

Thadomal Shahani Engineering College, Bandra
Department of Artificial Intelligence & Data Science

Name: Vinit Bishal Lunia			Subject: WCN Laboratory	
TE- 1	Batch: T13	Sem: 6	Roll No: 2301063	Date: 02-02-2026

Experiment No: 4

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

Steps:

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

Build great things at any scale

The leading open source automation server, Jenkins provides hundreds of plugins to support building, deploying and automating any project.

[Documentation](#) [Download](#)

2019 Jenkins Board and Officer elections

In November 2019 we held the first Jenkins board elections ever. On behalf of the Jenkins community, we congratulate all elected board members and officers!

[See results](#)

Jenkins

2019 Elections

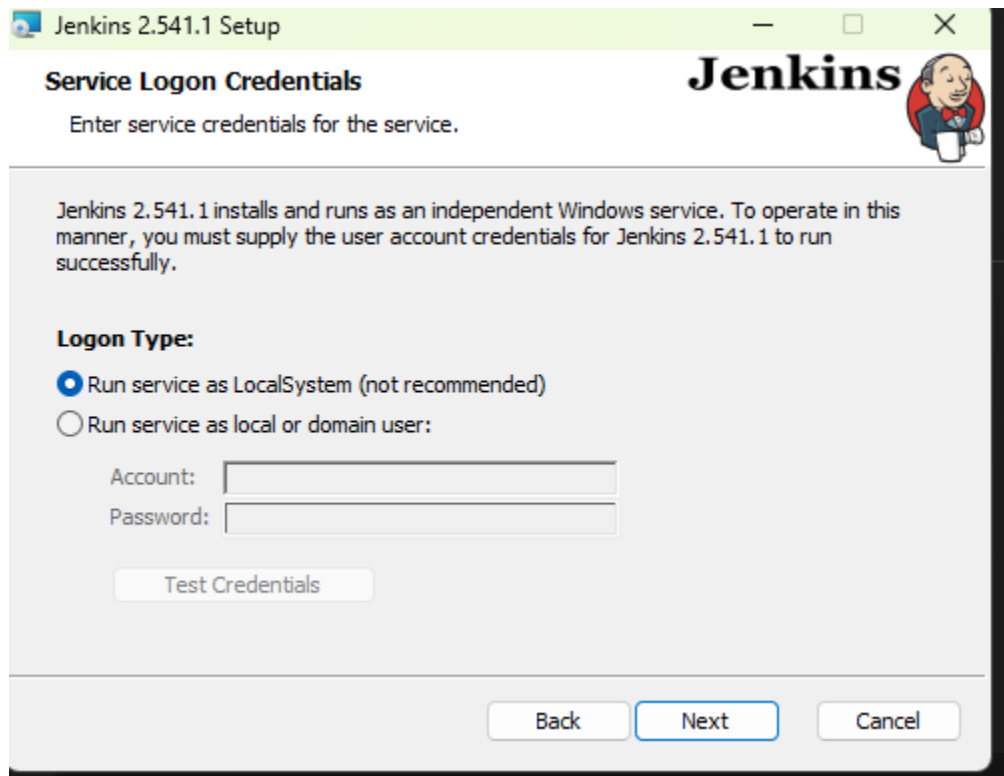
- Governing Board
- Security Officer
- Events Officer

