

		Hope Foundation's Finolex Academy of Management and Technology, Ratnagiri	
		Information Technology Department	
Subject name: DevOps Lab			Subject Code:
Class	BE IT	Semester – VIII (CBCGS)	Academic year: 2019-20
Name of Student	Omkar Dattaraj Dali	QUIZ Score :10	
Roll No	10	Assignment/Experiment No.	04
Title: Install and Configure Docker for creating containers of different operating systems image			

1.Course objectives applicable COB3. COB6.
2. Course outcomes applicable: CO2 - CO6-
3. Learning Objectives: <ol style="list-style-type: none"> Understand the docker technology To know the building the images
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 Docker Hub account
6. Hardware Requirements: <ol style="list-style-type: none"> Internet Access with Browser Access to root privileges on fedora 30
7. Software Requirements: Docker installed on fedora 30
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 docker? What is the containerization? What are the benefits of docker?

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-

Docker is a tool designed to make it easier to create, deploy, and run applications by using containers. Containers allow a developer to package up an application with all of the parts it needs, such as libraries and other dependencies, and deploy it as one package. By doing so, thanks to the container, the developer can rest assured that the application will run on any other Linux machine regardless of any customized settings that machine might have that could differ from the machine used for writing and testing the code.

11. Installation Steps / Performance Steps –

```
$uname -r 4.16.5-300.fc28.x86_64
sudo dnf config-manager --add-repo https://download.docker.com/linux/fedora/docker-ce.repo
sudo dnf makecache
$ sudo dnf install docker To start the Docker service use:
$ sudo systemctl start docker
sudo systemctl enable docker
```

12. Learning Outcomes Achieved.

- 1.Student understood the installations of Docker on fedora 30
- 2.Students understood the creating containers from downloaded base images.
- 3.Students understood the pushing the customized base images to docker hub.
- 4.Students understood the running of Dockerfile

13. Conclusion:

1. **Applications of the studied technique in industry**
 - a. Dockers are used in industry for removing the complexity of software installations
 - b. To write installations instructions only once and thereafter running of Dockerfile
2. **Engineering Relevance**
 - a. Quickly start using of any application/services
 - b. To modify the base images and pushing it on DockerHUB
3. **Skills Developed**
 - a. Installations of Docker and launching a containers
 - b. Making changes to the downloaded base images by adding applications using Dockerfile

14.References:

- 1.<https://opensource.com/resources/what-docker>
- 2.<https://www.ibm.com/cloud/learn/devops-a-complete-guide#toc-what-is-de-pMY50L7C>