		Hope Foundation's	
		Finolex Academy of Management and Technology, Ratnagiri Information Technology Department	
Subject name: DevOps Lab			Subject Code: ITL803
Class	BE IT	Semester – VIII (CBCGS)	Academic year: 2019-20
Name of Student		QUIZ Score :	
Roll No		Assignment/Experiment No.	02
Title: Install and configure Jenkins with necessary plugin			

1.Course objectives applicable LOB3. 1. To understand the concept of DevOps with associated technologies and methodologies.
2. Course outcomes applicable: LO2 -Understand the importance of Jenkins to Build, Deploy and Test Software Applications
3. Learning Objectives: <ol style="list-style-type: none"> To understand the CI/CD tool called Jenkins To know the installations of Jenkins on Fedora 30 os.
4. Practical applications of the assignment/experiment: To automate the several tasks such as automatic building the code ,deploying the code and notifying the developer about build status via sms/email etc
5. Prerequisites: <ol style="list-style-type: none"> Familiar with Linux os Internet Access Knowledge of CI/CD
6. Hardware Requirements: <ol style="list-style-type: none"> Internet Access with Browser Access to root privileges
7. Software Requirements: Browser like Chrome, Internet Explorer Edge
8. Quiz Questions (if any): (Online Exam will be taken separately batchwise, attach the certificate/ Marks obtained) <ol style="list-style-type: none"> What is CI/CD? What are the different CI/CD tools ? What is the Jenkins?

9. Experiment/Assignment Evaluation:			
Sr. No.	Parameters	Marks obtained	Out of
1	Technical Understanding (Assessment may be done based on Q & A <u>or</u> any other relevant method.) Teacher should mention the other method used -		6
2	Neatness/presentation		2
3	Punctuality		2
Date of performance (DOP)		Total marks obtained	10
Date of checking (DOC)		Signature of teacher	

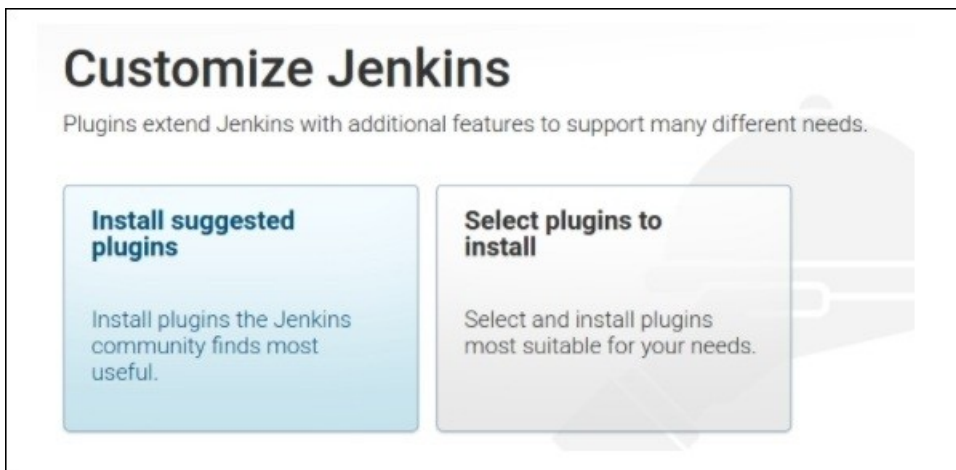
10.Theory- <Preferably given as handwritten work for students>

Jenkins is an open source automation server. With Jenkins, organizations can accelerate the software development process by automating it. Jenkins manages and controls software delivery processes throughout the entire lifecycle, including build, document, test, package, stage, deployment, static code analysis and much more.

