

**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](http://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



The screenshot shows the Jenkins website homepage. At the top, there's a navigation bar with links for Blog, Documentation, Plugins, Community, Subprojects, About, English, and Download. Below the navigation is the Jenkins logo, which is a cartoon character wearing a tuxedo and bow tie, holding a mug. The main heading is "Jenkins" with the tagline "Build great things at any scale". A brief description follows: "The leading open source automation server, Jenkins provides hundreds of plugins to support building, deploying and automating any project." Below this are two buttons: "Documentation" and "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](#)

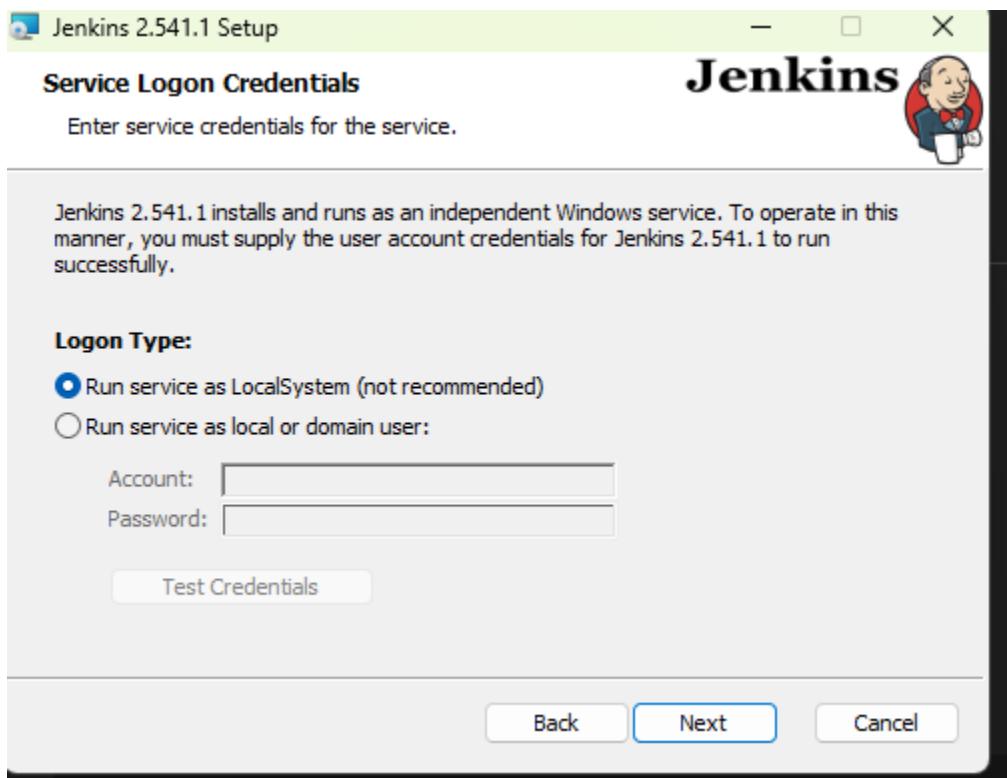
**Jenkins**  
2019 Elections  
• Governing Board  
• Security Officer  
• Events Officer

