Projects - for final presentation

Thursday, December 23, 2021

11:48 AM

**Project guidelines:**

**Note: "XXX" represents your project name.**

**Goal:** You got requirement from customer to build "XXX" project and quick delivery with quality maintained of your product. Utilized your Development and operations skills together to achieve end goal of project.

**Project Requirements:**

You need to build "XXX" project which should have bare minimum CRUD capabilities.

For example: Let take an example of Facebook app.

* Create post
* Edit added post
* List different posts
* Delete post

**Note:** You can build bare min UI (html + css + js ) for these CRUD operations on your project.

**Technical tools / stack you have to utilize:**

* Java / Java Spring boot
* Git
* Maven
* Jenkins
* Nexus
* AWS
* Docker
* DevOps Skills - iteration and refine your project, collaborate inside team, distribute work and get it done.

**Mandatory Requirements:**

* Git to manage your project source code
* Java spring boot to code your application
* Db (**mysql**) assuming you have on your workstation. (Not using mongodb because its not installed on your workstation)

* Create docker image of your spring boot application.
* Push docker image to your docker hub repository
* Once your development done or in going phase, create jekins CI/CD pipeline for your project.
* For setting up / testing jenkins server your can use Virtual box o AWS EC2 Instance (up to your team)
* Manage your Pipeline as code inside your project repo.
* On Jenkins sever - pipeline should get auto triggered as soon as someone commit code in your project repo. (Note: setup GitHub hook, Jenkins server need to set on EC2 instance only as it does not support localhost ip address to trigger it)
* Inside your jenkins pipeline project should get with maven build and artifact should get generated.
* Generated artifact should automatically get published inside Nexus repo.
* **You need to setup Nexus sever as well** - You can utilized your knowledge to setup as cotainer or seprate EC2 instace.

- To run your application as container, use aws EC2 instance. You have to pull your application docker

image to run app.

**Good have requirements:**

A - Setup ansible on your server EC2

* Manage your server IT ops tasks such as Installtion / Uninstallation of web servers (Apache, Nginx etc)
* Manage as playbook inside your project repo

B - If time permit basic integration of Apache Kafka in your project.

1. You can add more feature to your project as you like.

Online Books shop listing app -

User directory listing app

Real Estate Property list app

Restaurant list app

Grocery Management app

**Note:**

* As team, to utilize AWS instances for set of your task you can **create fresh account for your project**

related activities and after your work done you can submit waive off bill request.

- While doing dev and initial testing you can try to utilized **your VB virtual machine.**

* Make sure after your work done stop your EC2 instances.