Assignment

Rolling out and Rolling back Deployments

A&B is a Leading Business Services & Solution Provider company in the market, for one of their
clients, they need a Java Developer, who is pro-efficient in developing Java Microservices using Spring Boot.
Based on your skills, Company has shortlisted your profile and proposed your profile to the client. The client would like to evaluate your skills and have given you an assignment to complete, based on the evaluation, client will confirm.
You are required to do following tasks :
1. Go to Spring Initializr.
2. Choose following configuration :
a. Project : Maven
b. Spring Boot : 2.7.3
c. Group name : com.star.agile.assignment
d. Name : springboot-demo
e. Artifact : springboot-demo
f. Packaging : Jar
g. Java : 8 or 11
3. In the dependency section, choose following dependency
a. Spring Web
b. Spring Data JPA
4. Click on Explore and verify the pom.xml that all the selected dependencies are present.
5. Click on download to download the Spring Boot Project Template. (springbootdemo.jar)

6. Import the downloaded project in Eclipse.

7. Add the file index.html with some HTML code in the static folder under resources of the project.

8. Write the Dockerfile to create the image and tag it as 1.0.

9. Push the Image to Docker Hub.

10. Setup the Kubernetes minikube single node cluster on an AWS EC2 Ubuntu instance.

11. Write a deployment to deploy the application as POD using Kubectl.

12. Create the node port service to expose the deployed container to the outside world.

13. Verify the application over browser.

14. Add a Hello world.html to the Spring Boot Application.

15. Build the docker image and give the tag as 2.0 this time.

16. Roll out the deployment of the 2.0 version.

17. Verify the app that new version has been deployed.

18. Rollback the deployment to the old version.

19. Verify the version and try to access the helloworld.html, It should not be accessible anymore.