

# Maven practical task

## 1. Install locally the latest versions of Java and Maven.

### Java

Download latest Java version .deb file for ubuntu:

```
wget https://download.oracle.com/java/23/latest/jdk-23_linux-x64_bin.deb
```

```
02:04:59 adrwal@adrwal-laptop-ubuntu ~ → wget https://download.oracle.com/java/23/latest/jdk-23_linux-x64_bin.deb
--2024-11-08 14:13:07-- https://download.oracle.com/java/23/latest/jdk-23_linux-x64_bin.deb
Resolving download.oracle.com (download.oracle.com)... 2.20.32.105
Connecting to download.oracle.com (download.oracle.com)[2.20.32.105]:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 209387156 (200M) [text/plain]
Saving to: 'jdk-23_linux-x64_bin.deb'

jdk-23_linux-x64_bin.deb                               100%[=====]
2024-11-08 14:13:12 (46.4 MB/s) - 'jdk-23_linux-x64_bin.deb' saved [209387156/209387156]
```

Install downloaded file:

```
sudo dpkg --install jdk-23_linux-x64_bin.deb
```

```
02:13:12 adrwal@adrwal-laptop-ubuntu ~ → sudo dpkg --install jdk-23_linux-x64_bin.deb
[sudo] password for adrwal:
Selecting previously unselected package jdk-23.
(Reading database ... 204629 files and directories currently installed.)
Preparing to unpack jdk-23_linux-x64_bin.deb ...
Unpacking jdk-23 (23.0.1-ga) ...
Setting up jdk-23 (23.0.1-ga) ...
update-alternatives: using /usr/lib/jvm/jdk-23.0.1-oracle-x64/bin/jar to provide /usr/bin/jar
update-alternatives: using /usr/lib/jvm/jdk-23.0.1-oracle-x64/bin/jarsigner to provide /usr/bin/jarsigner
update-alternatives: using /usr/lib/jvm/jdk-23.0.1-oracle-x64/bin/java to provide /usr/bin/java
update-alternatives: using /usr/lib/jvm/jdk-23.0.1-oracle-x64/bin/javac to provide /usr/bin/javac
update-alternatives: using /usr/lib/jvm/jdk-23.0.1-oracle-x64/bin/javadoc to provide /usr/bin/javadoc
update-alternatives: using /usr/lib/jvm/jdk-23.0.1-oracle-x64/bin/javap to provide /usr/bin/javap
```

Test if Java installed correctly:

```
java --version
```

```
02:22:44 adrwal@adrwal-laptop-ubuntu ~ → java --version
java 23.0.1 2024-10-15
Java(TM) SE Runtime Environment (build 23.0.1+11-39)
Java HotSpot(TM) 64-Bit Server VM (build 23.0.1+11-39, mixed mode, sharing)
02:25:18 adrwal@adrwal-laptop-ubuntu ~ →
```

### Maven

Download latest maven version and add its binaries to PATH:

```
wget https://dlcdn.apache.org/maven/maven-3/3.9.9/binaries/apache-maven-3.9.9-bin.tar.gz
tar -xvzf apache-maven-3.9.9-bin.tar.gz
sudo mv ./apache-maven-3.9.9 /usr/local/
nano ~/.bashrc
```

```
export PATH=$PATH:/usr/local/apache-maven-3.9.9/bin/
```

Now we can check maven version:

```
02:44:58 adrwal@adrwal-laptop-ubuntu ~ → source ~/.bashrc
02:45:09 adrwal@adrwal-laptop-ubuntu ~ → mvn --version
Apache Maven 3.9.9 (8e8579a9e76f7d015ee5ec7bfcdc97d260186937)
Maven home: /usr/local/apache-maven-3.9.9
Java version: 23.0.1, vendor: Oracle Corporation, runtime: /usr/lib/jvm/jdk-23.0.1-oracle-x64
Default locale: en_US, platform encoding: UTF-8
OS name: "linux", version: "6.8.0-48-generic", arch: "amd64", family: "unix"
02:45:12 adrwal@adrwal-laptop-ubuntu ~ →
```