11. Installation Steps / Performance Steps -

```
java -jar jenkins.war
```

1. The initial screen page will ask about the plugin options:



2. Plugins will be installed as per the selected configuration in the preceding option:

Getting Started

Getting Started

✓ Folders Plugin	✓ OWASP Markup Formatter Plugin	✓ OWASP Markup Formatter Plugin	✓ OWASP Markup Formatter Plugin	Folders Plugin ** Structs Plugin ** JUnit Plugin OWASP Markup Formatter Plugin PAM Authentication plugin ** Windows Slaves Plugin ** Display URL API Jenkins Mailer Plugin LDAP Plugin ** Pipeline: Step API ** Script Security Plugin ** SCM API Plugin ** Pipeline: API ** Pipeline: Supporting APIs ** Pipeline: Job ** Token Macro Plugin ** External Monitor Job Type ** - required dependency
✓ Timestampers	✓ Workspace Cleanup Plugin	✓ Ant Plugin	✓ Gradle Plugin	
⌚ Pipeline	⌚ GitHub Branch Source Plugin	⌚ Pipeline: GitHub Groovy Libraries	⌚ Pipeline: Stage View Plugin	
⌚ Git plugin	⌚ Subversion Plug-in	⌚ SSH Slaves plugin	✓ Matrix Authorization Strategy Plugin	
✓ PAM Authentication plugin	✓ LDAP Plugin	⌚ Email Extension Plugin	✓ Mailer Plugin	

Jenkins 2.60.3

3. After successful installation, the following admin credential creation page will pop up:

Getting Started

Create First Admin User

Username:

Password:

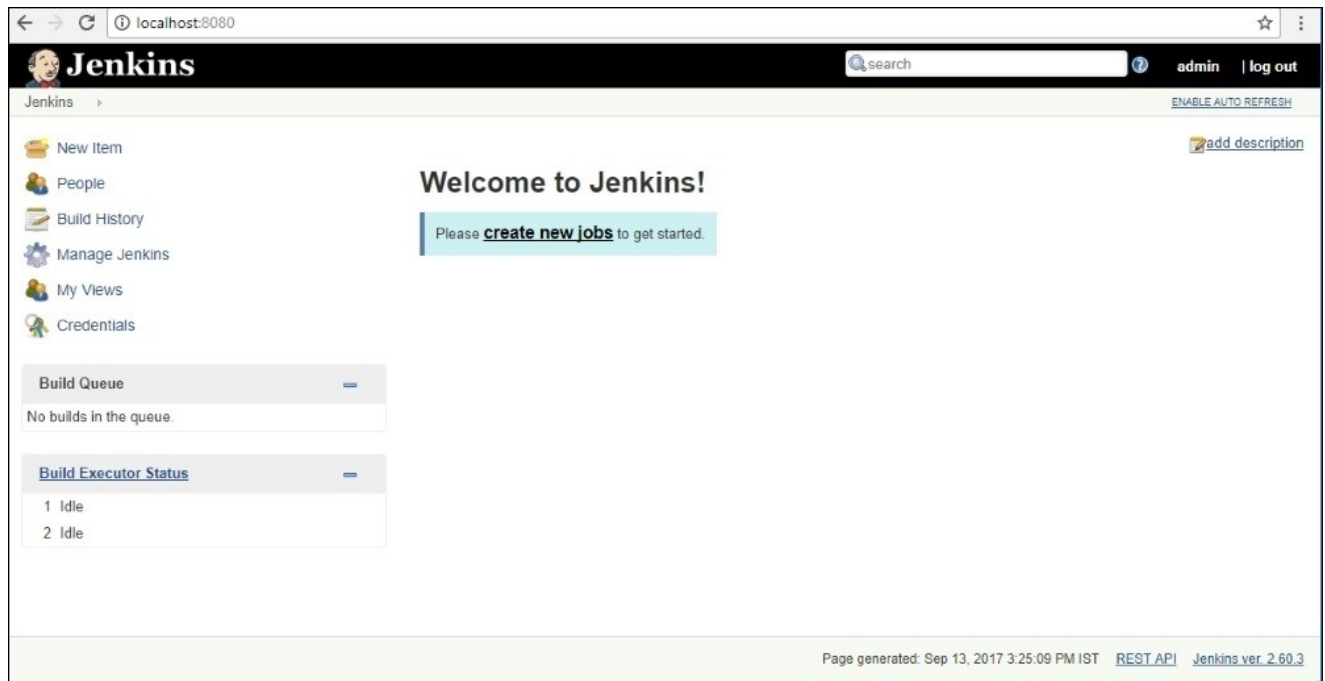
Confirm password:

Full name:

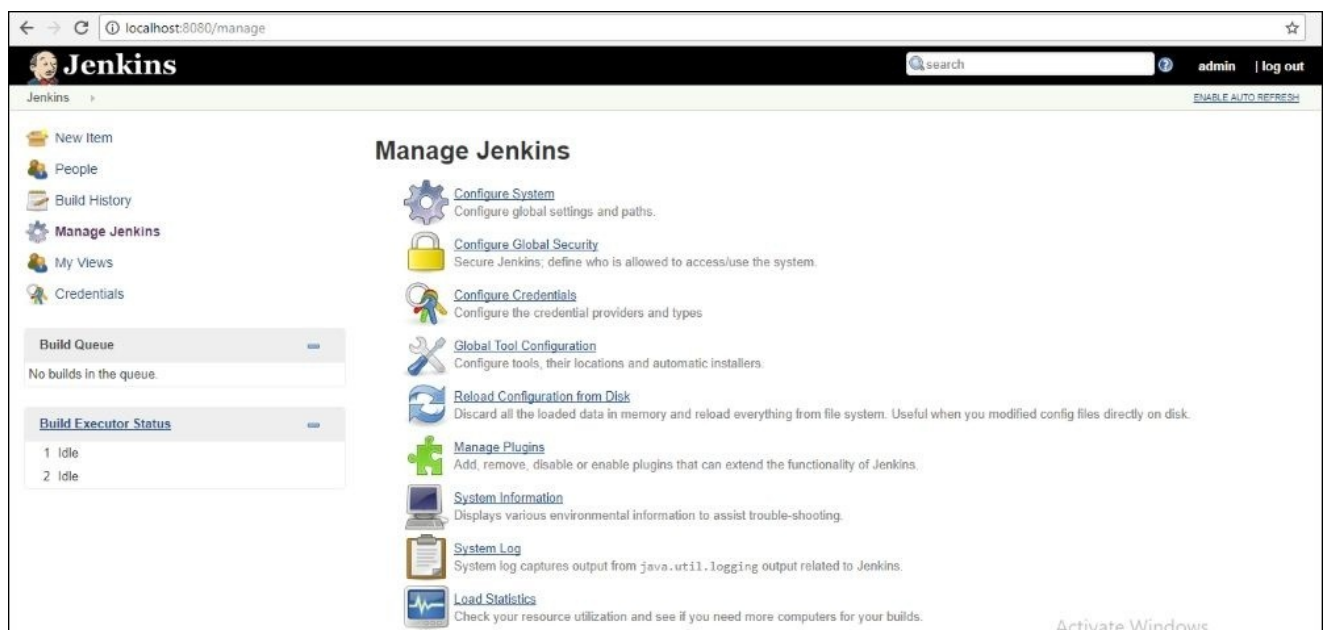
E-mail address:

Jenkins 2.60.3
 Continue as admin
Save and Finish

4. Accessing Jenkins: After successful installation, Jenkins can be accessed through a web browser from your local machine as follows: <http://localhost:8080>



5. The Manage Jenkins option in the dashboard will provide various options to configure various parameters



12. Learning Outcomes Achieved.

1. Student understood the installation process of Jenkins on Fedora 30.
2. Students understood the installations of Jenkins plugins.
3. Students understood the creating a simple project on Jenkins.
4. Students understood the removal of admin password in the event of forgot password.

13. Conclusion:

1. **Applications of the studied technique in industry**
 - a. Jenkins are used to automate the tasks in the industry
 - b. To send notifications to the developer about the build status
2. **Engineering Relevance**
 - a. Connecting Jenkins to the GitHub service
 - b. To automate the continuous integration of various modules
3. **Skills Developed**
 - a. Installations of Jenkins
 - b. Installations of required plugins and enabling them.

14. References:

1. <https://linuxconfig.org/how-to-install-jenkins-on-redhat-8>
2. <https://www.ibm.com/cloud/learn/devops-a-complete-guide#toc-what-is-depMY50L7C>