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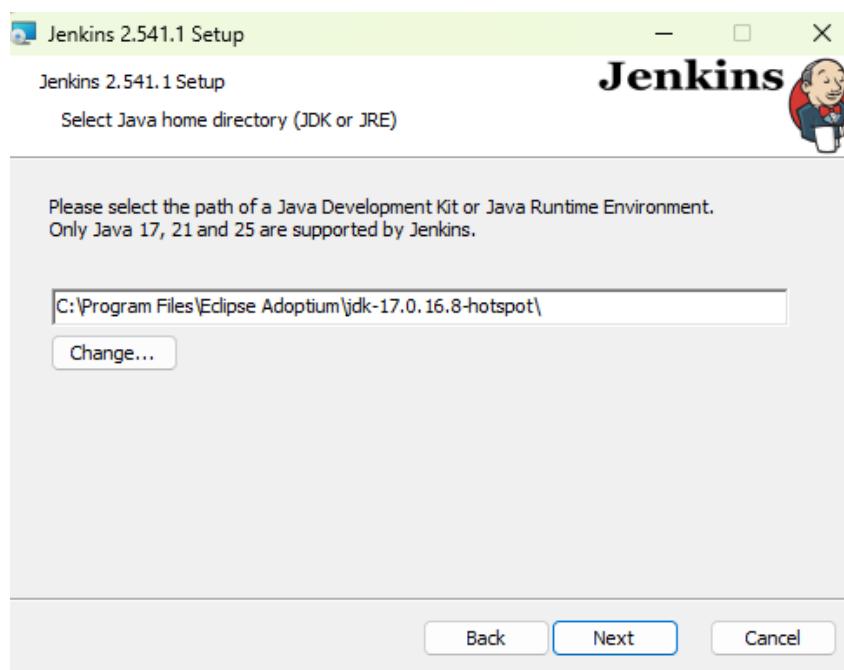
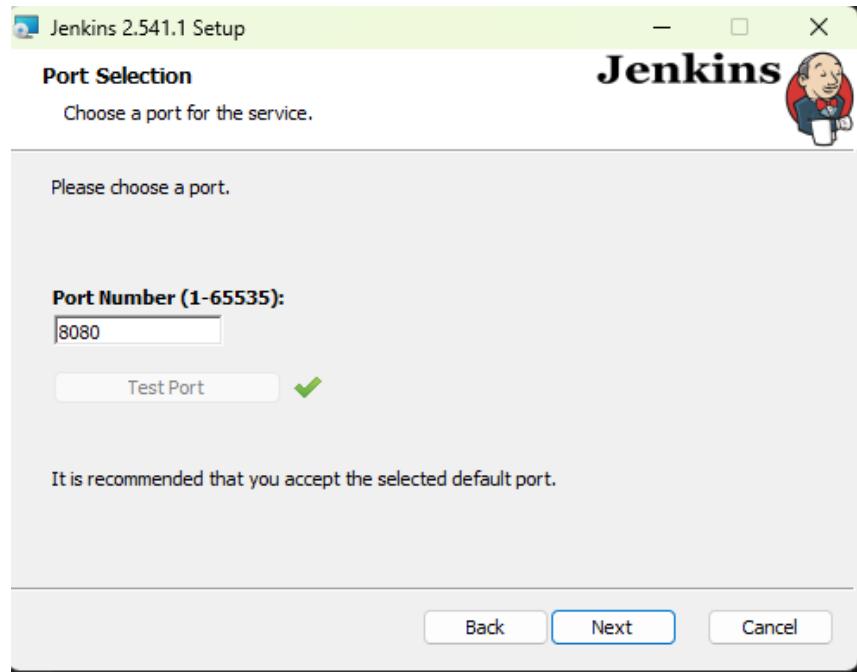
Jenkins is an open source automation tool written in Java with plugins built for Continuous Integration purpose. Jenkins is used to build and test your software projects continuously making it easier for developers to integrate changes to the project, and making it easier for users to obtain a fresh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

