Assignment Number:4

Name: Divya Shah Branch: IT/V Roll No.:115 Date:24/08/2023

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.

|  |
| --- |
|  |
| Fig. 1 |

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

|  |
| --- |
|  |
| Fig. 2 Install Generic .war file |

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

|  |
| --- |
|  |
| Fig. 3 Run the above command |

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

|  |
| --- |
|  |
| Fig. 4 Copy the Password and Directory path |

|  |
| --- |
|  |
| Fig. 5 The path contains following files and password too |

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

|  |
| --- |
|  |
| Fig. 6 In browser go to “localhost:8080” and enter your passwords |

|  |
| --- |
|  |
| Fig. 6 After correct password entered you will be redirected to this page. Then click on Install suggested plugins |

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

|  |
| --- |
|  |
| Fig. 7 After successful setup of plugins and Jenkins setup |

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

|  |
| --- |
|  |
| Fig. 8 For login you can now use your username and password you gave while set up of Jenkins |

|  |
| --- |
|  |
| Fig. 9 Dashboard of Jenkins |

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