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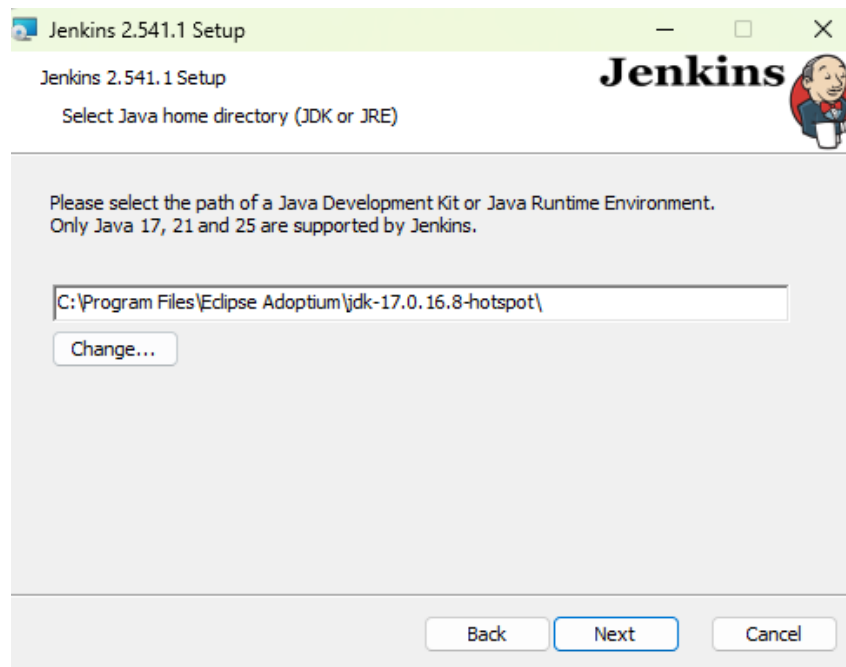
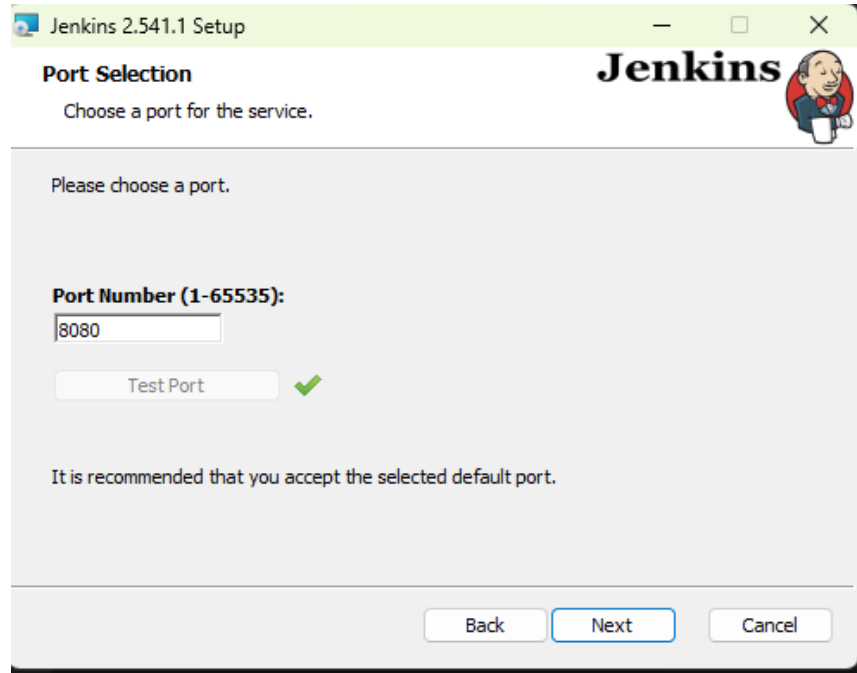
Jenkins is an open source automation tool written in Java with plugins built for Continuous Integration purpose. Jenkins is used to build and test your software projects continuously making it easier for developers to integrate changes to the project, and making it easier for users to obtain a fresh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

Output:



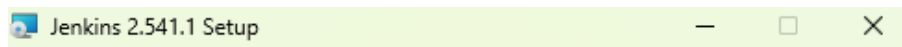
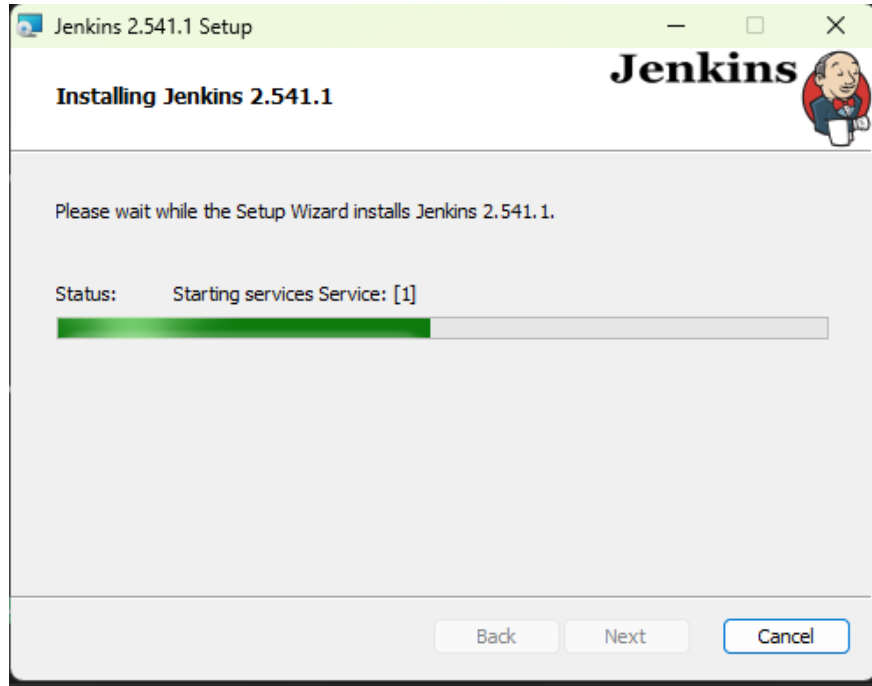
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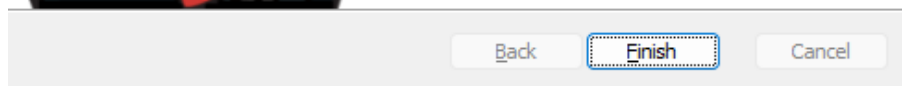
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Completed the Jenkins 2.541.1 Setup Wizard

Click the Finish button to exit the Setup Wizard.



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The screenshot shows the Jenkins Dashboard at localhost:8080. On the left, there's a sidebar with 'New Item', 'Build History', 'Build Queue' (showing 'No builds in the queue'), and 'Build Executor Status' (showing '0/2'). The main area displays a table of builds with columns: S (Status), W (Icon), Name, Last Success, Last Failure, and Last Duration. The table lists 14 builds, including 'example0' through 'prototype'. The bottom of the image shows a Windows taskbar with the time 1:39 PM on 2/2/2026.

S	W	Name	Last Success	Last Failure	Last Duration
✓	☀	example0	10 mo #2	N/A	0.11 sec
✓	☀	Example1	10 mo #1	N/A	0.1 sec
✓	☀	example12	10 mo #5	N/A	0.1 sec
⋮	☀	Example2	N/A	N/A	N/A
✓	☁	example_1	2 yr 0 mo #5	2 yr 0 mo #4	0.11 sec
⋮	☀	exp 1	N/A	N/A	N/A
✓	☀	exp 6	5 days 21 hr #1	N/A	0.16 sec
✓	☀	Hello_Java	11 mo #1	N/A	72 ms
✗	☁	kannya	11 mo #3	11 mo #10	0.11 sec
✓	☀	nisarg	11 mo #2	N/A	0.12 sec
✓	☁	pipeline demo	2 yr 11 mo #2	2 yr 11 mo #1	2.4 sec
⋮	☀	prototype1	N/A	N/A	N/A
✓	☀	prototype	10 mo #1	N/A	0.18 sec

