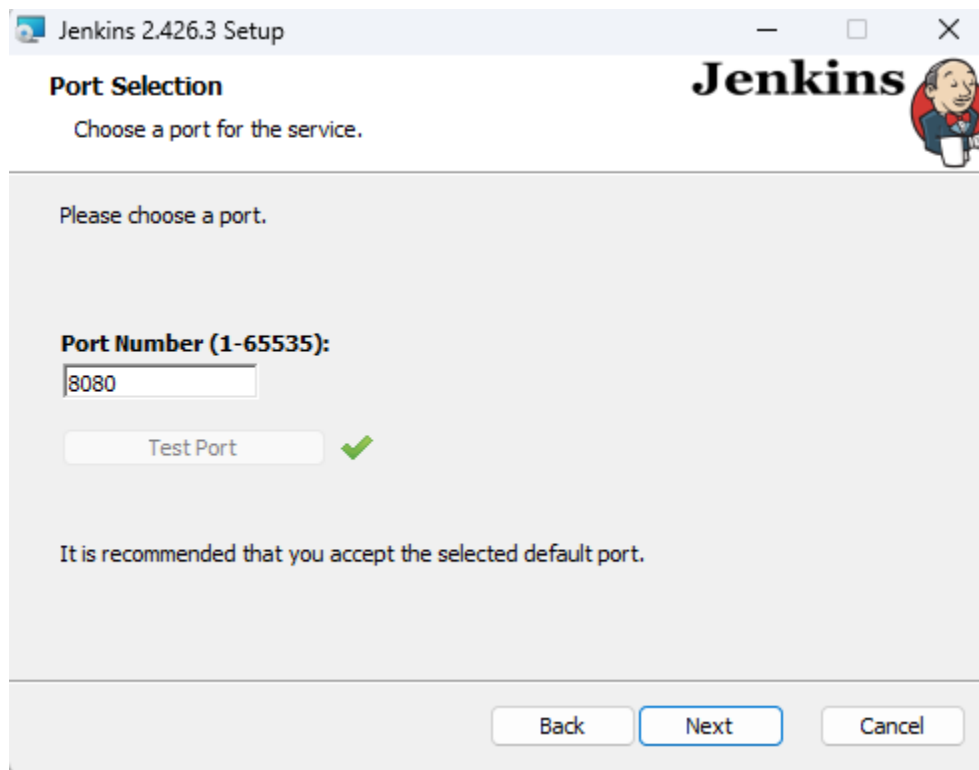
Jenkins simplifies and accelerates the software development lifecycle. By automating repetitive tasks, it reduces the chance of errors, provides faster