**Output:**



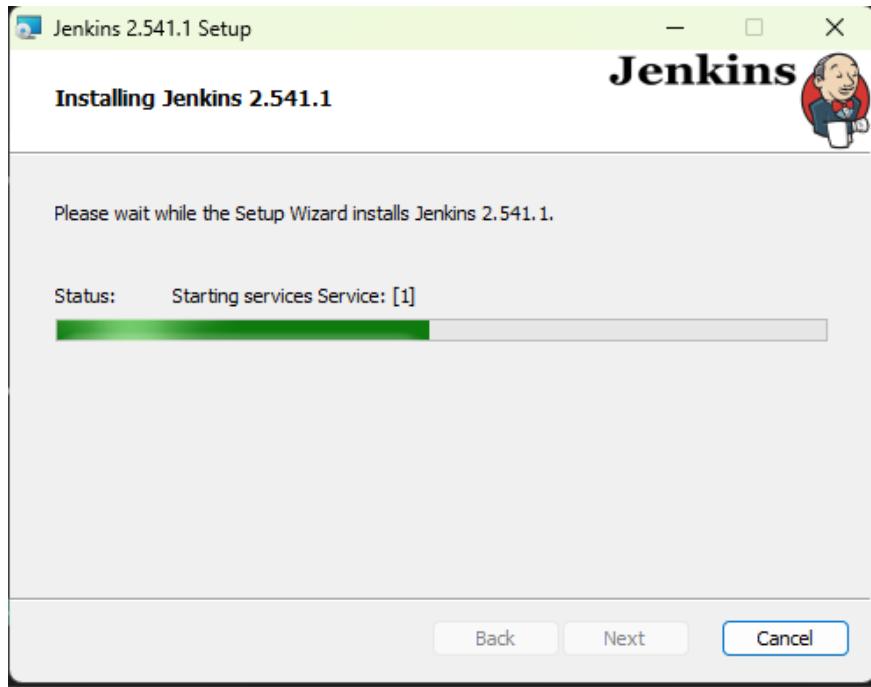
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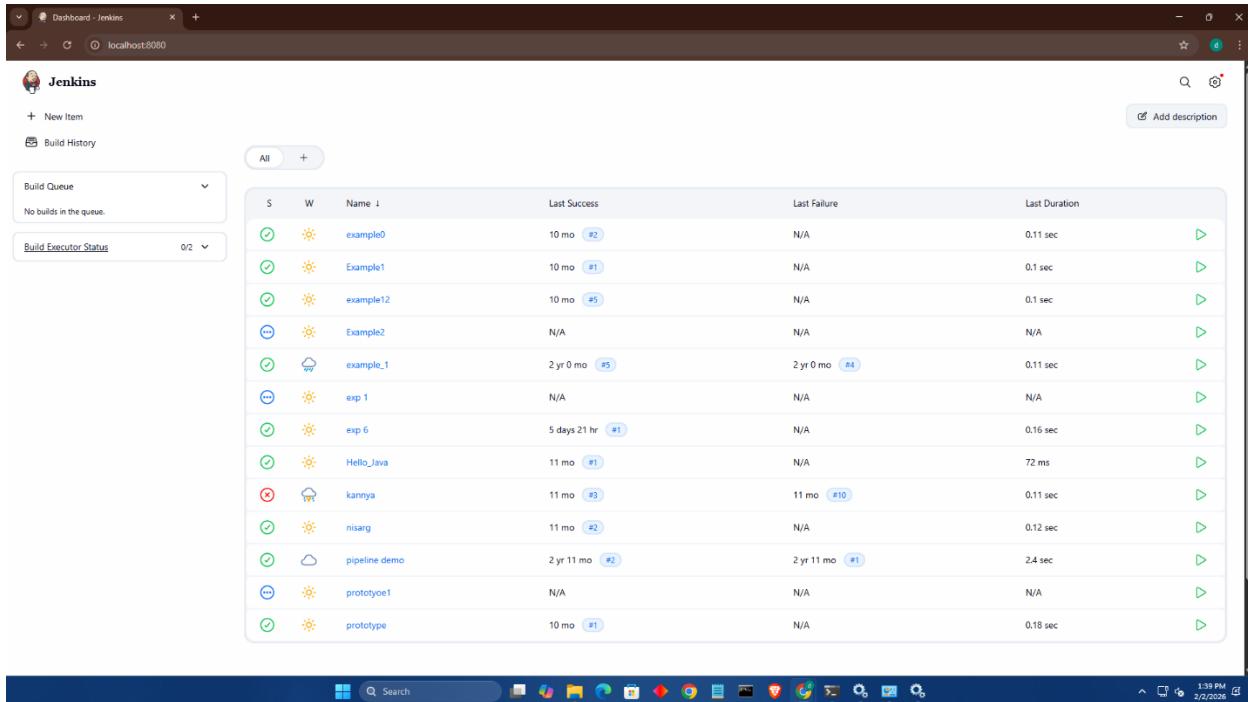
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The screenshot shows the Jenkins dashboard at [localhost:8080](http://localhost:8080). The main area displays the 'Build Queue' with 15 items listed. Each item includes a status icon (green circle with a checkmark), a name, its last success date (e.g., 10 mo ago), its last failure date (e.g., N/A or 2 yr 0 mo ago), and its last duration (e.g., 0.11 sec). The items include 'example0', 'Example1', 'example12', 'Example2', 'example\_1', 'exp 1', 'exp 6', 'Hello\_Java', 'kannya', 'nisarg', 'pipeline demo', 'prototype1', and 'prototype'. Below the queue, the 'Build Executor Status' section shows 0/2 executors available. The top navigation bar has links for 'Dashboard - Jenkins', '+ New Item', 'Build History', and 'Add description'. The bottom status bar shows the time as 1:39 PM on 2/2/2026.