The screenshot shows the Jenkins Console view for build #1 of job T13_63. The left sidebar includes 'Status', 'Changes', 'Console Output' (selected), 'Edit Build Information', 'Delete build #1', and 'Next Build'. The main area displays the console output, which shows the build process starting as 'unknown or anonymous', running as 'SYSTEM', and executing a batch script. The output includes 'Hello Jenkins' and ends with 'Finished: SUCCESS'. The bottom of the image shows a Windows taskbar with the time 1:45 PM on 2/2/2026.

```
Started by user: unknown or anonymous
Running as SYSTEM
Building in workspace C:\ProgramData\Jenkins\jenkins\workspace\T13_63
[T13_63] $ cmd /c call C:\WINDOWS\TEMP\jenkins13590814823258880476.bat

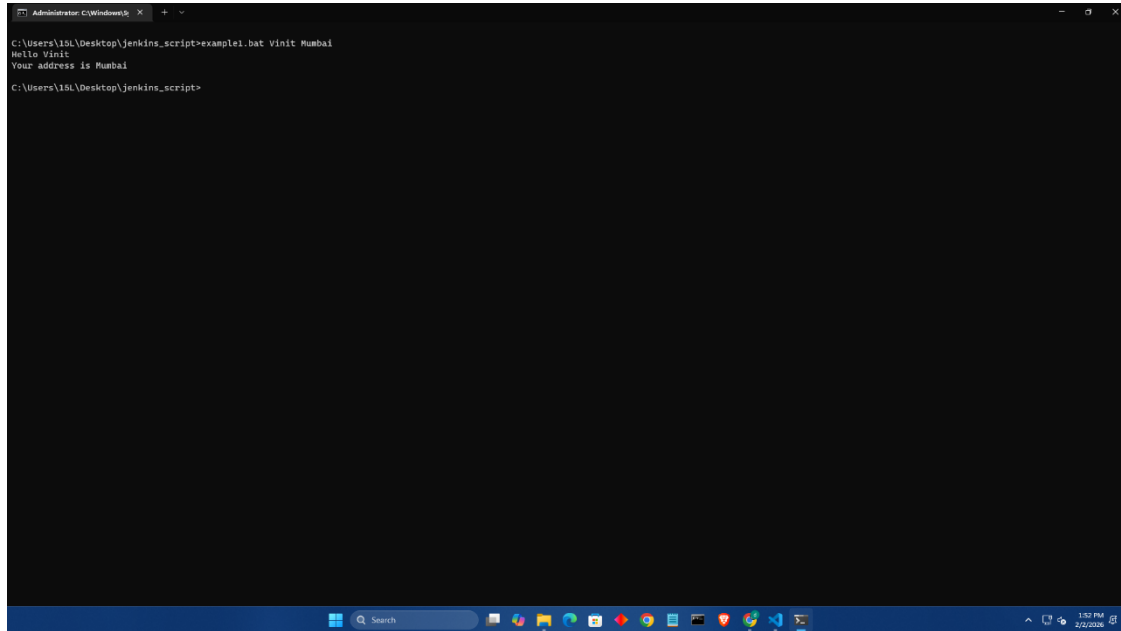
C:\ProgramData\Jenkins\jenkins\workspace\T13_63>echo Hello Jenkins
Hello Jenkins

C:\ProgramData\Jenkins\jenkins\workspace\T13_63>exit 0
Finished: SUCCESS
```

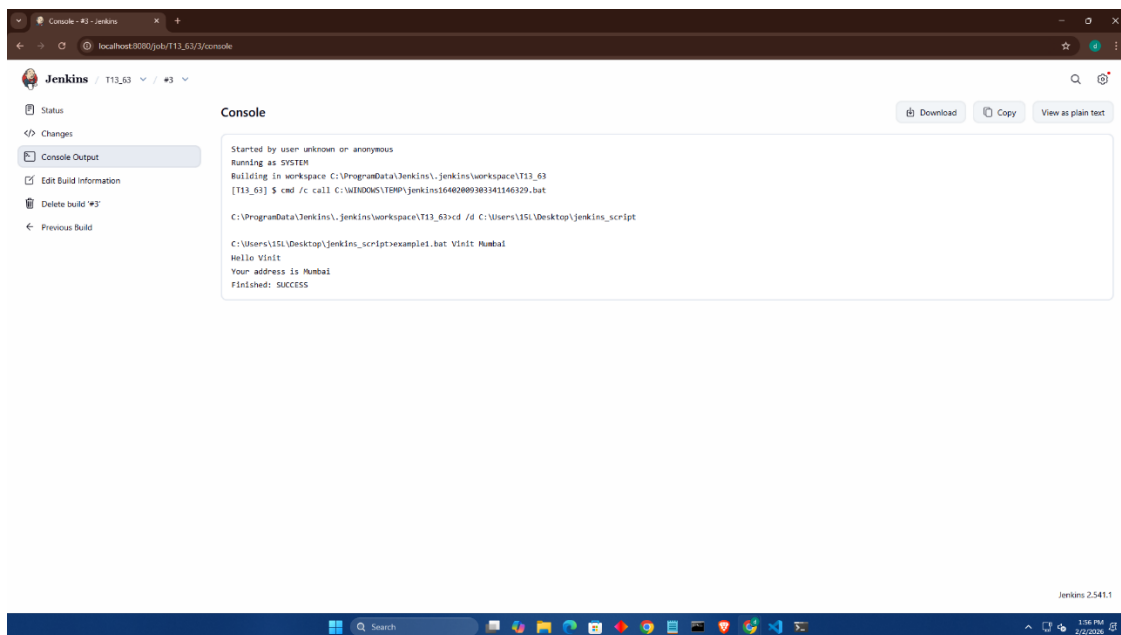
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Example 1



```
Administrator: C:\Windows\S...
C:\Users\15L\Desktop\jenkins_script>example1.bat Vinit Mumbai
Hello Vinit
Your address is Mumbai
C:\Users\15L\Desktop\jenkins_script>
```