## 2. Go to <https://github.com/spring-projects/spring-petclinic>, fork it and clone the forked repo.

Fork repo through github web GUI. And clone it locally.

```
git clone git@github.com:adrwalGD/spring-petclinic.git
```

```
02:45:12 adrwal@adrwal-laptop-ubuntu ~ → git clone git@github.com:adrwalGD/spring-petclinic.git
Cloning into 'spring-petclinic'...
remote: Enumerating objects: 10198, done.
remote: Counting objects: 100% (81/81), done.
remote: Compressing objects: 100% (49/49), done.
remote: Total 10198 (delta 19), reused 50 (delta 7), pack-reused 10117 (from 1)
Receiving objects: 100% (10198/10198), 7.63 MiB | 2.94 MiB/s, done.
Resolving deltas: 100% (3842/3842), done.
02:54:58 adrwal@adrwal-laptop-ubuntu ~ →
```

## 3. Perform validation to check if the project is correct.

```
mvn validate
```

```

03:00:12 adrwal@adrwal-laptop-ubuntu spring-petclinic ±|main|→ mvn validate
[INFO] Scanning for projects...
[INFO]
[INFO] -----< org.springframework.samples:spring-petclinic >-----
[INFO] Building petclinic 3.3.0-SNAPSHOT
[INFO]   from pom.xml
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- enforcer:3.4.1:enforce (enforce-java) @ spring-petclinic ---
[INFO] Rule 0: org.apache.maven.enforcer.rules.version.RequireJavaVersion passed
[INFO]
[INFO] --- spring-javaformat:0.0.43:validate (default) @ spring-petclinic ---
[INFO]
[INFO] --- checkstyle:3.6.0:check (nohttp-checkstyle-validation) @ spring-petclinic ---
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/geronimo/genesis/genesis/
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/geronimo/genesis/genesis/
Downloaded from central: https://repo.maven.apache.org/maven2/org/xmlresolver/xmlresolver/5.2.2/x
[INFO] You have 0 Checkstyle violations.
[INFO]
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 01:21 min
[INFO] Finished at: 2024-11-08T15:01:38+01:00
[INFO] -----
03:01:38 adrwal@adrwal-laptop-ubuntu spring-petclinic ±|main|→