The screenshot shows the Jenkins console output for build #1 of job T13\_63 at [localhost:8080/job/T13\\_63/1/console](http://localhost:8080/job/T13_63/1/console). The left sidebar shows options like Status, Changes, Console Output (which is selected), Edit Build Information, Delete build #1, and Next Build. The right panel displays the console logs:

```

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\jenkins3599814823258880476.bat
C:\ProgramData\Jenkins\jenkins\workspace\T13_63>echo Hello Jenkins
Hello Jenkins

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

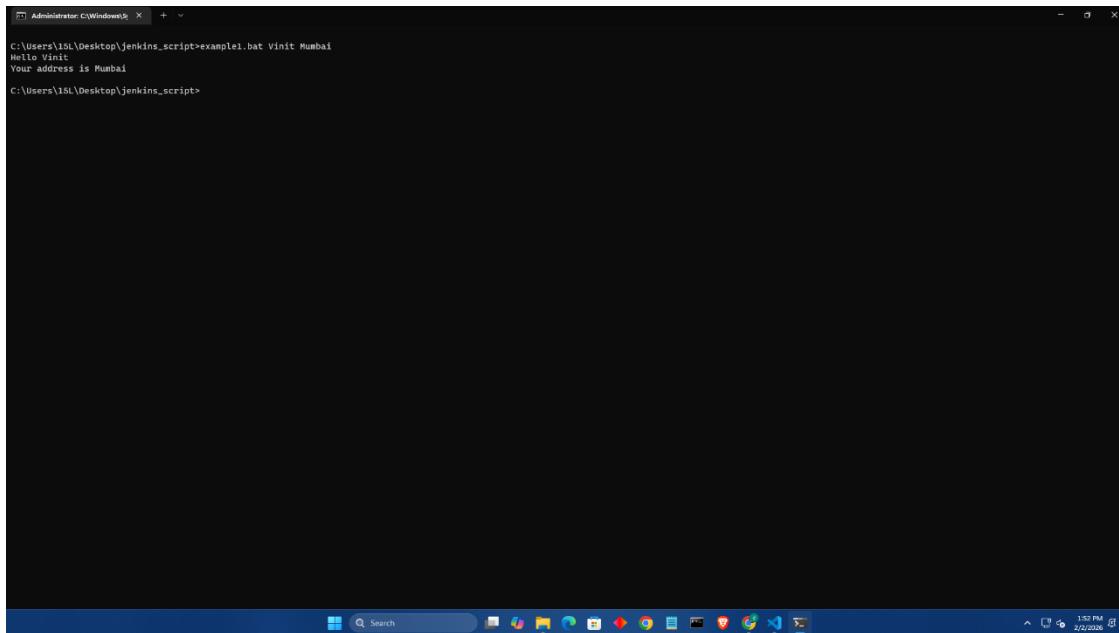
```



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### Example 1



```
C:\Administrator:C:\Windows\system32> + ~
C:\Users\1SL\Desktop\jenkins_script>example1.bat Vinit Mumbai
Hello Vinit
Your address is Mumbai
C:\Users\1SL\Desktop\jenkins_script>
```



