Integration and Deployment

Course-end Project 1

Project Agenda:

- To Host the Application on AWS EC2 Instance
- To automate the build and deployment process using Jenkins on AWS EC2
- To Containerize the application using docker on AWS EC2

Prerequisites:

- SpringBoot
- Jenkins
- Docker
- AWS

Description:

This assignment is designed to help understand how to plan and develop the back end for a given problem. Further, to gain hands-on experience building the CI/CD Pipeline using Jenkins and then containerizing the application on the AWS cloud platform.

Problem Statement:

Dr. Shawn runs a pet clinic. He needs to record the visits and other details associated with the pets and their owners visiting his clinic. He has software developed by Bella Solutions, a software company, to manage the same.

Bella Solutions aims to host the software solution for Dr. Shawn on AWS EC2 instance to have online access from anywhere by building CI CD Pipeline and containerizing the solution using Docker on AWS EC2.

Tasks:

1. As a task, you need to design and develop the front end for the problem statement along with database design:
2. Import the given Spring Boot project with the generated code in Eclipse
3. Configure the project with Dockerfile
4. Configure the project with Jenkinsfile
5. Build the project using the maven package
6. Create and Launch AWS EC2 Instance
7. Configure EC2 Instance with JDK 11
8. Install jdk8
9. Install jdk11
10. Configure EC2 Instance with Docker
11. Install the docker on EC2
12. Configure EC2 Instance with Jenkins
13. Install the Jenkins on EC2
14. Create the Admin User
15. Upload the given code to git repo
16. Create Jenkins Pipeline on EC2 with SCM as git
17. Build the Pipeline to dockerize the application