Day 14

Project 01

Problem Statement:

You are tasked with setting up a CI/CD pipeline using Jenkins to streamline the deployment process of a simple Java application. The pipeline should accomplish the following tasks:

1. **Fetch the Dockerfile**: The pipeline should clone a GitHub repository containing the source code of the Java application and a Dockerfile.
2. **Create a Docker Image**: The pipeline should build a Docker image from the fetched Dockerfile.
3. **Push the Docker Image**: The pipeline should push the created Docker image to a specified DockerHub repository.
4. **Deploy the Container**: The pipeline should deploy a container using the pushed Docker image.

Dockerfile

Jenkinsfile

```groovy
pipeline {
    agent any
    environment {
        registry = 'docker.io'
        registryCredential = 'docker-cred'
    }
    stages {
        stage('Checkout') {
            steps {
                git url: 'https://github.com/yashmahi88/java-docker.git', branch: 'master'
            }
        }
        stage('build image') {
            steps{
                script{
                    docker.withRegistry('', registryCredential){
                        def customImage = docker.build("yashmahi04/java-app:${env.BUILD_ID}")
                        customImage.push()

                    }
                }
            }
        }
        stage('Deploy Container') {
            steps {
                script {
                    docker.withRegistry('', registryCredential) {
                        def runContainer = docker.image("yashmahi04/java-app:${env.BUILD_ID}").run('--name day_fifteen -d')
                        echo "Container ID: ${runContainer.id}"
                    }
                }
            }
        }
    }
}
```

Successfully build.

```
[Pipeline] // withEnv
[Pipeline] isUnix
[Pipeline] withEnv
[Pipeline] {
[Pipeline] sh
+ docker push yashmahi04/java-app:1
The push refers to repository [docker.io/yashmahi04/java-app]
f737cc6a106b: Preparing
23edca16576d: Preparing
7b7f3078e1db: Preparing
826c3ddbb29c: Preparing
b626401ef603: Preparing
9b55156abf26: Preparing
293d5db30c9f: Preparing
03127cdb479b: Preparing
9c742cd6c7a5: Preparing
9b55156abf26: Waiting
03127cdb479b: Waiting
293d5db30c9f: Waiting
9c742cd6c7a5: Waiting
b626401ef603: Mounted from library/openjdk
7b7f3078e1db: Mounted from library/openjdk
826c3ddbb29c: Mounted from library/openjdk
293d5db30c9f: Mounted from library/openjdk
9b55156abf26: Mounted from library/openjdk
f737cc6a106b: Pushed
23edca16576d: Pushed
03127cdb479b: Mounted from library/openjdk
9c742cd6c7a5: Mounted from library/openjdk
1: digest: sha256:790fe90739e14b6bafe56214069202e8142e79516f0332dcebc76b699fce6d5c size: 2211
```

```
[Pipeline] script
[Pipeline] {
[Pipeline] withEnv
[Pipeline] {
[Pipeline] withDockerRegistry
$ docker login -u yashmahi04 -p ******** https://index.docker.io/v1/
WARNING! Using --password via the CLI is insecure. Use --password-stdin.
WARNING! Your password will be stored unencrypted in /var/lib/jenkins/workspace/java-docker@tmp/22abbab6-ecb5-4dbb-9544-c9cdf205ff0c/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

Login Succeeded
[Pipeline] {
[Pipeline] isUnix
[Pipeline] sh
+ docker run -d --name day_fifteen -d yashmahi04/java-app:1
[Pipeline] echo
Container ID: 8159794f8186642b66f7b130712c0f2e704debdda005f312f8acfc618ee595a2
[Pipeline] }
[Pipeline] // withDockerRegistry
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // script
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```