Project-1

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Project:[Java App Jenkins-Docker]

Project: **Build Java Application thru Maven and build artifacts to docker image & push to Dockerhub by Jenkins pipe**
[Github + Jenkins + Maven + Docker]
Reference Video: https://youtu.be/Sxg9BNbaOP8   [BC Reddy Devops]

Step 1: Application code files in Github
Step 2: Launch two EC2 (Amazon Linux2) servers 1st for [Jenkins + Maven + Docker], 2nd for Docker
Step 3: Open Ports 22, 80, 8080 ports in 1st EC2 and 22, 80 in 2nd EC2
Step 4: Jenkins, [Java11-openjdk + Maven] (in /opt folder) both installed in 1st EC2
Step 5: Install docker in both EC2s
Step 6: Install and configure Git, JDK, Maven, Git credentials in Jenkins dashboard
Step 7: Create Pipeline Job and build it to docker image and push it to Dockerhub and triggered with Github webhook

Required files: pom.xml, Jenkinsfile, src/main and dump folders with Maven related project files

Task-1 (Git & Docker) on 1st EC2 & 2nd EC2
```
1. sudo yum update -y
2. Sudo yum install git -y
3. sudo amazon-linux-extras install docker -y
4. sudo systemctl start docker, sudo systemctl enable docker, sudo systemctl status docker
5. sudo usermod -a -G docker ec2-user
6. /var/run/docker.sock
```

Task-2 (Maven) on 1st EC2
```
1. cd /opt
2. wget https://dlcdn.apache.org/maven/maven-3/3.9.3/binaries/apache-maven-3.9.3-bin.tar.gz
3. ls
4. tar -xvzf apache-maven-3.9.3-bin.tar.gz
5. ls
6. mv apache-maven-3.9.3 maven3
7. rm -rf apache-maven-3.9.3-bin.tar.gz
8. export PATH=$PATH:/opt/maven3/bin/
```

Task-3 (Jenkins) on 1st EC2
```
1. amazon-linux-extras install java-openjdk11 -y [on both EC2s]
2. sudo wget -O /etc/yum.repos.d/jenkins.repo https://pkg.jenkins.io/redhat-stable/jenkins.repo
3. sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key
4. yum install fontconfig java-11-openjdk
5. yum install jenkins
6. systemctl start jenkins
7. systemctl enable jenkins
8. systemctl status jenkins
9. cat /var/lib/jenkins/secrets/initialAdminPassword [login into Jenkins dashboard public IP:8080]
```

Create Pipeline Job and run the build in Jenkins dashboard and check the image in dockerhub