

Experiment 04

Aim: To understand continuous integration, install and configure Jenkins with maven/ant/gradle to set up a build job.

Theory:

To install Jenkins following software packages are required:

- 1) GIT (git-scm.com)
- 2) Notepad++ (<https://notepad-plus-plus.org/downloads/>)
- 3) Latest Java development kit (JDK)
- 4) Jenkins
- 5) Apache Maven (Optional)

Step 1-: Install GIT

Step 2 -: Install Notepad++

Step 3 -: Install Java

Step 4 -: Install Jenkins

Step 5 -: Install Maven

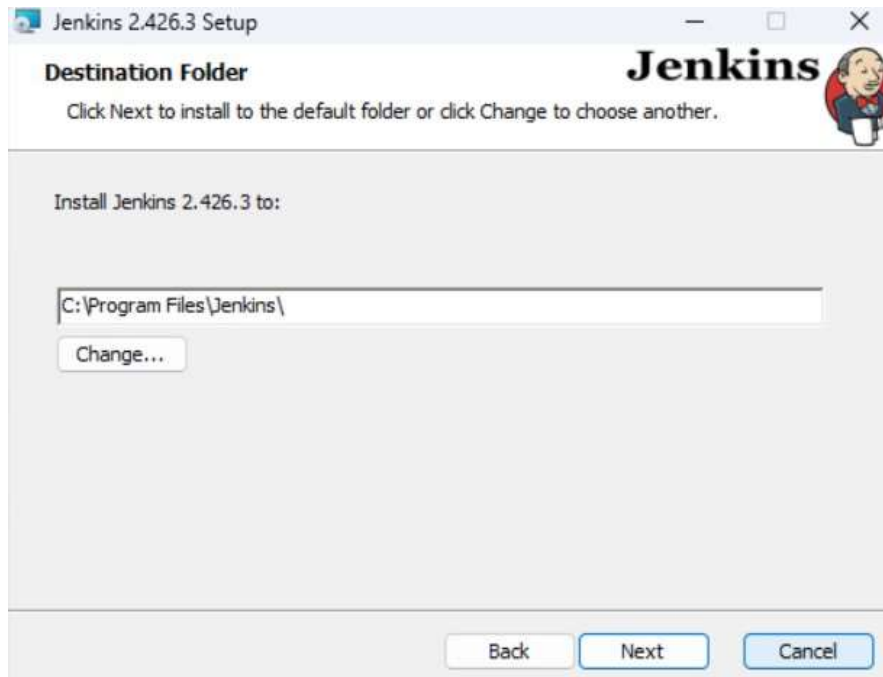
Jenkins is an open source automation tool written in Java with plugins built for Continuous Integration purpose. Jenkins is used to build and test your software projects continuously making it easier for developers to integrate changes to the project, and making it easier for users to obtain a fresh build. It also allows you to continuously deliver your software by integrating with a large number of testing and deployment technologies.

Step 1-: Open <https://www.jenkins.io/doc/book/installing/windows/> and install Jenkins.