Jenkins / T13_63 / #3

Status
Changes
Console Output
Edit Build Information
Delete build #3
Previous Build

Console [Download] [Copy] [View as plain text]

```
Started by user unknown or anonymous
Running as SYSTEM
Building in workspace C:\ProgramData\Jenkins\jenkins\workspace\T13_63
[T13_63] $ cmd /c call C:\WINDOWS\TEMP\jenkins16462809389341146329.bat

C:\ProgramData\Jenkins\jenkins\workspace\T13_63>cd /d C:\Users\15L\Desktop\jenkins_script

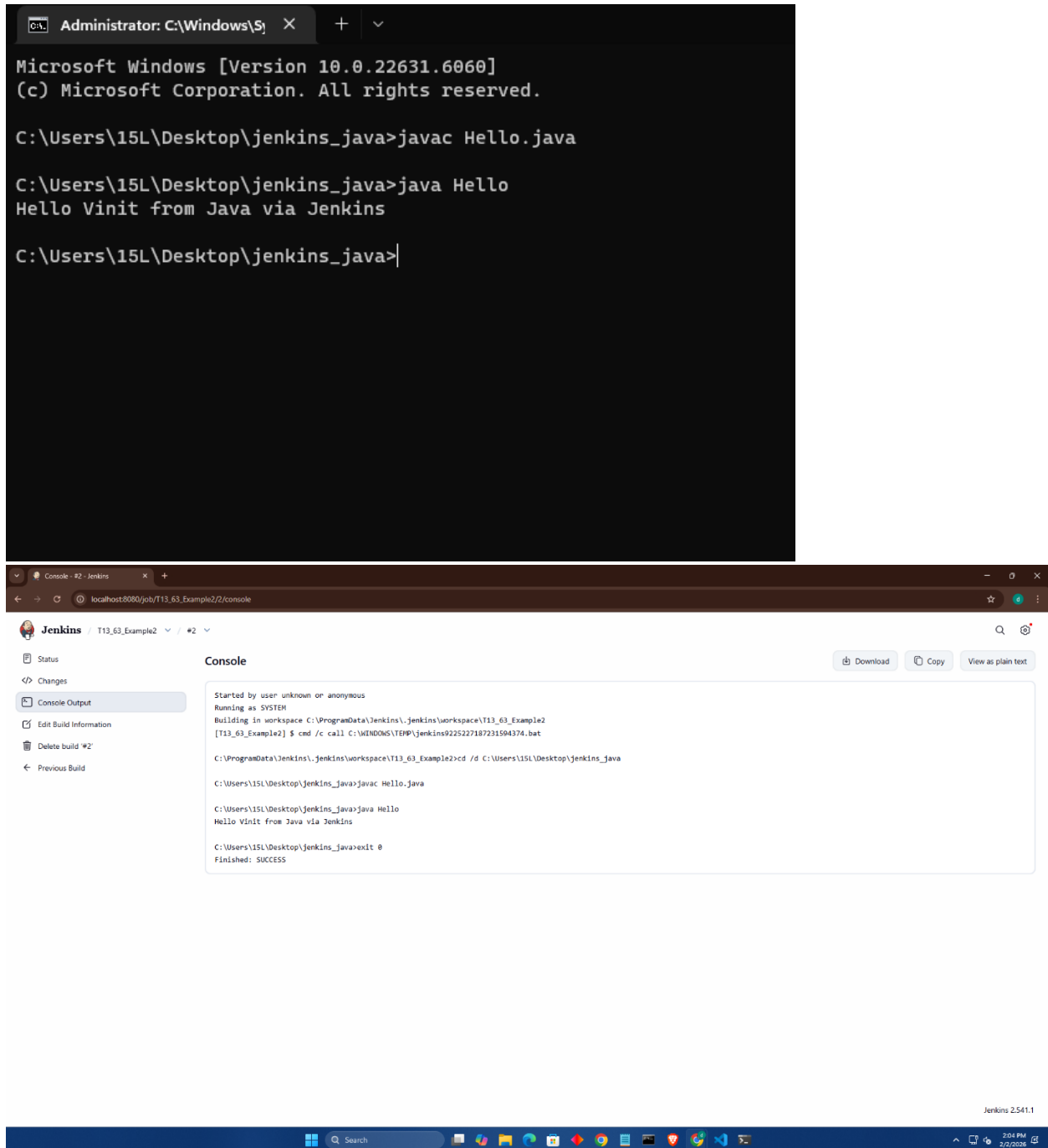
C:\Users\15L\Desktop\jenkins_script>example1.bat Vinit Mumbai
Hello Vinit
Your address is Mumbai
Finished: SUCCESS
```

