* Install and setup the docker engine on the host machine.
* Install Jenkins inside a docker container.
* Setup Jenkins with plugins
* Mount the Jenkins container to localhost to preserve the jobs, and modify the Dockerfile specifying the plugins
* Create a Jenkins pipeline, connect SCM with it and set polling time
* Configure the settings.xml of project for proxy, local repository etc.
* Construct a build container (Write the Dockerfile)
  + Pull the base image from docker hub : maven-jdk
  + On top of the base image, install other things in the environment
    - PostgreSQL
  + Setup the database, role, user and other db configurations.
  + Build the image and push it to the local Private Docker Registry
* Construct the Integration Testing Container
  + Pull the same maven\_custom image used in build container
  + On top of it, install Firefox, Xfvb
* Now that we have 3 containers :
  + Jenkins Container
  + Build container
  + Integration testing Container
  + Write the Jenkinsfile specifying the workflow of the pipeline
    - Divide the automation in stages
    - Stage Checkout
    - Stage Build
      * Run commands inside the docker container to build the project and hence run unit tests
    - Stage Archive
      * Preserve the result of the build as WAR file
    - Stage Integration Testing
      * Using Xvfb, firefox and selenium, run the integration testing and deploy the project.

<https://www.digitalocean.com/community/tutorials/an-introduction-to-continuous-integration-delivery-and-deployment>

<https://kubernetes.io/docs/concepts/overview/what-is-kubernetes/>

Presentation

1. Self Intro 1 slide + Tech 1 slide 2min
   1. About me , team name, project domain, college, hobbies
   2. Technical Skills and experiences, projects achievements

1. Overview of the need of this work : my project 1min
   1. Intro with the traditional processes, drawbacks, problem
   2. How would it be if automation…..
   3. Hence my project : devops ci/cd docker
2. My project : terasoluna sample and tech stack 3min
   1. System setup using diagrams
   2. Flow
   3. Ease
   4. Jitney words seekhe hain sab use karna hai zero se
3. Demo 1min
4. Comparison ` 1min
   1. Metric :
   2. Proof
5. Hence this : conclusion 1min
6. Use cases, future scope 1min
7. Vote of thanks 30 sec