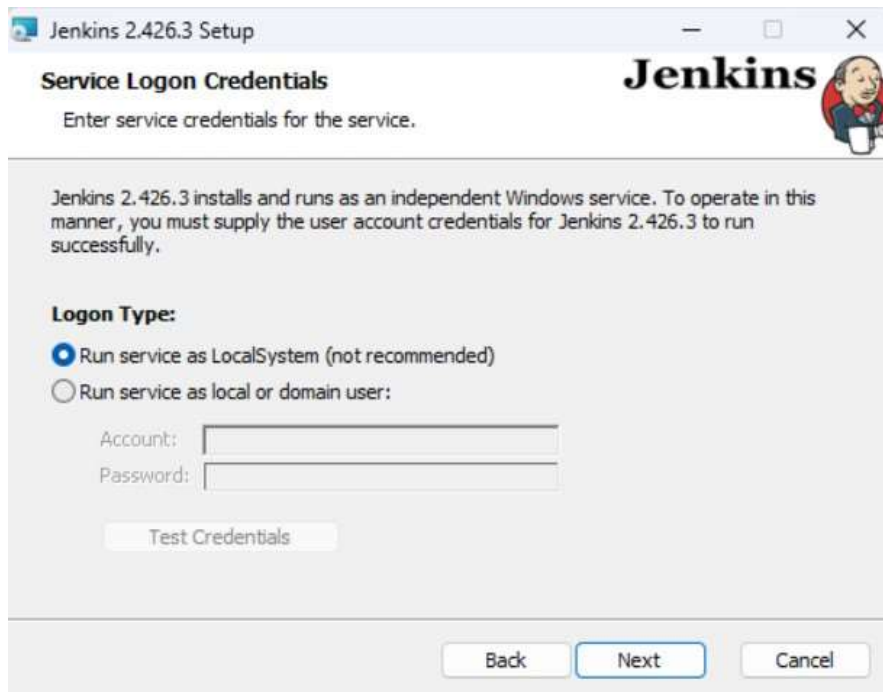
Open the installed .exe setup



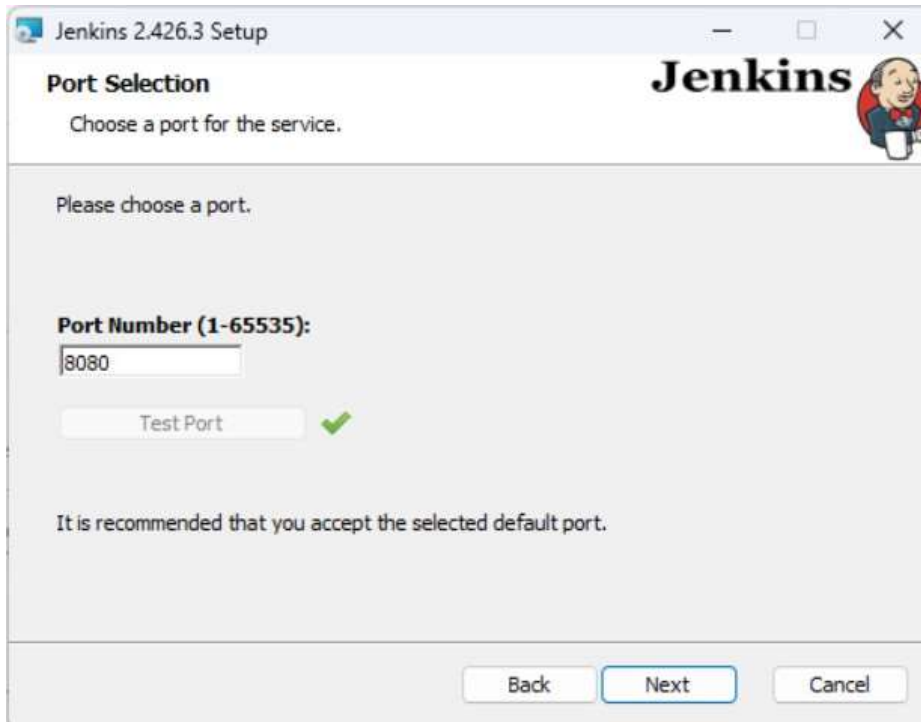
Step 2: Locate the folder where you want to install Jenkins in the location path:



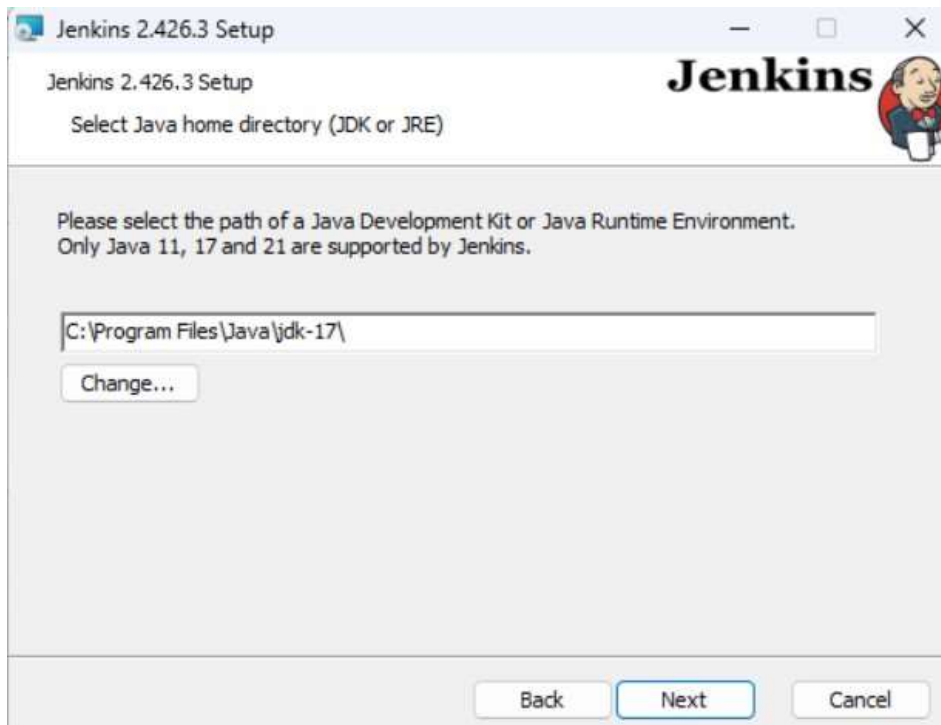
Step 3: Select service as Local System and proceed to Next.



