

Software Engineering and Project Management

EXPERIMENT – 4

Name: Nisarg Sampat

Batch: T21

Roll No: 87

AIM:

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

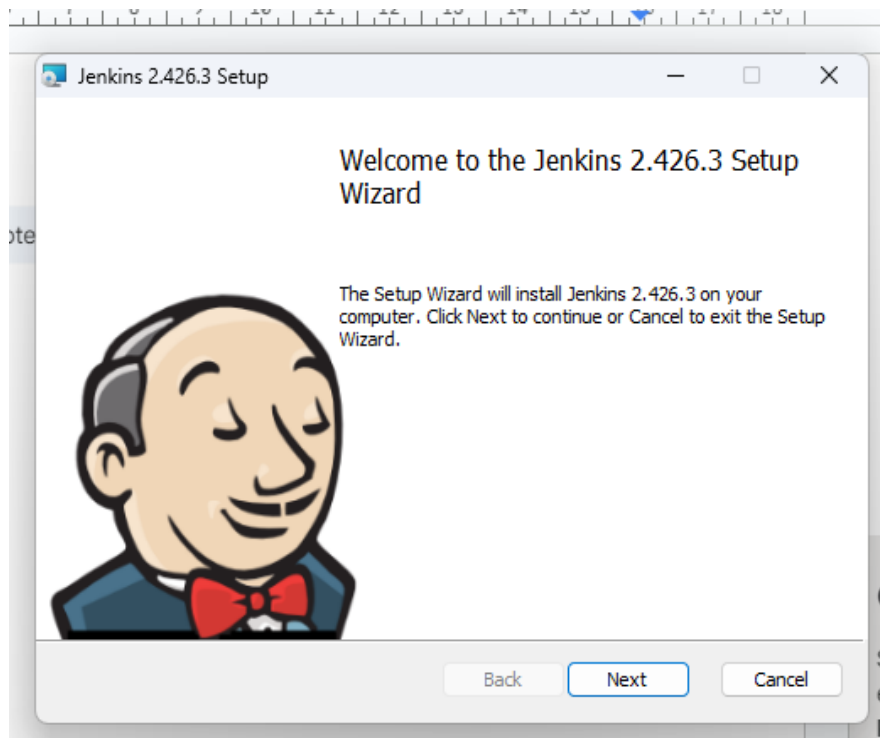
THEORY:

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.

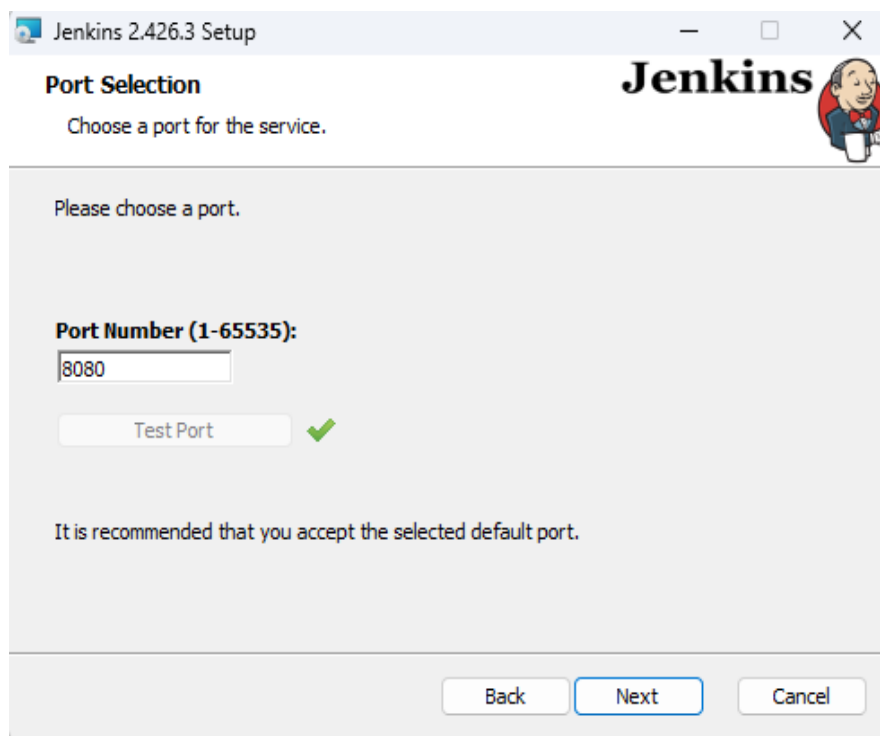
Jenkins simplifies and accelerates the software development lifecycle. By automating repetitive tasks, it reduces the chance of errors, provides faster feedback to developers, and enables more frequent software releases. This automation helps teams to deliver software more quickly and with higher quality.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

