

ASSIGNMENT 4

AIM: To understand Continuous integration, Jenkins installation.

LO MAPPED: LO1, LO3

THEORY:

Continuous Integration is a development practice that promotes collaboration, early issue detection, and automated testing to enhance the quality and efficiency of software development.

Jenkins is an open-source automation server that facilitates continuous integration and continuous delivery (CI/CD) of software projects. It helps developers automate various stages of the software development lifecycle, from building and testing to deployment and monitoring. Jenkins supports a wide range of plugins and integrations, making it a versatile tool for automating various tasks in software development.

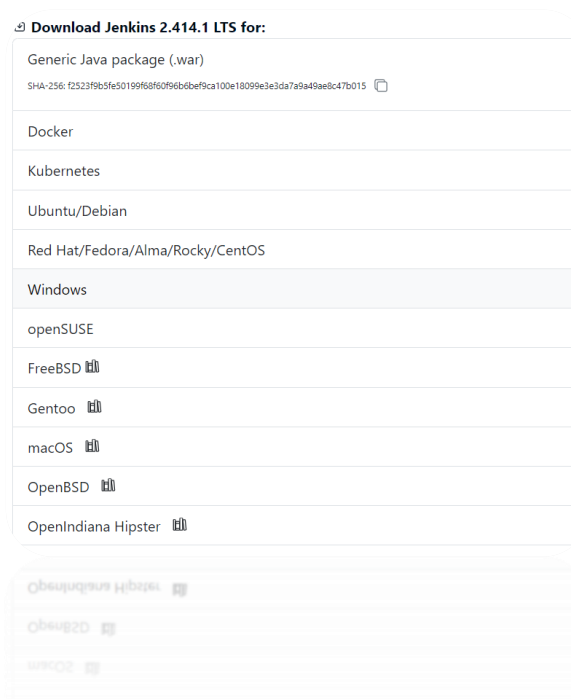
Steps to be followed while installing Jenkins:

1. **Java Installation:** Ensure Java Development Kit (JDK) is installed on your system.

```
C:\Users\Asus>java --version
java 19.0.2 2023-01-17
Java(TM) SE Runtime Environment (build 19.0.2+7-44)
Java HotSpot(TM) 64-Bit Server VM (build 19.0.2+7-44, mixed mode, sharing)

C:\Users\Asus>
```

2. **Download Jenkins:** Get the latest Jenkins WAR file from the official website or package manager.



3. Launch Terminal: Open a terminal/command prompt on your system

```
C:\Users\Asus>java -jar C:\Users\Asus\Downloads\jenkins.war
Running with Java 19 from C:\Program Files\Java\jdk-19, which is not yet fully supported.
Run the command again with the --enable-future-java flag to enable preview support for future Java versions.
Supported Java versions are: [11, 17]
See https://jenkins.io/redirect/java-support/ for more information.

C:\Users\Asus>java -jar C:\Users\Asus\Downloads\jenkins.war --enable-future-java
Running with Java 19 from C:\Program Files\Java\jdk-19, which is not yet fully supported. Continuing because --enable-future-java is set. Supported Java versions are: [11, 17]. See https://jenkins.io/redirect/java-support/ for more information. Running from: C:\Users\Asus\Downloads\jenkins.war
webroot: C:\Users\Asus\.jenkins\war
```