Console - #3 - Jenkins

localhost:8080/jobs/T13\_63/3/console

Jenkins T13\_63 / #3

Status Changes

Console Output

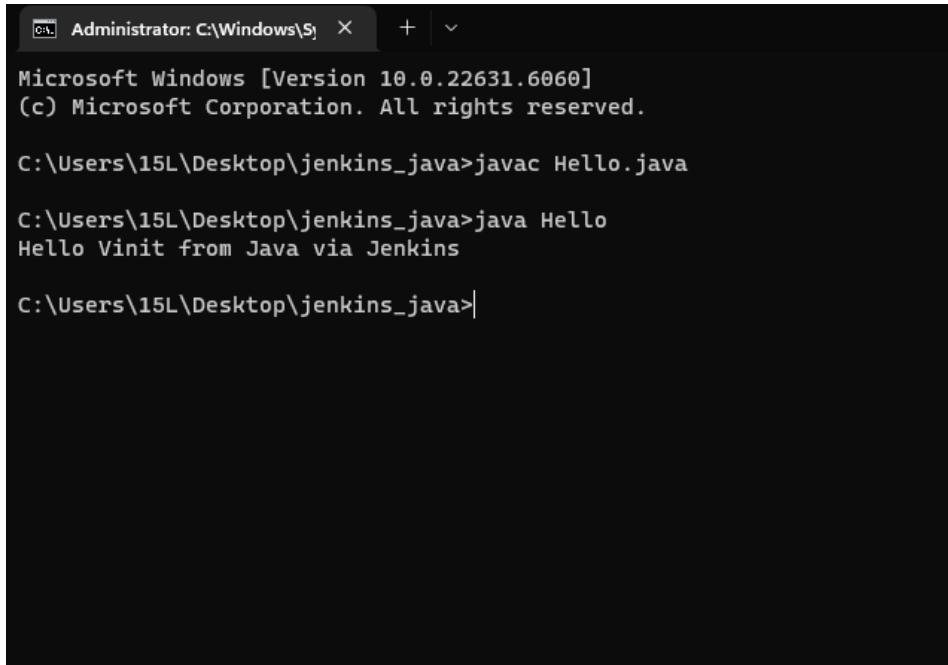
Started by user unknown or anonymous  
Running as SYSTEM  
Building in workspace C:\ProgramData\Jenkins\jenkinsworkspace\T13\_63  
[T13\_63] \$ cmd /c call C:\WINDOWS\TEMP\jenkins16462889393341146329.bat  
C:\ProgramData\Jenkins\jenkinsworkspace\T13\_63>cd /d C:\Users\1SL\Desktop\jenkins\_script  
C:\Users\1SL\Desktop\jenkins\_script>example1.bat Vinit Mumbai  
Hello Vinit  
Your address is Mumbai  
Finished: SUCCESS



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### Example 2

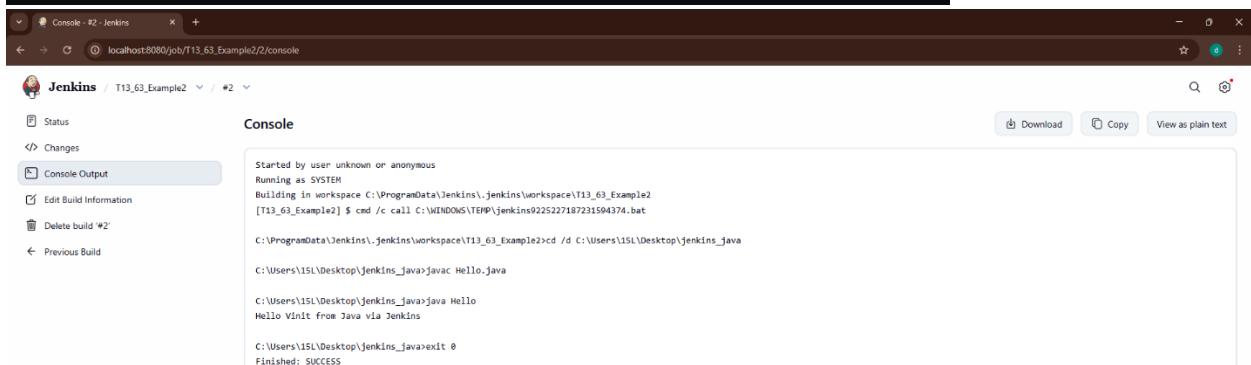


```
Administrator: C:\Windows\S... + 
Microsoft Windows [Version 10.0.22631.6060]
(c) Microsoft Corporation. All rights reserved.

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>
```