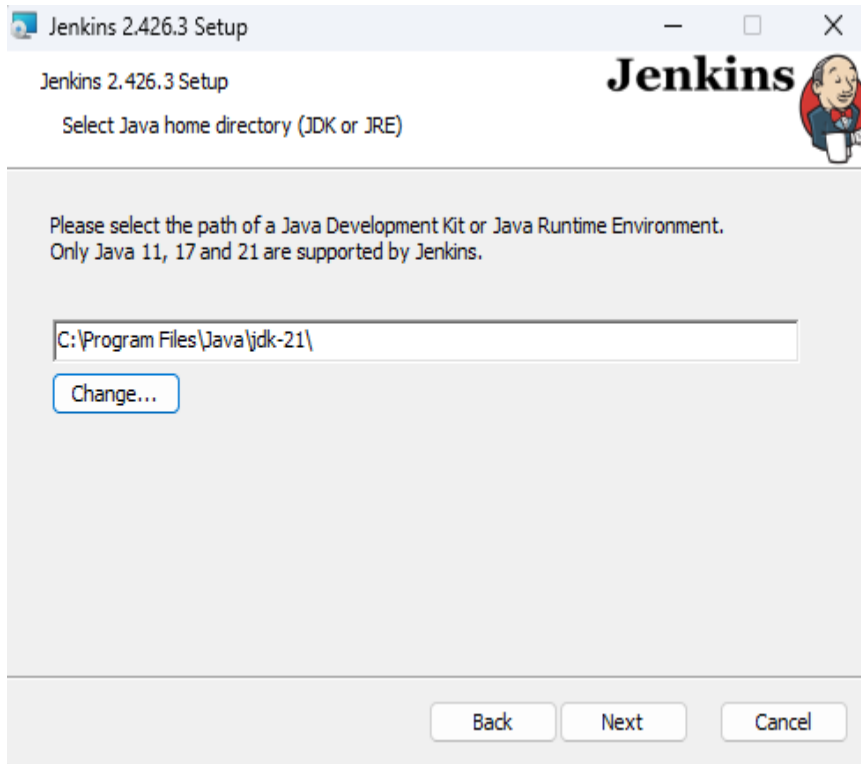
Step 1:



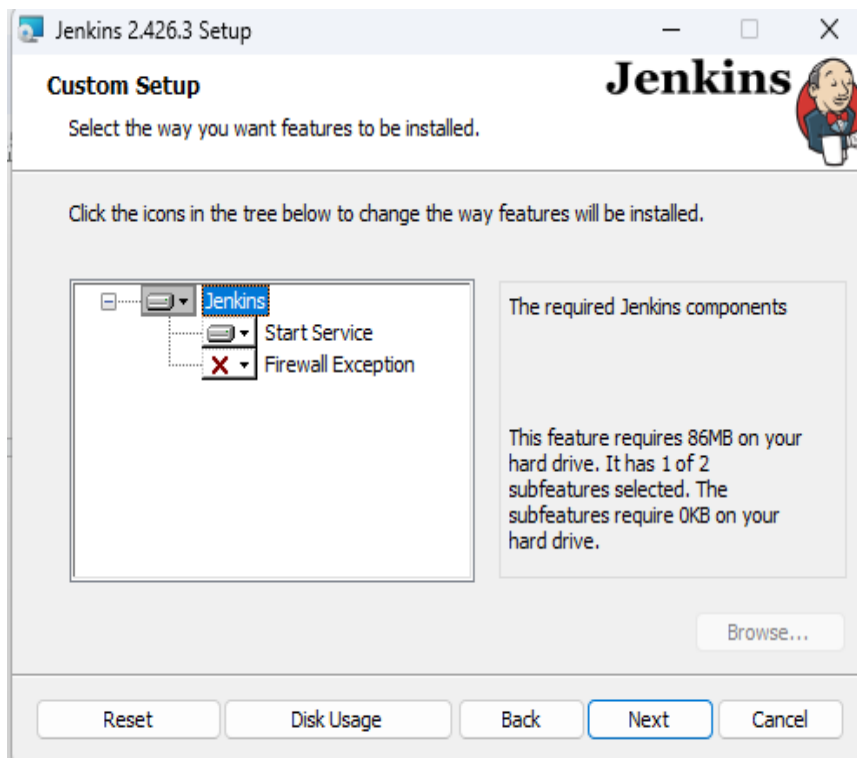
Step 2:



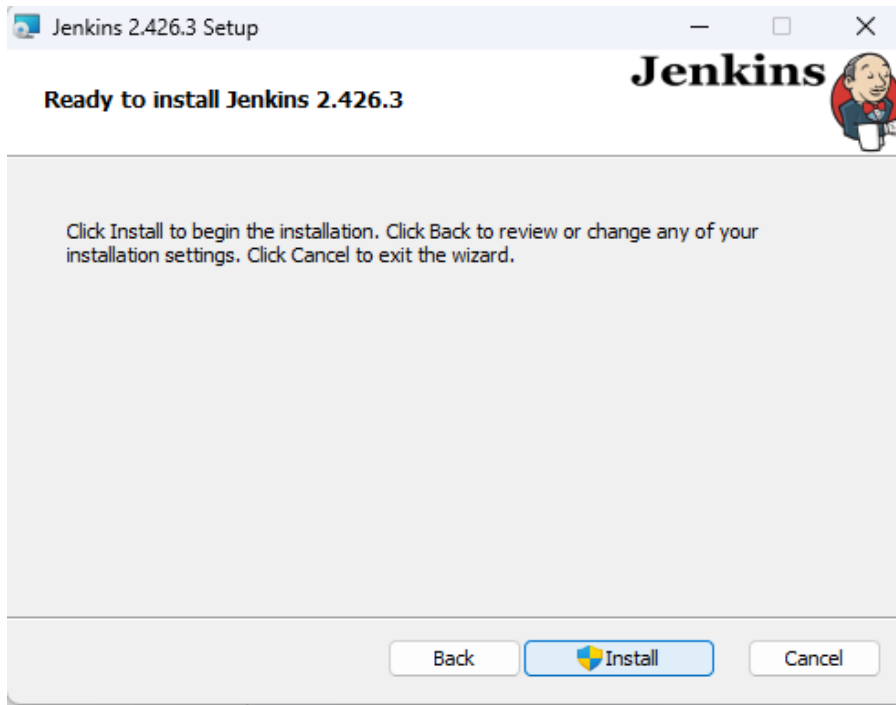
Step 3:



Step 4:



Step 5:



Step 6:



Step 7:

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:

Create First Admin User

Username

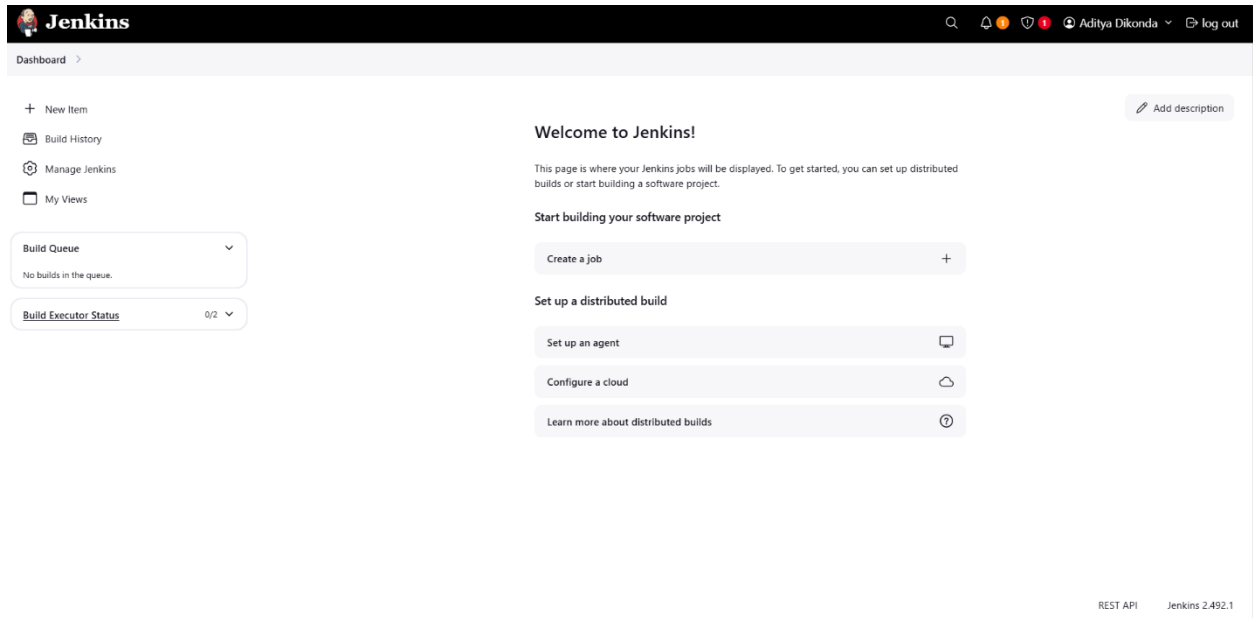
Password

Confirm password

Full name

E-mail address

Step 11:



The screenshot shows the Jenkins Dashboard. At the top, there's a black header with the Jenkins logo, a search icon, notification icons, and a user profile for 'Aditya Dikonda' with a 'log out' link. Below the header, the main content area is divided into a left sidebar and a main panel. The sidebar contains links for 'New Item', 'Build History', 'Manage Jenkins', and 'My Views'. It also features two summary cards: 'Build Queue' showing 'No builds in the queue.' and 'Build Executor Status' showing '0/2'. The main panel has a 'Welcome to Jenkins!' message, a brief explanation of the page's purpose, and a section titled 'Start building your software project' with a 'Create a job' button. Below this is a 'Set up a distributed build' section with three options: 'Set up an agent', 'Configure a cloud', and 'Learn more about distributed builds'. At the bottom right, the footer indicates 'REST API' and 'Jenkins 2.492.1'.

Jenkins

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

CONCLUSION:

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