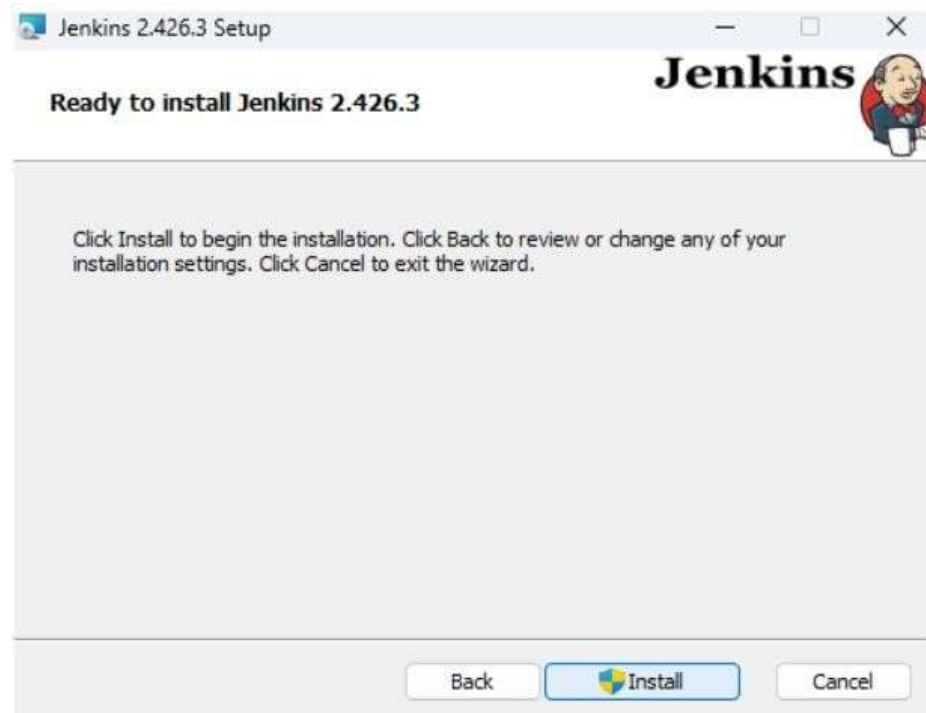
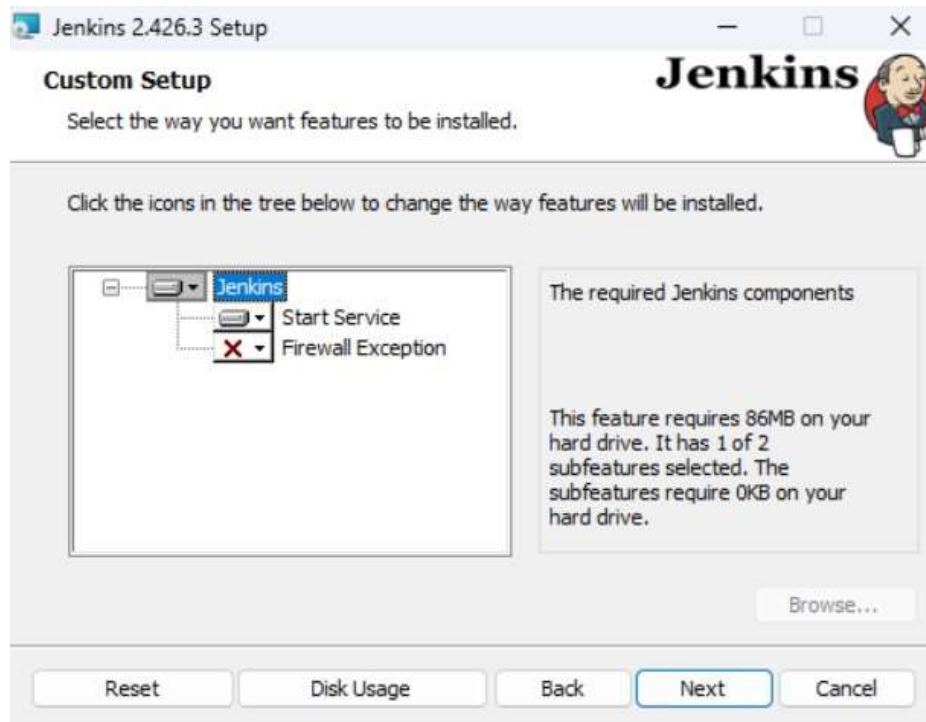
Step 4: Select the port 8080 and click Test Port button. The green tick will appear after which you can proceed to Next.