Jenkins 2.541.1

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Example 2



The image shows a Windows command prompt window and a Jenkins console output. The command prompt window is titled "Administrator: C:\Windows\Sy" and shows the following commands and output:

```
Microsoft Windows [Version 10.0.22631.6060]
(c) Microsoft Corporation. All rights reserved.

C:\Users\15L\Desktop\jenkins_java>javac Hello.java

C:\Users\15L\Desktop\jenkins_java>java Hello
Hello Vinit from Java via Jenkins

C:\Users\15L\Desktop\jenkins_java>|
```

The Jenkins console output is titled "Console" and shows the following output:

```
Started by user: unknown or anonymous
Running as SYSTEM
Building in workspace C:\ProgramData\jenkins\workspace\T13_63_Example2
[T13_63_Example2] $ cmd /c call C:\WINDOWS\TEMP\jenkins925227187231504374.bat

C:\ProgramData\jenkins\workspace\T13_63_Example2>cd /d C:\Users\15L\Desktop\jenkins_java

C:\Users\15L\Desktop\jenkins_java>javac Hello.java

C:\Users\15L\Desktop\jenkins_java>java Hello
Hello Vinit from Java via Jenkins

C:\Users\15L\Desktop\jenkins_java>exit 0
Finished: SUCCESS
```

The Jenkins interface shows the job "T13_63_Example2" with a build number of "2". The console output is displayed in a text area with "Download", "Copy", and "View as plain text" buttons. The Jenkins version is 2.541.1.

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Parameter

Jenkins / t13_63_Example3

Status

Changes

Workspace

Build with Parameters

Configure

Delete Project

Rename

Builds

No builds

Project t13_63_Example3

This build requires parameters:

FirstName
Enter your name:
Vinit

City
Select your city:
Mumbai

Mumbai
Nagpur
Pune
Delhi
Bangalore
Chennai

Jenkins / t13_63_Example3

Status

Changes

Workspace

Build with Parameters

Configure

Delete Project

Rename

Builds

No builds

Project t13_63_Example3

This build requires parameters:

