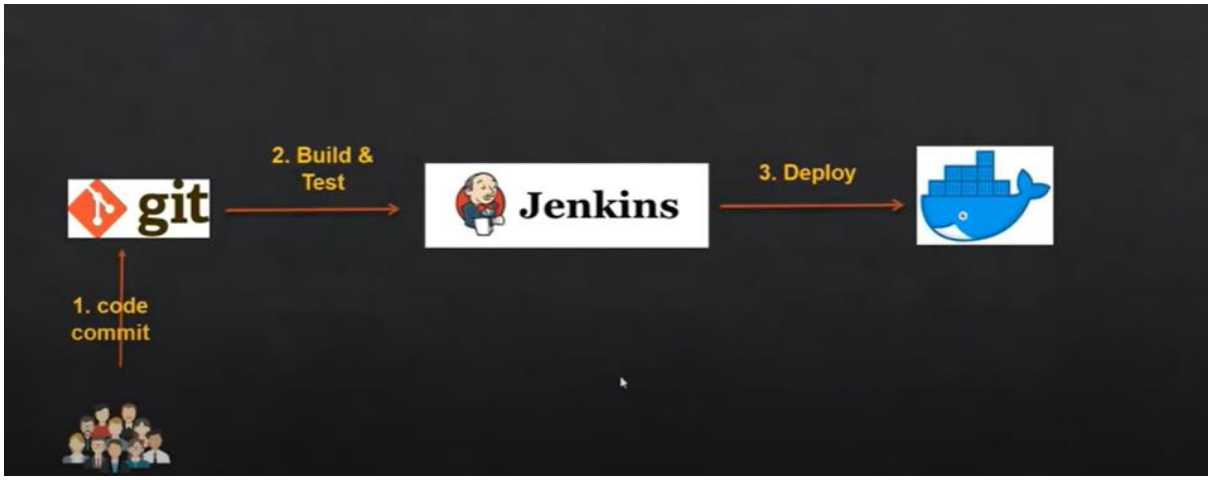
# DevOps Project -3

## Objective:

To use Jenkins as deployment tool to deploy war file on docker container.

**Project Workflow:**




1. Launch an EC2 instance for Docker host
2. Install docker on EC2 instance and start services

```
yum install docker
service docker start
```

3. create a new user for Docker management and add him to Docker (default) group

```
useradd dockeradmin
passwd dockeradmin
usermod -aG docker dockeradmin
```

4. Write a Docker file under /opt/docker

```
mkdir /opt/docker

### vi Dockerfile
# Pull base image
From tomcat:8-jre8

# Maintainer
MAINTAINER "valaxytech"

# copy war file on to container
COPY ./webapp.war /usr/local/tomcat/webapps
```

5. Login to Jenkins console and add Docker server to execute commands from Jenkins
   Manage Jenkins --> Configure system --> Publish over SSH --> add Docker server and credentials

6. Create Jenkins job

A) Source Code Management
Repository : https://github.com/yadneshingole/CI-CD_Project.git
Branches to build : */main

B) Build Root POM: pom.xml
Goals and options : clean install package

C) send files or execute commands over SSH Name: docker_host
Source files : `webapp/target/*.war` Remove prefix : `webapp/target` Remote directory : `//opt//docker`
Exec command[s] :

```
docker stop valaxy_demo;
docker rm -f valaxy_demo;
docker image rm -f valaxy_demo;
cd /opt/docker;
docker build -t valaxy_demo .
```

D) send files or execute commands over SSH
Name: `docker_host`
Exec command : `docker run -d --name valaxy_demo -p 8090:8080 valaxy_demo`

7. Login to Docker host and check images and containers. (no images and containers)

8. Execute Jenkins job

9. check images and containers again on Docker host. This time an image and container get creates through Jenkins job

10. Access web application from browser which is running on container

`<docker_host_Public_IP>:8090`