Step 5: Locate the folder where you have installed JDK in the location path:



Proceed to Next

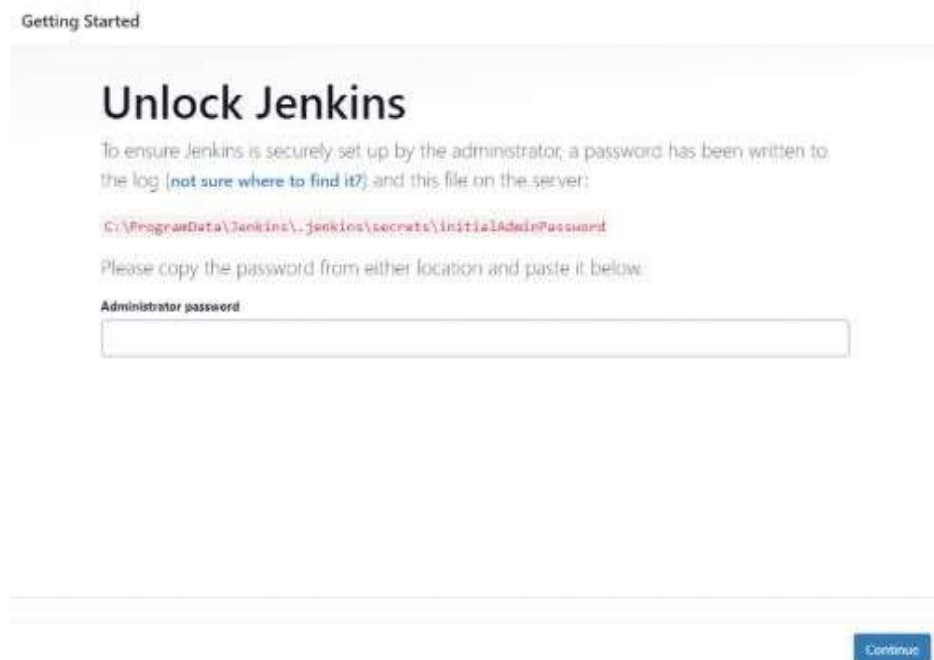


On clicking 'Install', installation is finished.

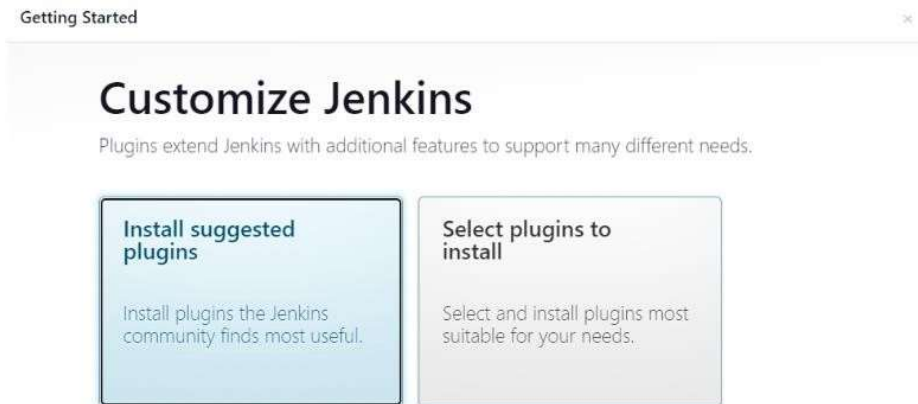


Step 6: Once Installation is done, you can test the Jenkins on <http://localhost:8080> on the browser.