FirstName
Enter your name:
Vinit

City
Select your city:
Mumbai

Build Cancel

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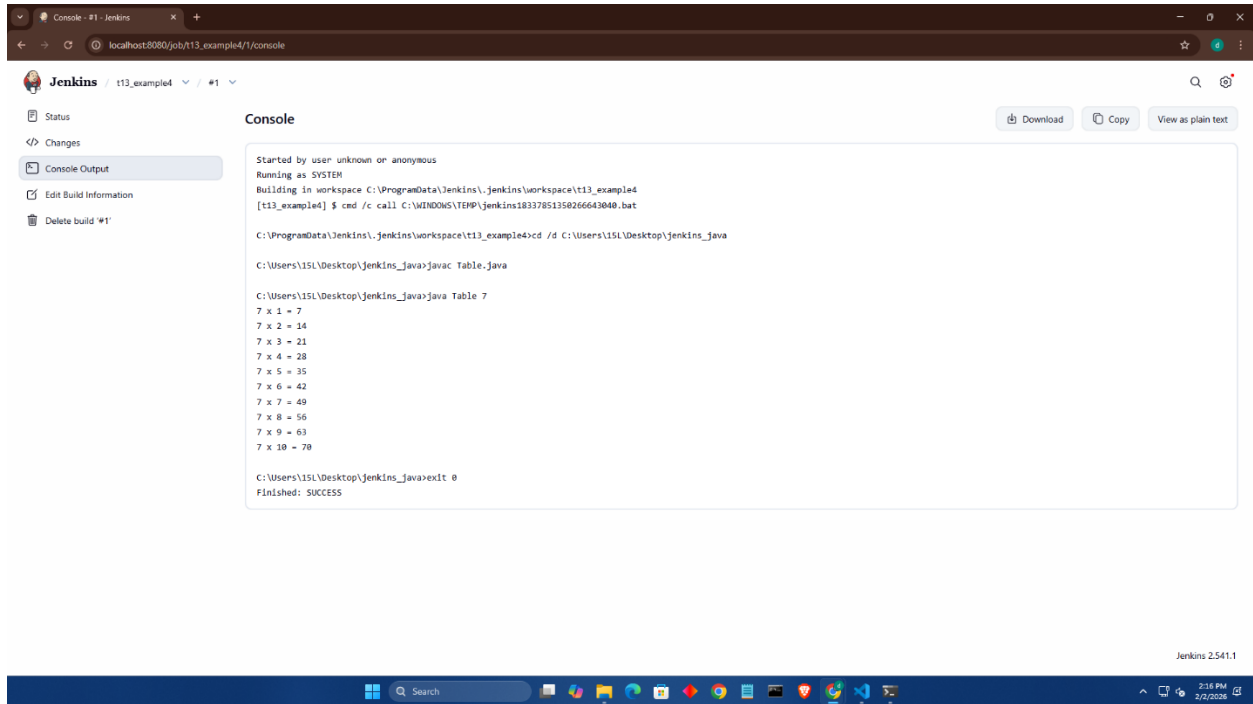
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Table:

```
Administrator: C:\Windows\id
C:\Users\151\Desktop\jenkins_java>javac Table.java
C:\Users\151\Desktop\jenkins_java>javac Table
error: Class names, 'Table', are only accepted if annotation processing is explicitly requested
1 error
C:\Users\151\Desktop\jenkins_java>javac Table.java
C:\Users\151\Desktop\jenkins_java>java Table
Please provide a number
C:\Users\151\Desktop\jenkins_java>java Table 5
5 x 1 = 5
5 x 2 = 10
5 x 3 = 15
5 x 4 = 20
5 x 5 = 25
5 x 6 = 30
5 x 7 = 35
5 x 8 = 40
5 x 9 = 45
5 x 10 = 50
C:\Users\151\Desktop\jenkins_java>
```

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The screenshot displays the Jenkins web interface for a build named 't13_example4'. The console output shows the following sequence of events:

- Started by user: unknown on anonymous
- Running as SYSTEM
- Building in workspace C:\ProgramData\Jenkins\jenkins\workspace\t13_example4
- Executing a Windows batch script: `[t13_example4] $ cd /c call C:\WINDOWS\TEMP\jenkins18337851350266643040.bat`
- Changing directory to `C:\ProgramData\Jenkins\jenkins\workspace\t13_example4`
- Compiling the Java file: `C:\Users\151\Desktop\jenkins_java>javac Table.java`
- Running the Java application: `C:\Users\151\Desktop\jenkins_java>java Table 7`
- The application outputs a multiplication table for 7:

```
7 x 1 = 7
7 x 2 = 14
7 x 3 = 21
7 x 4 = 28
7 x 5 = 35
7 x 6 = 42
7 x 7 = 49
7 x 8 = 56
7 x 9 = 63
7 x 10 = 70
```
- Exiting the application: `C:\Users\151\Desktop\jenkins_java>exit 0`
- Build finished successfully: `Finished: SUCCESS`

The Jenkins interface also shows a left-hand menu with options like 'Status', 'Changes', 'Console Output', 'Edit Build Information', and 'Delete build *1'. The top right corner indicates the Jenkins version is 2.541.1.

Conclusion: Successfully Implemented Continuous Integration, install and configure Jenkins with Maven/Ant/Gradle to setup a build Job