

DevOps Practical Sets 1, 2, 3

[illegible]

Q1. Create a new Git repository locally, add a Java file (HelloWorld.java), commit it, and push it to

```
sudo apt update
sudo apt install git -y
mkdir DevOpsProject
cd DevOpsProject
git init
nano HelloWorld.java
# public class HelloWorld {
#     public static void main(String[] args) {
#         System.out.println("Hello World from Ubuntu!");
#     }
# }
git add HelloWorld.java
git commit -m "Initial commit - HelloWorld.java"
git branch -M main
git remote add origin https://github.com/<username>/<repo-name>.git
git push -u origin main
```

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Q2. Create a simple Maven project using the command line and build it using mvn clean package.

```
sudo apt update
sudo apt install openjdk-17-jdk maven -y
java -version
mvn -v
mvn archetype:generate -DgroupId=com.example -DartifactId=myapp -DarchetypeArtifactId=maven-archetype
cd myapp
mvn clean package
ls target/
```

[illegible]

Q3. Create a Dockerfile for your Maven project and build a Docker image using the command line.

```
sudo apt update
sudo apt install docker.io -y
sudo systemctl start docker
sudo systemctl enable docker
cd ~/myapp
nano Dockerfile
# FROM openjdk:17
# COPY target/myapp-1.0-SNAPSHOT.jar app.jar
# ENTRYPOINT ["java","-jar","app.jar"]
sudo docker build -t myapp:latest .
sudo docker images
```

SET 2

Q1. Create a new Jenkins Freestyle project that pulls code from your GitHub repository and builds it

```
sudo apt update
sudo apt install openjdk-17-jdk git maven -y
wget -q -O - https://pkg.jenkins.io/debian/jenkins.io.key | sudo apt-key add -
sudo sh -c 'echo deb http://pkg.jenkins.io/debian/ binary/ > /etc/apt/sources.list.d/jenkins.list'
sudo apt update
sudo apt install jenkins -y
sudo systemctl start jenkins
sudo systemctl enable jenkins
# Open Jenkins at http://localhost:8080 → Create Freestyle Project → Configure Git URL → Add build
```

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Q2. Configure Jenkins to automatically trigger a build whenever new code is pushed to GitHub using a

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

```
sudo apt update
sudo apt install git openjdk-17-jdk maven -y
wget -q -O - https://pkg.jenkins.io/debian/jenkins.io.key | sudo apt-key add -
sudo sh -c 'echo deb http://pkg.jenkins.io/debian/ binary/ > /etc/apt/sources.list.d/jenkins.list'
sudo apt update
sudo apt install jenkins -y
sudo systemctl start jenkins
sudo systemctl enable jenkins
# Jenkinsfile content:
# pipeline {
#     agent any
#     stages {
```