First time, when you open Jenkins portal it will ask to put admin default password which is stored in `/var/lib/jenkins/secrets/initialAdminPassword` file.

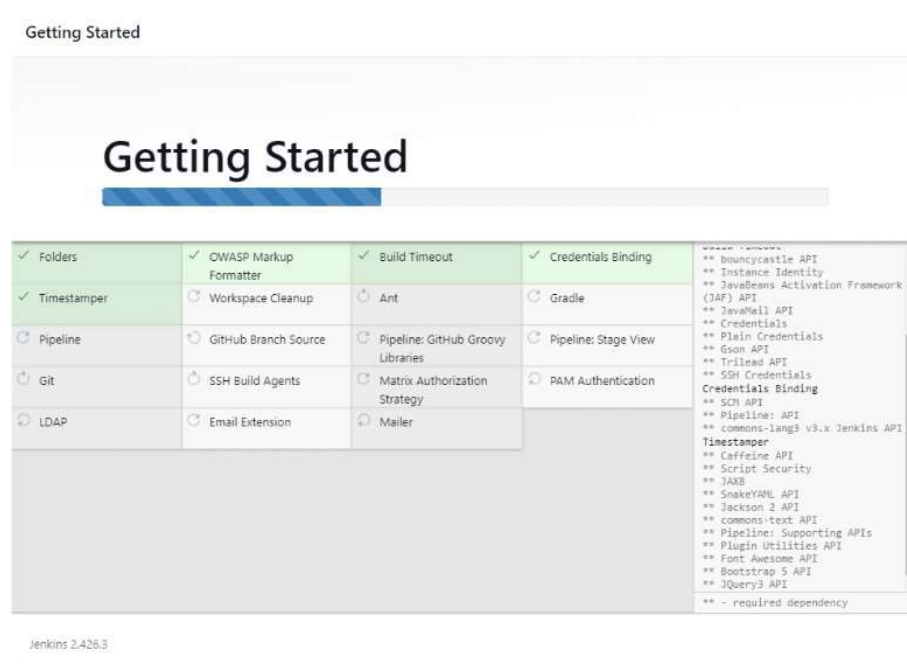


Step 7: On entering the password, you can continue to choose “Install Suggested Plugins”



Once plugins are installed, click on next and specify the admin details along with the new password for Jenkins admin and click on finish to complete the installation.

After filling the details, click on Save & Continue, you will be redirected to the dashboard.