```

## 4. Build JAR artifact from source code, run the application locally and see the web interface in the browser.

We can build application with maven using below command

```
mvn clean package
```

```

04:12:52 adrwal@adrwal-laptop-ubuntu spring-petclinic ±|main|→ mvn clean package
[INFO] Scanning for projects...
[INFO]
[INFO] -----< org.springframework.samples:spring-petclinic >-----
[INFO] Building petclinic 3.3.0-SNAPSHOT
[INFO]   from pom.xml
[INFO] -----[ jar ]-----
Downloading from spring-snapshots: https://repo.spring.io/snapshot/org/cyclonedx/cyclonedx-core-java
Downloading from spring-milestones: https://repo.spring.io/milestone/org/cyclonedx/cyclonedx-core-java
Downloading from central: https://repo.maven.apache.org/maven2/org/cyclonedx/cyclonedx-core-java
Downloaded from central: https://repo.maven.apache.org/maven2/org/cyclonedx/cyclonedx-core-java
Hibernate: select pt1_0.id,pt1_0.name from types pt1_0 order by pt1_0.name
[INFO] Tests run: 10, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.390 s -- in
[INFO]
[INFO] Results:
[INFO]
[WARNING] Tests run: 50, Failures: 0, Errors: 0, Skipped: 2
[INFO]
[INFO]
[INFO] --- jacoco:0.8.12:report (report) @ spring-petclinic ---
[INFO] Loading execution data file /home/adrwal/spring-petclinic/target/jacoco.exec
[INFO] Analyzed bundle 'petclinic' with 21 classes
[INFO]
[INFO] --- jar:3.4.2:jar (default-jar) @ spring-petclinic ---
Downloading from spring-snapshots: https://repo.spring.io/snapshot/commons-io/commons-io
Downloading from spring-milestones: https://repo.spring.io/milestone/commons-io/commons-io
Downloading from central: https://repo.maven.apache.org/maven2/commons-io/commons-io
Downloaded from central: https://repo.maven.apache.org/maven2/commons-io/commons-io/2.11.0/commons-io-2.11.0.jar
Downloading from spring-snapshots: https://repo.spring.io/snapshot/commons-io/commons-io
Downloading from spring-snapshots: https://repo.spring.io/snapshot/org/apache/commons/commons-compress
Downloading from spring-milestones: https://repo.spring.io/milestone/commons-io/commons-io
Downloading from spring-milestones: https://repo.spring.io/milestone/org/apache/commons/commons-compress
Downloading from central: https://repo.maven.apache.org/maven2/commons-io/commons-io
Downloaded from central: https://repo.maven.apache.org/maven2/commons-io/commons-io/2.11.0/commons-io-2.11.0.jar
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/commons/commons-compress
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/commons/commons-compress/1.21/commons-compress-1.21.jar
[INFO] Building jar: /home/adrwal/spring-petclinic/target/spring-petclinic-3.3.0-SNAPSHOT.jar
[INFO]
[INFO] --- spring-boot:3.3.5:repackage (repackage) @ spring-petclinic ---
[INFO] Replacing main artifact /home/adrwal/spring-petclinic/target/spring-petclinic-3.3.0-SNAPSHOT.jar
[INFO] The original artifact has been renamed to /home/adrwal/spring-petclinic/target/spring-petclinic-3.3.0-SNAPSHOT.jar.original
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 02:37 min
[INFO] Finished at: 2024-11-08T16:31:45+01:00
[INFO] -----
04:31:45 adrwal@adrwal-laptop-ubuntu spring-petclinic ±|main|→

```

All phases up to package have ran successfully.