Console - #2 - Jenkins

localhost:8080/job/T13\_63.Example2/2/console

Jenkins / T13\_63.Example2 / #2

Status Changes Console Output Edit Build Information Delete build '#2' Previous Build

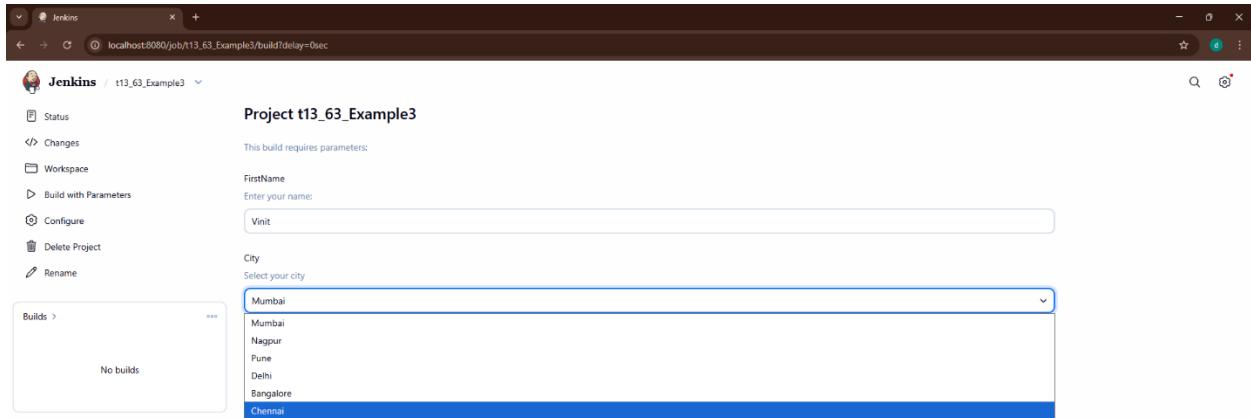
Started by user unknown or anonymous  
Running as SYSTEM  
Building in workspace C:\ProgramData\Jenkins\jenkins\workspace\T13\_63.Example2  
[T13\_63.Example2] \$ cmd /c call C:\WINDOWS\TEMP\jenkins922522107231594374.bat  
C:\ProgramData\Jenkins\jenkins\workspace\T13\_63.Example2>cd /d C:\Users\15L\Desktop\jenkins\_java  
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



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### Parameter



Jenkins / t13\_63\_Example3

Project t13\_63\_Example3

This build requires parameters:

