Deploy Spring boot application using EC2 instance with Docker and Jenkin

1. Create Spring boot project (Development task).
2. Build the project (we will get the jar file).
3. Then create the Dockerfile
4. Then create the DockerCompose file(using docker compose we can run more than one container).
5. Jenkinsfile which is responsible to run Docker compose file.
6. Run spring boot application on different port number. Like 9090
7. We need to create EC2 instance
8. Open range of port number (8080-9090)
9. Install git
10. Install java
11. Install maven
12. Install docker
13. Install Jenkin 8080
14. Once you install Jenkin we can open Jenkin dashboard using EC2 instance public IP Address.
15. <http://publicIpAddress:8080>
16. We need to create Jenkin pipe line job which is responsible to pull the project from git hub account and build the project. (we can run simple java, maven or docker)

All required software installation steps

1. Install git
2. sudo yum install git -y
3. git --version
4. install java
5. sudo yum install java-17
6. java –version
7. install maven
8. sudo yum install maven
9. mvn --version
10. For installation for Jenkin need to follow below command
    1. sudo wget -O /etc/yum.repos.d/jenkins.repo <https://pkg.jenkins.io/redhat/jenkins.repo>
    2. sudo rpm --import <https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key>
    3. sudo yum install jenkins
11. we need to start the Jenkin software
    1. sudo service jenkins start
12. to check the status Jenkin is running or not
    1. sudo systemctl status jenkins

to come out cntr + C or Cntr +D

Now open Jenkin dashboard

<http://publicIpAddress:8080>

1. to get Jenkin initial password you need to run below command
   1. sudo cat /var/lib/jenkins/secrets/initialAdminPassword
2. install the docker
3. sudo yum install docker
4. docker –version
5. to start the docker

if you want to run docker and docker-compose in jenkin then please execute these command

1. sudo usermod -a -G docker jenkins
2. sudo usermod -a -G docker ec2-user

(ec2-user is user name of instance )

1. sudo chmod 777 /var/run/docker.sock
2. sudo service jenkins restart