	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	**Kazi Jawwad A Rahim**	**QUIZ Score :** 10 / ~~06~~ 10	
Roll No	**28**	Assignment/Experiment No.	01
Title: To Understand the concept of DevOps with related technologies			

1.Lab objectives applicable

LOB1. To understand the concept of DevOps with associated technologies and methodologies.

2. Lab outcomes applicable:

LO2 -Students understood the technologies involved in DevOps process.

3. Learning Objectives:

1. To understand concept of devops and its benefits
2. To know the open source tools to achieve the benefits of DevOps culture

4. Practical applications of the assignment/experiment: To get the faster release of software and continuous feedback,its important to know the related technologies

5. Prerequisites:

1. Knowledge of waterfall model in software development
2. Internet Access
3. Knowledge linux operating system

6. Hardware Requirements:

1. Internet Access with Browser
2. Access to root privilegees

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)

1. What is DevOps ?
2. What are the devops development life cycles?
3. How the devops is different than agile technology?

9. Experiment/Assignment Evaluation:

Sr. No.	Parameters	Marks obtained	Out of
1	Technical Understanding (Assessment may be done based on Q & A or 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**	

Theory:

Benefits of Devops –

Implementing a Devops practice can add ~~upto~~ value to your organization through a member of benefits, including the following-

- Faster code delivery
- Faster time to market
- Higher quality software
- Improved collaboration between developers and operations
- Decreased time to resolution for fixing bugs and vulnerabilities
- A culture that brings business, development and operations together for improved responsiveness to market demands.

DevOps tools –

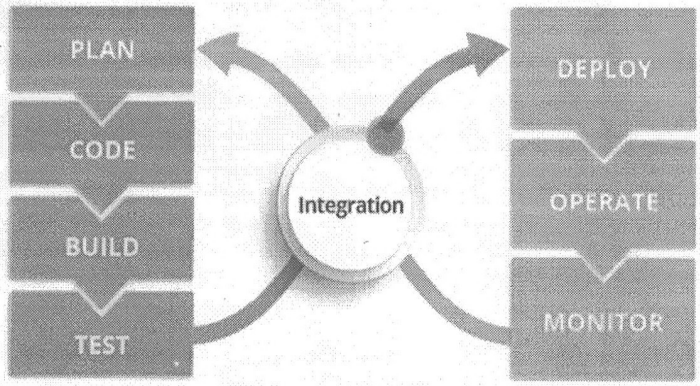
DevOps tools cover a range of processes within the software development lifecycle:

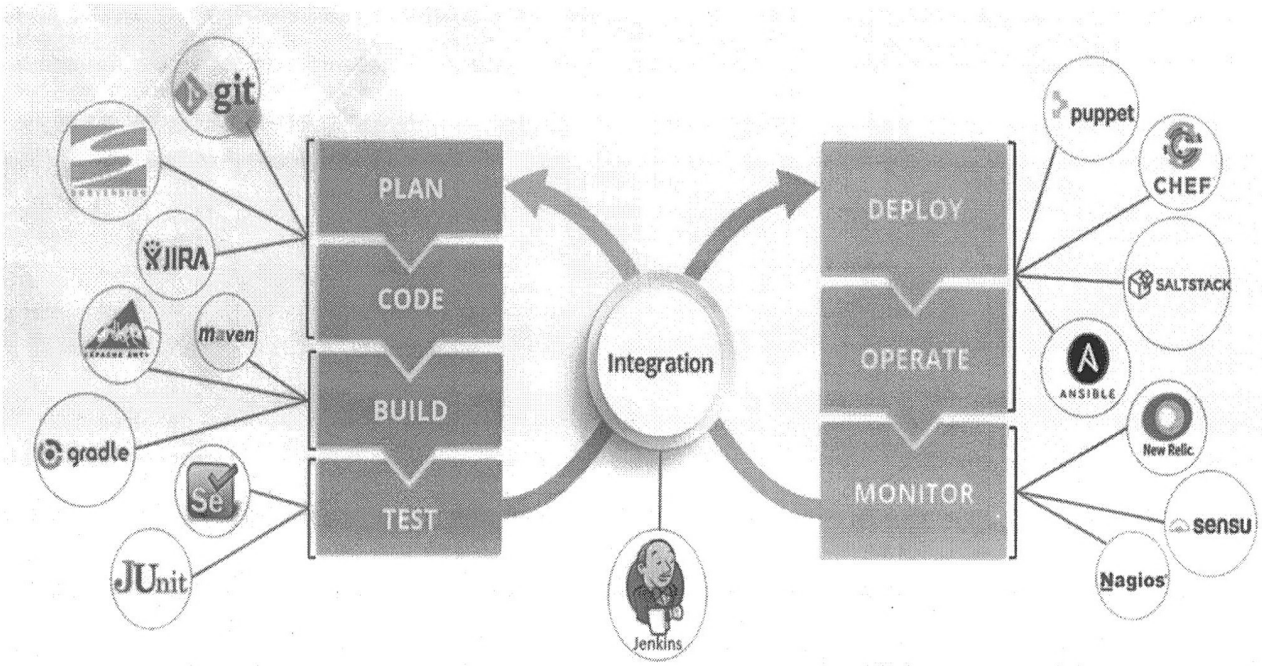
- Define and plan which focuses on planning DevOps workflows for interations, release management, and issue tracking. Notable tools or tool vendors in this space include Atlassian, CA Technologies, IBM, iRise and Jama Software.
- Code, build and configure which focuses on code development and review, source code management and code merging. Notable tools/tool vendors include BitBucket, Electric Cloud, GitLab, GitHub and IBM.

- Test which varifies that the quality of the software release and code are maintained throught the development process and that the highest quality deploys to production. Notable tools/tool vendors include Delphix, Flawcheck, HP, IBM, Microsoft, Parasoft, SonarSource, Skytap and ThoughtWorks.
- Packaging and preproduction which refers to the activities involved once the release is ready for deployment, it's also called staging or preproduction, which refers to the activities involved once the release is ready for deployment, its also called staging or preproduction. Notable tools or tool vendors include IBM, Inedo's ProGet, JFrog's Artifactory, Sonatype, Nexus repository.
- Release, deploy and orchestration which is the process of actually ~~notable~~ releasing software and usually involves change management, release approvals, release automation, schedule orchestration, provisioning and deploying into production. Tools/tool vendor in this space include Automatic, Clarive, BMC, IBM, Flexagon, VMware and XebiaLabs.
- Continuous management and configuration includes continuous configuration automation, configuration management and infrastructure as code. Notable tools/tool vendors include Ansible, Chef, IBM, Puppet Labs, Otter and salt.

10.Theory-.

DevOps is a Software Development approach which involves Continuous Development, Continuous Testing, Continuous Integration, Continuous Deployment and Continuous Monitoring of the software throughout its development lifecycle





References :

IBM DevOps: Shorten releases, improve reliability, and stay ahead of the competition

- Read the eBook, DevOps for Dummies
- Try IBM UrbanCode Velocity free for 60 days

Learning Outcomes Achieved:

1. Students understood the concept of devops and its benefits.
2. Students understood the open source tools to achieve the benefits of DevOps culture.
3. Students understood the concept of devops with associated technologies and methodologies.
4. Students understood the technologies involved in Devops process.

Conclusion:

1. Applications of the studied technique in industry
   a. DevOps helps to automate the development process.
2. Engineering relevance
   a. DevOps gives the idea of module before development.
3. Skills Developed
   a. Installations of DevOps.