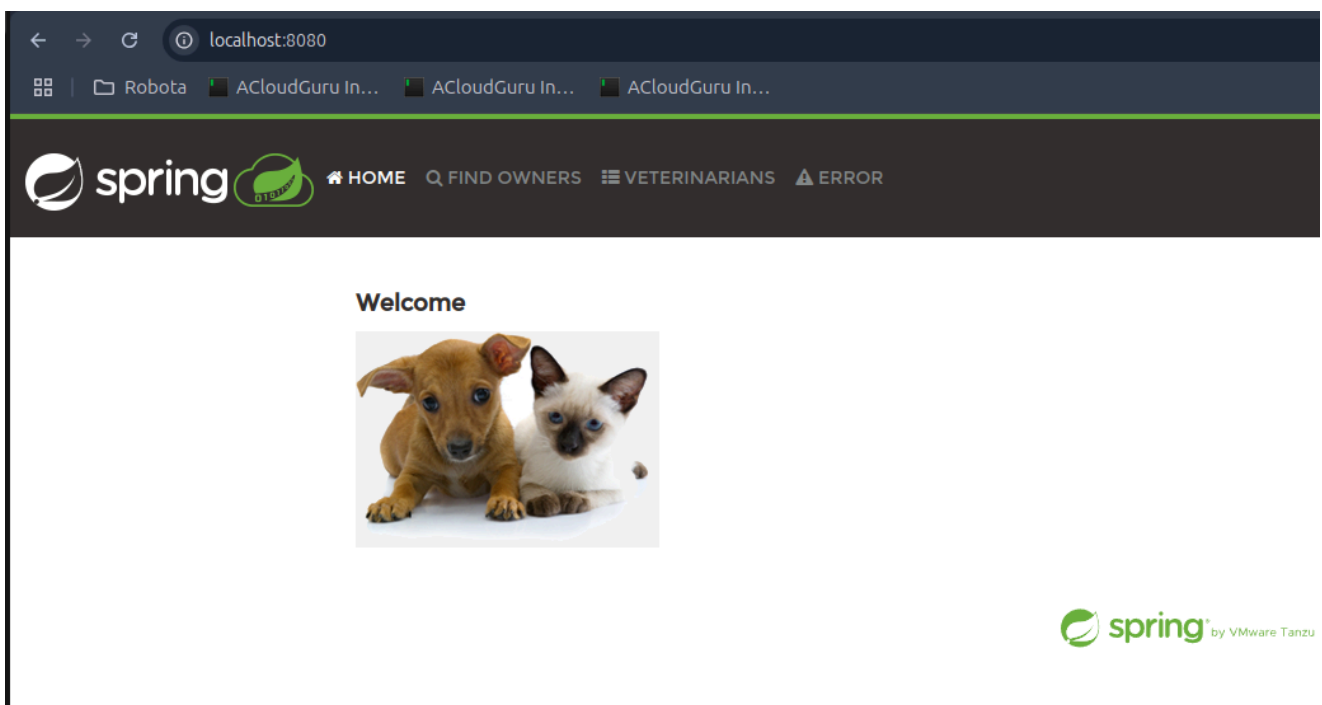
We can now run generated `.jar`

```
java -jar target/spring-petclinic-3.3.0-SNAPSHOT.jar
```

```
04:31:45 adrwal@adrwal-laptop-ubuntu spring-petclinic ±[main|→ java -jar target/spring-petclinic-3.3.0-SNAPSHOT.jar

:: Built with Spring Boot :: 3.3.5

2024-11-08T16:34:01.767+01:00 INFO 23155 --- [main] o.s.s.petclinic.PetClinicApplication : Starting PetClinicApplication v3.3.0-SNAPSHOT using Java 23.0.1 with PID 2
5 (/home/adrwal/spring-petclinic/target/spring-petclinic-3.3.0-SNAPSHOT.jar started by adrwal in /home/adrwal/spring-petclinic)
2024-11-08T16:34:01.772+01:00 INFO 23155 --- [main] o.s.s.petclinic.PetClinicApplication : No active profile set, falling back to 1 default profile: "default"
2024-11-08T16:34:02.533+01:00 INFO 23155 --- [main] .s.d.r.c.RepositoryConfigurationDelegate : Bootstrapping Spring Data JPA repositories in DEFAULT mode.
2024-11-08T16:34:02.574+01:00 INFO 23155 --- [main] .s.d.r.c.RepositoryConfigurationDelegate : Finished Spring Data repository scanning in 35 ms. Found 2 JPA repository
interfaces.
2024-11-08T16:34:03.136+01:00 INFO 23155 --- [main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port 8080 (http)
2024-11-08T16:34:03.147+01:00 INFO 23155 --- [main] o.apache.catalina.core.StandardService : Starting service [Tomcat]
2024-11-08T16:34:03.147+01:00 INFO 23155 --- [main] o.apache.catalina.core.StandardEngine : Starting Servlet engine: [Apache Tomcat/10.1.31]
2024-11-08T16:34:03.173+01:00 INFO 23155 --- [main] o.a.c.c.C.[Tomcat].[localhost].[/] : Initializing Spring embedded WebApplicationContext
2024-11-08T16:34:03.174+01:00 INFO 23155 --- [main] w.s.c.ServletWebServerApplicationContext : Root WebApplicationContext: initialization completed in 1354 ms
2024-11-08T16:34:03.380+01:00 INFO 23155 --- [main] com.zaxxer.hikari.HikariDataSource : HikariPool-1 - Starting...
2024-11-08T16:34:03.590+01:00 INFO 23155 --- [main] com.zaxxer.hikari.pool.HikariPool : HikariPool-1 - Added connection conn0: url=jdbc:h2:mem:daaec7e0-98dd-45ec-
2-64bc79f4c2b1 user=SA
2024-11-08T16:34:03.601+01:00 INFO 23155 --- [main] com.zaxxer.hikari.HikariDataSource : HikariPool-1 - Start completed.
2024-11-08T16:34:03.612+01:00 INFO 23155 --- [main] o.hibernate.jpa.internal.util.LogHelper : HHH000204: Processing PersistenceUnitInfo [name: default]
2024-11-08T16:34:03.653+01:00 INFO 23155 --- [main] org.hibernate.Version : HHH000412: Hibernate ORM core version 6.5.3.Final
2024-11-08T16:34:03.676+01:00 INFO 23155 --- [main] o.h.c.internal.RegionFactoryInitiator : HHH000026: Second-level cache disabled
2024-11-08T16:34:03.854+01:00 INFO 23155 --- [main] o.s.o.j.p.SpringPersistenceUnitInfo : No LoadTimeWeaver setup: ignoring JPA class transformer
2024-11-08T16:34:04.547+01:00 INFO 23155 --- [main] o.h.e.t.j.p.l.JtaPlatformInitiator : HHH000489: No JTA platform available (set 'hibernate.transaction.jta.platf
orm' to enable JTA platform integration)
2024-11-08T16:34:04.549+01:00 INFO 23155 --- [main] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persistence unit 'default'
2024-11-08T16:34:04.760+01:00 INFO 23155 --- [main] o.s.d.j.r.query.QueryEnhancerFactory : Hibernate is in classpath; If applicable, HQL parser will be used.
2024-11-08T16:34:05.800+01:00 INFO 23155 --- [main] o.s.b.a.e.web.EndpointLinksResolver : Exposing 14 endpoints beneath base path '/actuator'
2024-11-08T16:34:05.871+01:00 INFO 23155 --- [main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port 8080 (http) with context path '/'
2024-11-08T16:34:05.881+01:00 INFO 23155 --- [main] o.s.s.petclinic.PetClinicApplication : Started PetClinicApplication in 4.421 seconds (process running for 4.758)
[]
```