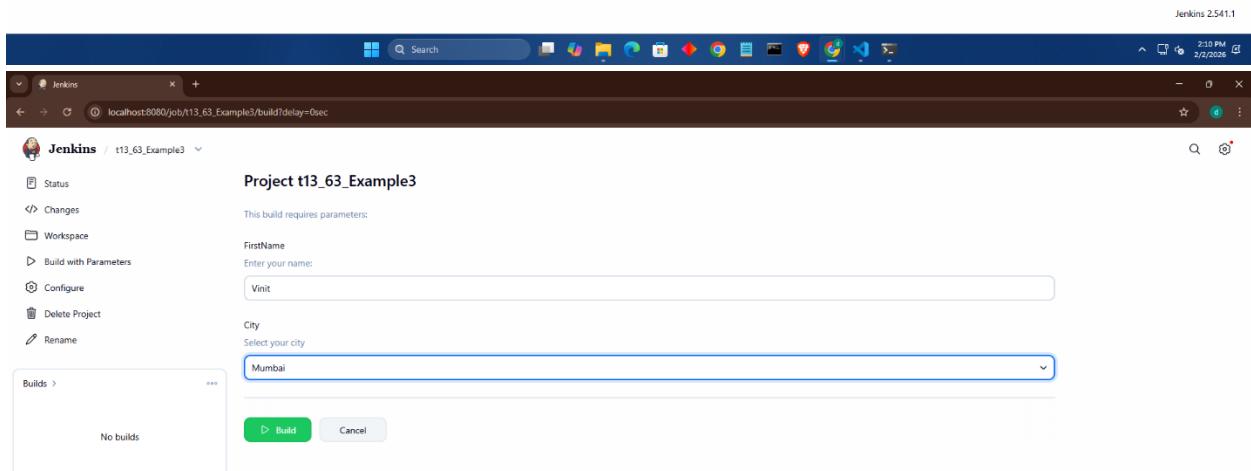
FirstName  
Enter your name:  
Vinit

City  
Select your city  
Mumbai  
Mumbai  
Nagpur  
Pune  
Delhi  
Bangalore  
Chennai

Builds >    No builds

Jenkins 2.541.1

A screenshot of a Jenkins project configuration page. The left sidebar shows options like Status, Changes, Workspace, Build with Parameters, Configure, Delete Project, and Rename. Under 'Build with Parameters', there are two fields: 'FirstName' with the value 'Vinit' and 'City' with a dropdown menu showing 'Mumbai' as the selected option. Below the sidebar, it says 'Builds > No builds'. At the bottom right, it shows 'Jenkins 2.541.1'.



Jenkins / t13\_63\_Example3

Project t13\_63\_Example3

This build requires parameters:

FirstName  
Enter your name:  
Vinit

City  
Select your city  
Mumbai

Builds >    No builds

**BUILD**    Cancel

Jenkins 2.541.1

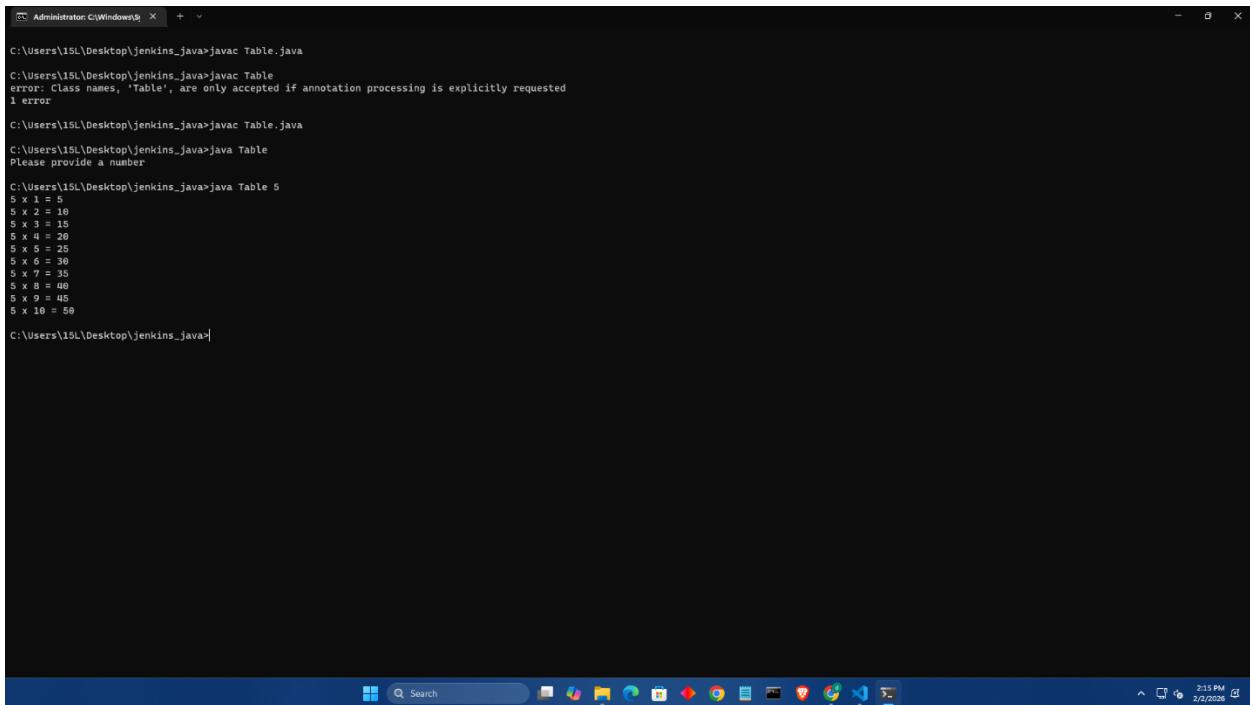
A screenshot of the same Jenkins project configuration page as above, but with a green 'BUILD' button highlighted at the bottom instead of the 'Cancel' button. The rest of the interface is identical to the previous screenshot.