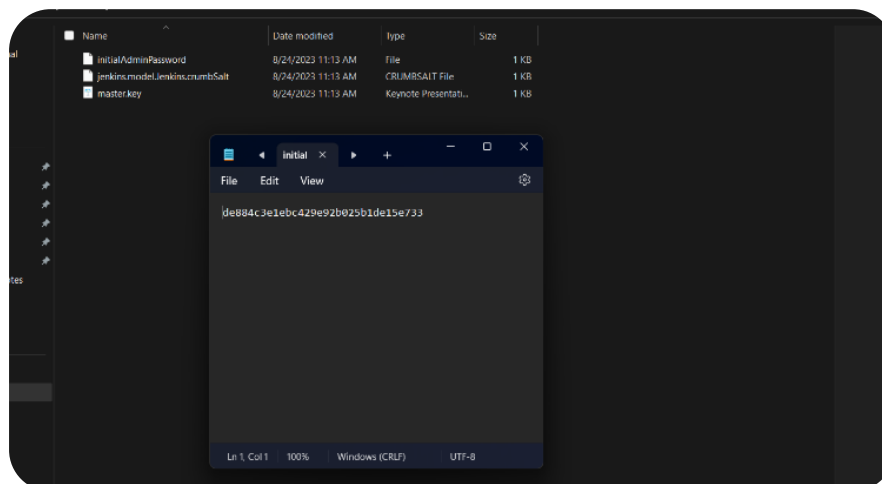
4. Navigate to Directory: Use the cd command to navigate to the directory containing the Jenkins WAR file.

```
Jenkins initial setup is required. An admin user has been created and a password generated.
Please use the following password to proceed to installation:
```

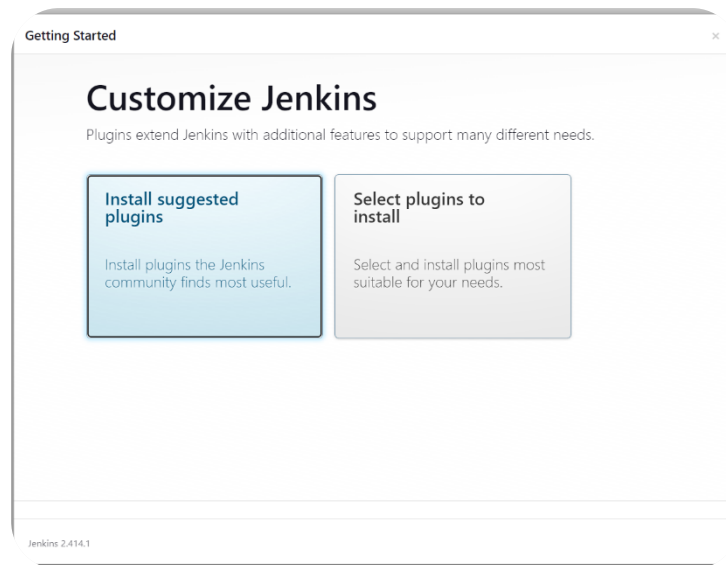
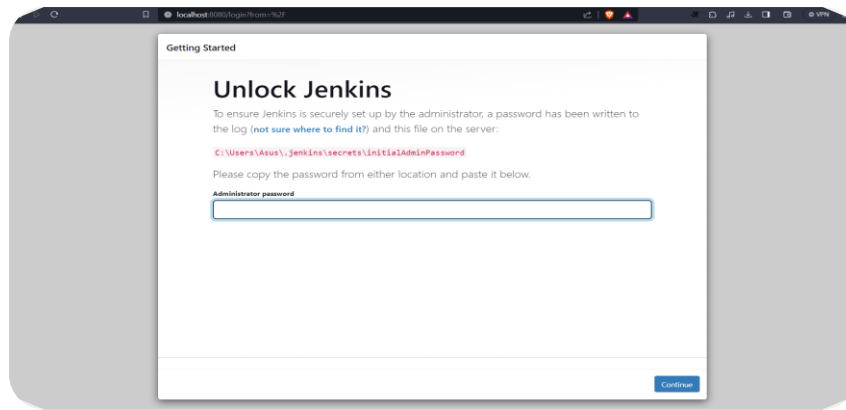
```
de884c3e1ebc429e92b025b1de15e733
```

```
This may also be found at: C:\Users\Asus\.jenkins\secrets\initialAdminPassword
```