## 5. Increase project Major version (e.g. from 3.2.0 to 4.0.0) without interactive mode. Use release plugin.

We can bump project version from `3.3.0-SNAPSHOT` to `4.0.0-SNAPSHOT` using maven release plugin:

```
mvn --batch-mode release:update-versions -DdevelopmentVersion=4.0.0-SNAPSHOT
```

```
04:54:02 adrwal@adrwal-laptop-ubuntu spring-petclinic ±|main X|→ head pom.xml -n 17
<?xml version="1.0" encoding="UTF-8"?>
<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/
xsd/maven-4.0.0.xsd">
  <modelVersion>4.0.0</modelVersion>

  <parent>
    <groupId>org.springframework.boot</groupId>
    <artifactId>spring-boot-starter-parent</artifactId>
    <version>3.3.5</version>
    <relativePath />
  </parent>

  <groupId>org.springframework.samples</groupId>
  <artifactId>spring-petclinic</artifactId>
  <version>4.0.0-SNAPSHOT</version>

  <name>petclinic</name>
```

## 6. In the pom file add <scm> section with your repo address. Prepare code to release.

In pom.xml file we add <scm> section:

```
<?xml version="1.0" encoding="UTF-8"?>
<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" x
  <modelVersion>4.0.0</modelVersion>

  <scm>
    <developerConnection>scm:git:ssh://git@github.com:adrwalGD/spring-petclinic.git</developerConnection>
  </scm>
```