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**Table:**



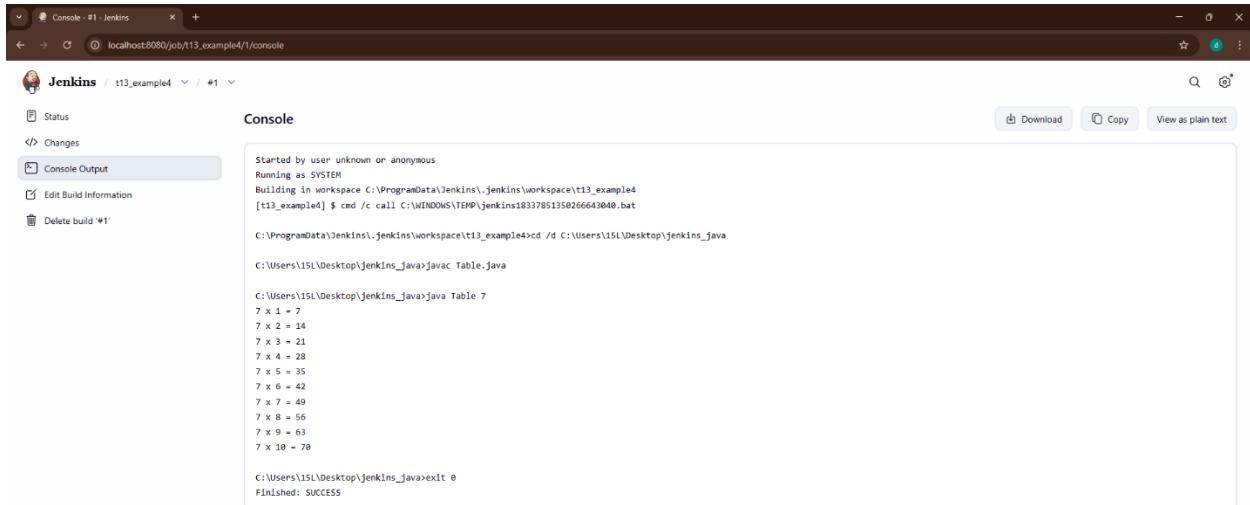
The screenshot shows a Windows command prompt window titled "Administrator: C:\Windows\Sp". The command history and output are as follows:

```
C:\Users\15L\Desktop\jenkins_java>javac Table.java
C:\Users\15L\Desktop\jenkins_java>javac Table.java
error: Class names, 'Table', are only accepted if annotation processing is explicitly requested
1 error
C:\Users\15L\Desktop\jenkins_java>javac Table.java
C:\Users\15L\Desktop\jenkins_java>java Table
Please provide a number
C:\Users\15L\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\15L\Desktop\jenkins_java>
```

The Java application prints the multiplication table of 5 up to 10.

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The screenshot shows the Jenkins console output for a build named 't13\_example4'. The build number is '#1'. The console output window has tabs for Status, Changes, and Console Output, with 'Console Output' selected. The output shows the execution of a Java program named 'Table.java' which prints the multiplication table of 7. The command run was 'javac Table.java' followed by 'java Table'. The output text is:

```
Started by user unknown or anonymous
Running as SYSTEM
Building in workspace C:\ProgramData\Jenkins\workspace\t13_example4
[t13_example4] $ cmd /c call C:\Windows\TEMP\jenkins18337851350266643040.bat

C:\ProgramData\Jenkins\workspace\t13_example4>cd /d C:\Users\15L\Desktop\jenkins_java

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

C:\Users\15L\Desktop\jenkins_java>java Table 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

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

Jenkins 2.541.1

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