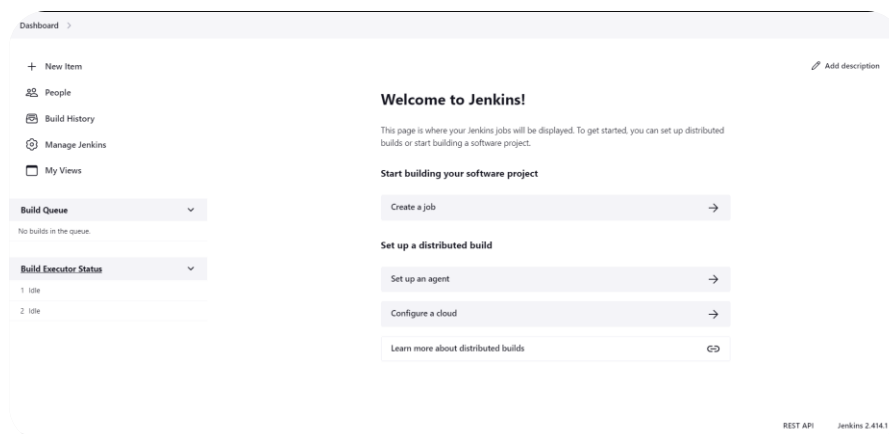
```
*****
```



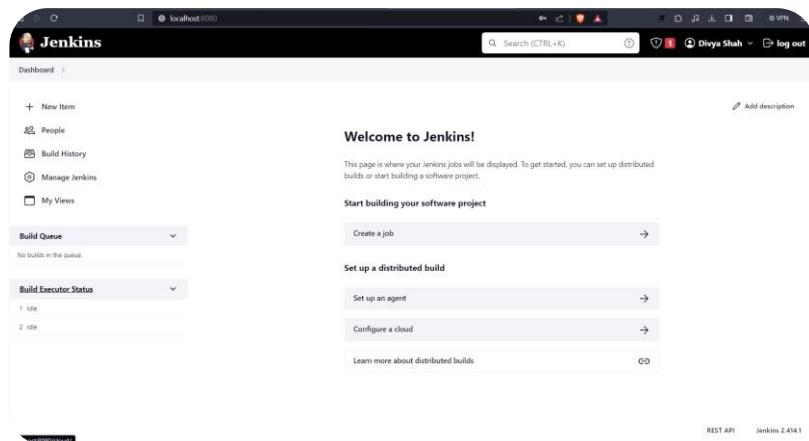
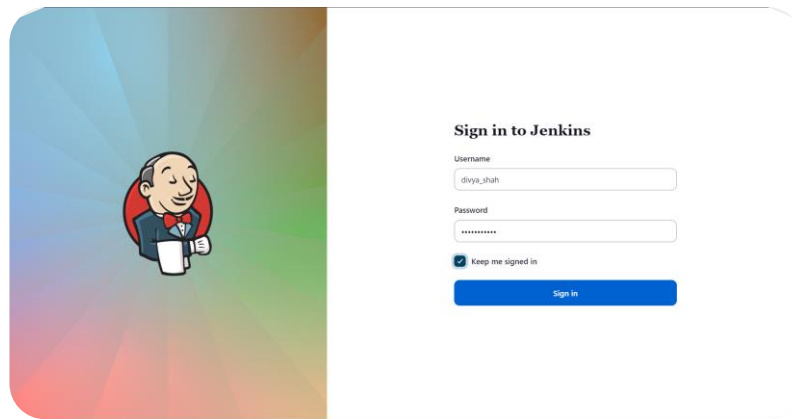
5. Start Jenkins: Run the command `java -jar jenkins.war` to start the Jenkins server.
6. Access Web UI: Open a web browser and go to `http://localhost:8080` to access the Jenkins setup wizard.



7. Unlock Jenkins: Retrieve the initial admin password from the terminal and enter it in the setup wizard.
8. Customize Plugins: Choose recommended or custom plugins to install during setup.
9. Create Admin User: Set up an admin user account with credentials.
10. Jenkins URL: Confirm the Jenkins URL and complete the setup process.



11. Dashboard: Log in with the admin credentials to access the Jenkins dashboard.



CONCLUSION: By this assignment we learned about Continuous integration and way to install Jenkins.