Dashboard

+ New Item

People

Build History

Manage Jenkins

My Views

Build Queue

No builds in the queue

Build Executor Status

1 idle

2 idle

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 2.426.3

Getting Started

Create First Admin User

Username

musk

Password

Confirm password

Full name

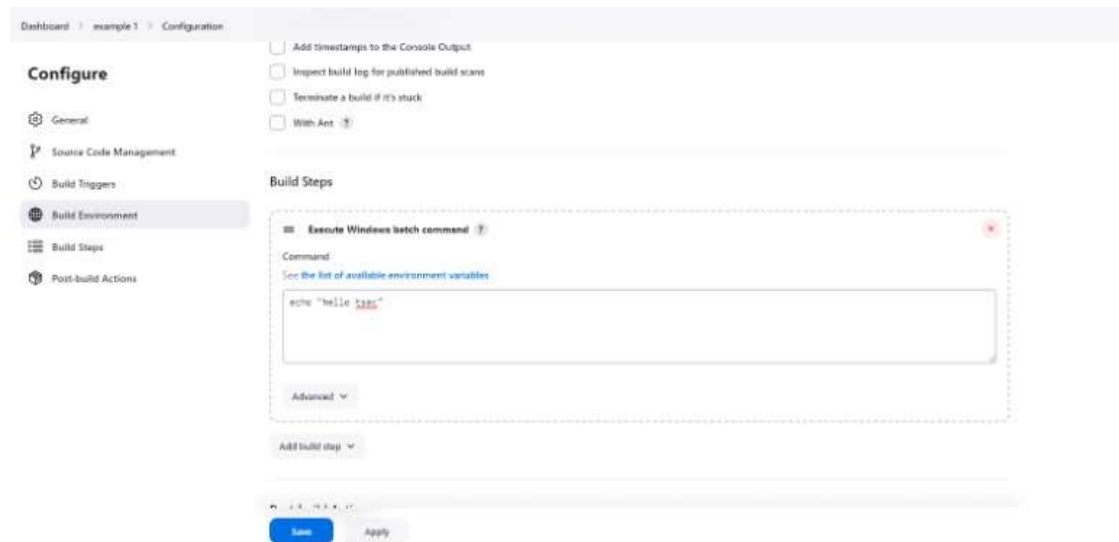
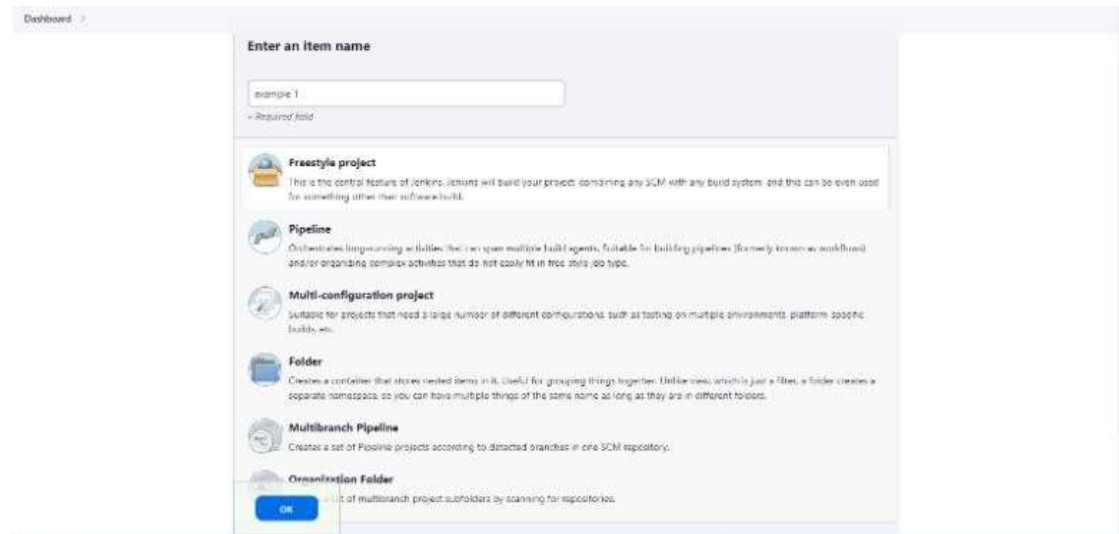
Muskan Tolani

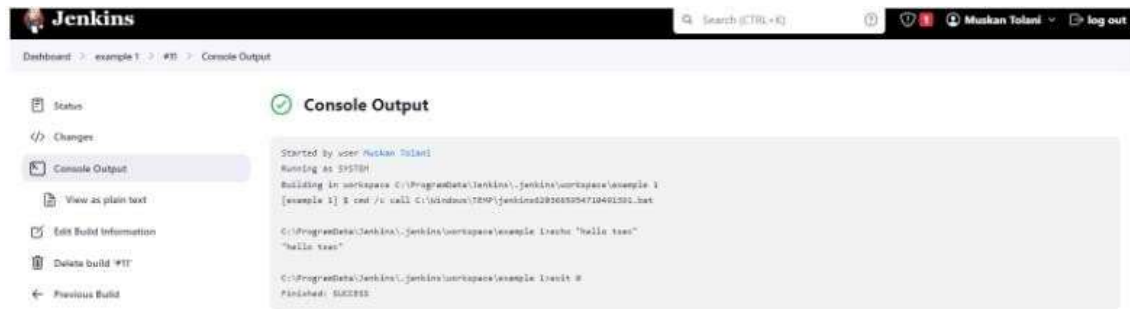
E-mail address

muskantolani7@gmail.com

Jenkins 2.426.3

[Skip and continue as admin](#)[Save and Continue](#)





Conclusion: We have successfully installed and configured Jenkins with Maven/Ant/Gradle to setup a build Job and learnt about the implementation of Jenkins in open source continuous integration.