feedback to developers, and enables more frequent software releases. This automation helps teams to deliver software more quickly and with higher quality. 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:
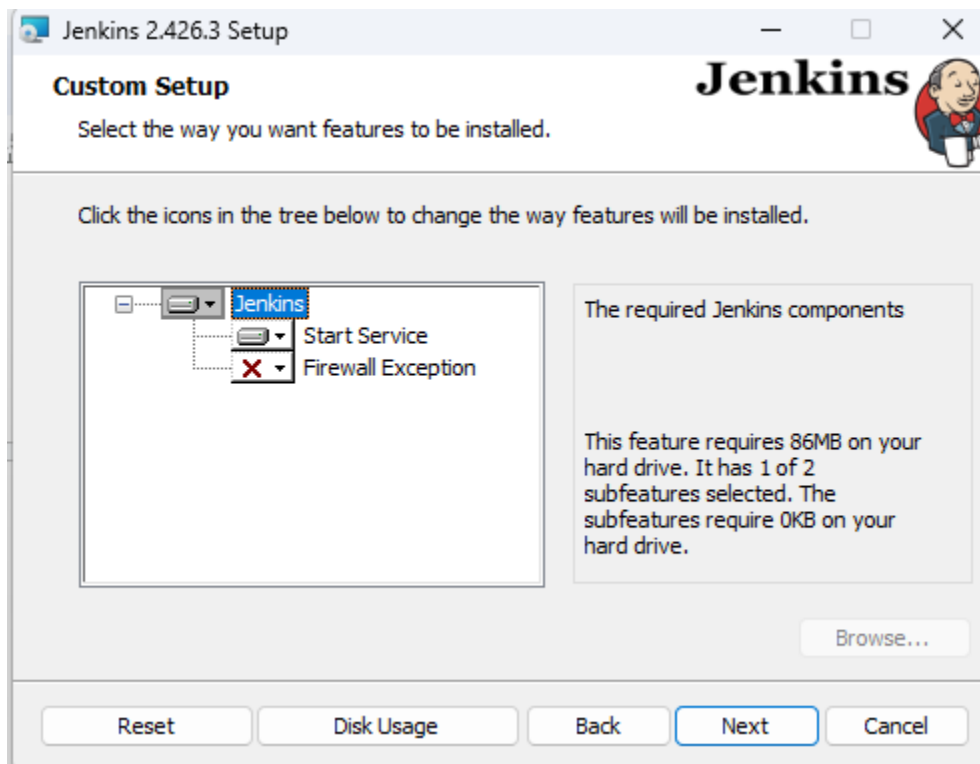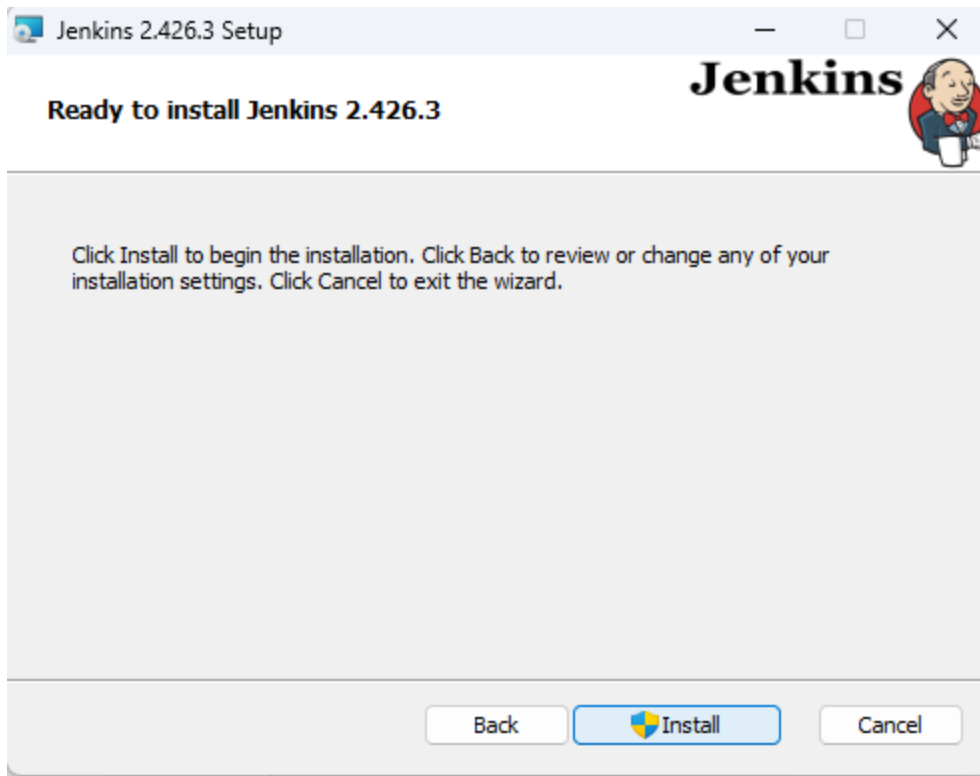
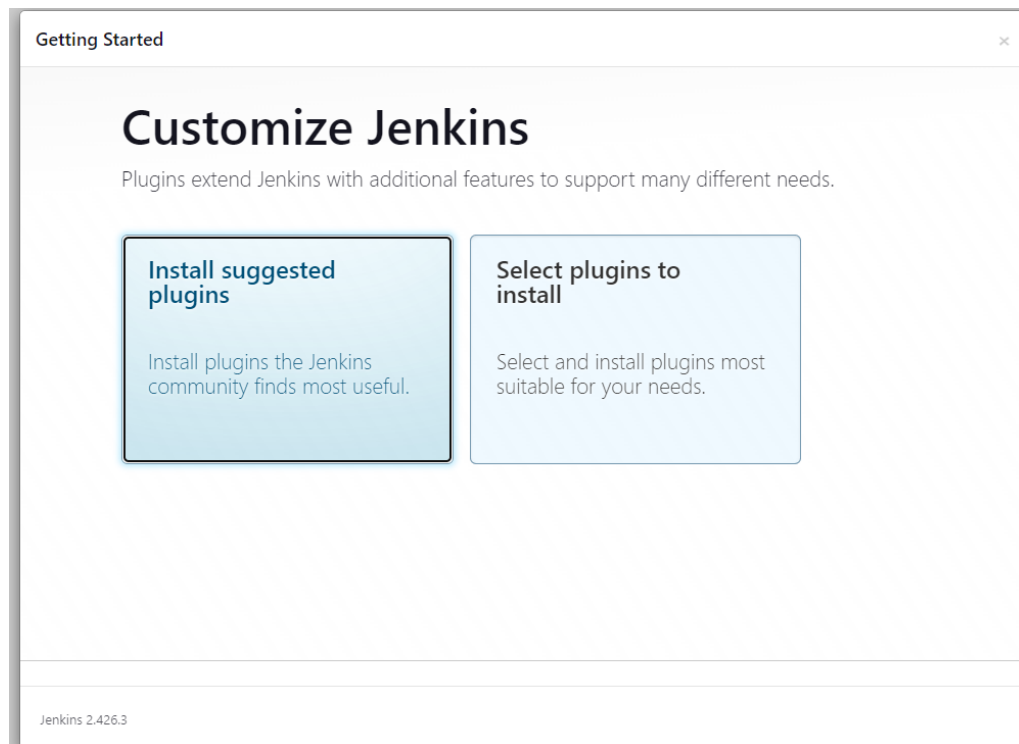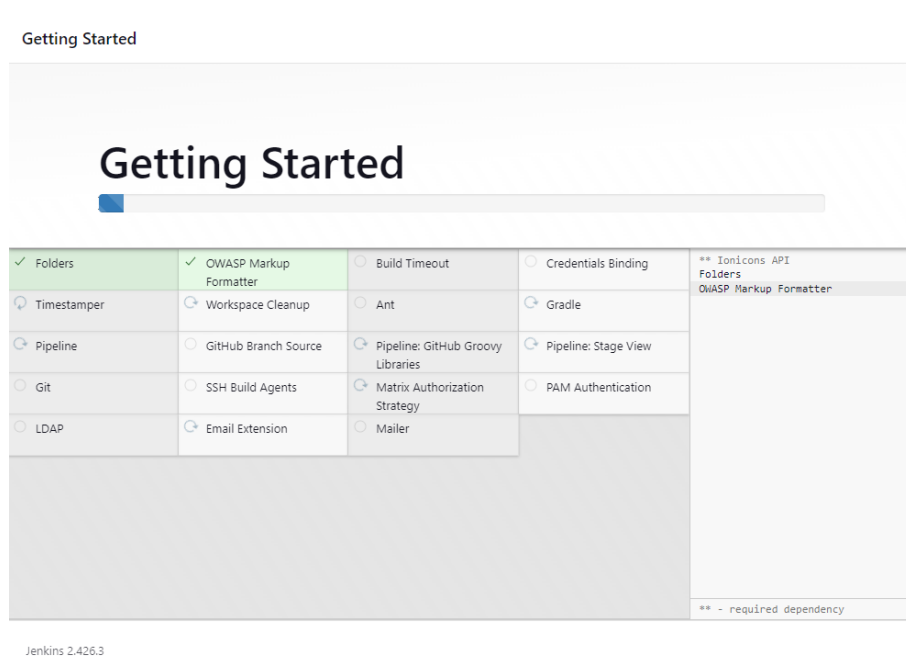Step 1:

Step 2:

Step 3:

Step 4:

Step 5:

Step 6:

Step 7:

Customize Jenkins

Plugins extend Jenkins with additional features to support many different needs.

Install suggested plugins

Install plugins the Jenkins community finds most useful.

Select plugins to install

Select and install plugins most suitable for your needs.

Jenkins 2.426.3

Step 8:

Getting Started

✓ Folders	✓ OWASP Markup Formatter	○ Build Timeout	○ Credentials Binding	** Ionicons API
Timestamper	Workspace Cleanup	Ant	Gradle	Folders
Pipeline	GitHub Branch Source	Pipeline: GitHub Groovy Libraries	Pipeline: Stage View	OWASP Markup Formatter
Git	SSH Build Agents	Matrix Authorization Strategy	PAM Authentication	
LDAP	Email Extension	Mailer		

** - required dependency

Jenkins 2.426.3

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 10:

Getting Started

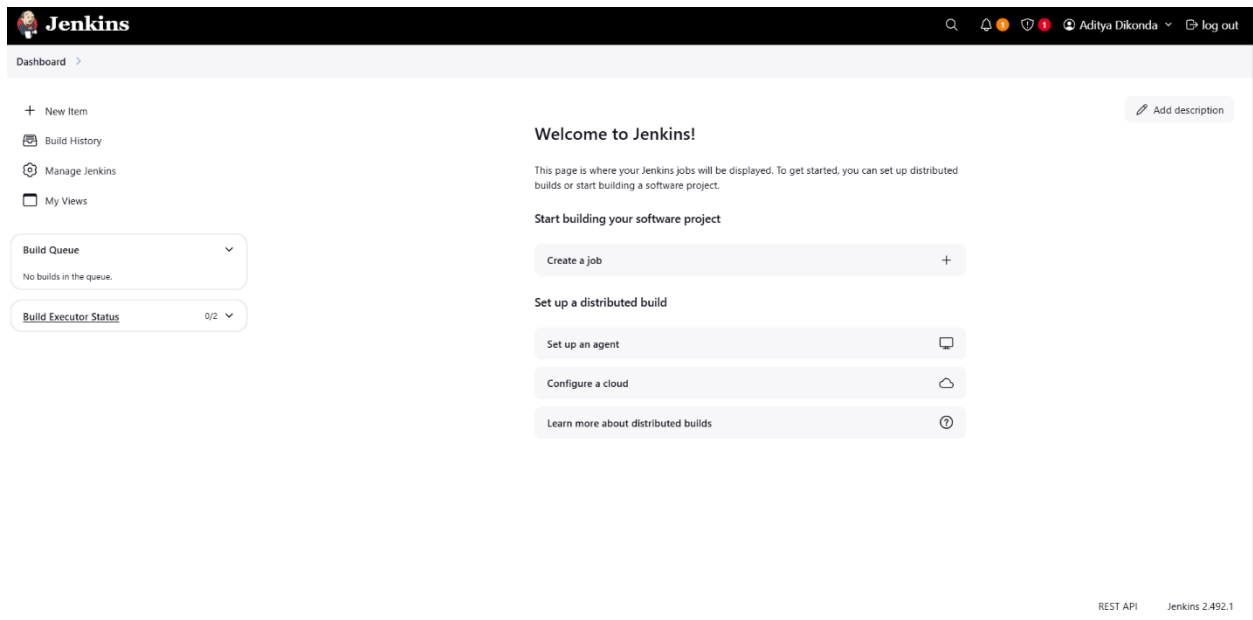# Create First Admin User

Username

Adityadikonda

Password

••••••••••

Confirm password

••••••••••

Full name

Aditya Dikonda

E-mail address

adityadikonda1711@gmail.com

Jenkins 2.492.1   Skip and continue as admin   Save and Continue

Step 11:

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