TASK 5

**Clone the Git Repository**

git clone https://github.com/Jervinjeno/spring-framework

cd spring-framework

git remote set-url origin https://github.com/avi11204/spring-framework.git

git push origin main

**Install Maven**

sudo apt update

sudo apt install maven -y

mvn -version

If outdated, install the latest version:

sudo apt remove maven -y

cd /opt

sudo wget https://downloads.apache.org/maven/maven-3/3.9.6/binaries/apache-maven-3.9.6-bin.tar.gz

sudo tar -xvzf apache-maven-3.9.6-bin.tar.gz

sudo mv apache-maven-3.9.6 /opt/maven

echo 'export M2\_HOME=/opt/maven' | sudo tee -a /etc/profile.d/maven.sh

echo 'export PATH=$M2\_HOME/bin:$PATH' | sudo tee -a /etc/profile.d/maven.sh

source /etc/profile.d/maven.sh

mvn -version

Ensure the correct symlink:

sudo ln -s /opt/maven/bin/mvn /usr/bin/mvn

**Build the Project with Maven**

cd /var/lib/jenkins/workspace/Spring-framework

mvn clean package -DskipTests

**Set Up Jenkins Pipeline**

Jenkinsfile:

pipeline {

agent any

environment {

IMAGE\_NAME = "hariharan3104/my-app"

REGISTRY = "docker.io"

DOCKER\_USER = "hariharan3104"

DOCKER\_PASS = H@ri\_2004

}

stages {

stage('Checkout Code') {

steps {

git url: 'https://github.com/avi11204/spring-framework.git', branch: 'main'

}

}

stage('Build Docker Image') {

steps {

sh "docker build -t $IMAGE\_NAME:latest ."

}

}

stage('Login to Docker Registry') {

steps {

sh 'echo $DOCKER\_PASS | docker login -u $DOCKER\_USER --password-stdin'

}

}

stage('Push Image to Docker Registry') {

steps {

sh "docker push $IMAGE\_NAME:latest"

}

}

}

post {

success { echo 'Pipeline executed successfully!' }

failure { echo 'Pipeline failed! Check the logs for errors.' }

}

}

**Fix Permissions for Jenkins**

sudo chown -R jenkins:jenkins /var/lib/jenkins/workspace/Spring-framework

sudo chmod -R 775 /var/lib/jenkins/workspace/Spring-framework

sudo systemctl restart jenkins

**Run and Debug the Pipeline**

docker images # Check if the image exists

docker ps -a # Check running containers

docker logs # View container logs