And commit our changes:

```
05:10:09 adrwal@adrwal-laptop-ubuntu spring-petclinic ±|main X|→ git add .
05:10:38 adrwal@adrwal-laptop-ubuntu spring-petclinic ±|main X|→ git commit -m "Added scm section to pom.xml"
[main fb3e5d5] Added scm section to pom.xml
1 file changed, 10 insertions(+), 6 deletions(-)
```

## 7. Try to prepare a release in non-interactive mode.

We can now prepare release of our new version:



```

05:12:22 adrwal@adrwal-laptop-ubuntu spring-petclinic ±|main|→ mvn release:prepare -DreleaseVersion=4.0.0 -DdevelopmentVersion=4.0.1-SNAPSHOT --batch-mode
[INFO] Scanning for projects...
[INFO]
[INFO] -----< org.springframework.samples:spring-petclinic >-----
[INFO] Building petclinic 4.0.0-SNAPSHOT
[INFO] from pom.xml
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- release:3.0.1:prepare (default-cli) @ spring-petclinic ---
[INFO] starting prepare goal, composed of 17 phases: check-poms, scm-check-modifications, check-dependency-snapshots, create-backup-poms, map-release-version
elopment-versions, rewrite-poms-for-release, generate-release-poms, run-preparation-goals, scm-commit-release, scm-tag, rewrite-poms-for-development, remove-
n-goals, scm-commit-development, end-release
[INFO] Working directory: /home/adrwal/spring-petclinic
[INFO] Executing: /bin/sh -c cd '/home/adrwal/spring-petclinic' && 'git' 'symbolic-ref' 'HEAD'
[INFO] Working directory: /home/adrwal/spring-petclinic
[INFO] Executing: /bin/sh -c cd '/home/adrwal/spring-petclinic' && 'git' 'push' 'ssh:*****
[INFO] Working directory: /home/adrwal/spring-petclinic
[INFO] 17/17 prepare:end-release
[INFO] Release preparation complete.
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 30.316 s
[INFO] Finished at: 2024-11-08T18:00:43+01:00
[INFO] -----
06:00:43 adrwal@adrwal-laptop-ubuntu spring-petclinic ±|main| X|→

```

Our repository has been updated with release we just made:

main

Commits on Nov 8, 2024

- [maven-release-plugin] prepare for next development iteration  
xDepcio committed 1 minute ago
- [maven-release-plugin] prepare release spring-petclinic-4.0.0  
xDepcio committed 1 minute ago
- added scm section to pom.xml  
xDepcio committed 2 minutes ago
- bumped version  
xDepcio committed 3 minutes ago

## 8. Try to perform the release of artifacts.

Now in order to release our new version to artifacts repository, we first need to add `<distributionManagement>` section to `pom.xml` with details of our artifact repository. For example we can use github packages to store our artifacts:

```

<distributionManagement>
  <repository>
    <id>github</id>
    <url>https://maven.pkg.github.com/adrwalGD/spring-petclinic</url>
  </repository>
</distributionManagement>

```

Now we need to correctly configure authentication as describe in github [docs](#).

So we update maven settings at `~/.m2/settings.xml` to include details on authenticating to github packages:

```
<settings xmlns="http://maven.apache.org/SETTINGS/1.0.0"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://maven.apache.org/SETTINGS/1.0.0
    http://maven.apache.org/xsd/settings-1.0.0.xsd">

  <activeProfiles>
    <activeProfile>github</activeProfile>
  </activeProfiles>

  <profiles>
    <profile>
      <id>github</id>
      <repositories>
        <repository>
          <id>central</id>
          <url>https://repo1.maven.org/maven2</url>
        </repository>
        <repository>
          <id>github</id>
          <url>https://maven.pkg.github.com/adrwal/spring-petclinic</url>
          <snapshots>
            <enabled>true</enabled>
          </snapshots>
        </repository>
      </repositories>
    </profile>
  </profiles>

  <servers>
    <server>
      <id>github</id>
      <username>adrwalGD</username>
      <password>CLASSIC GITHUB ACCES TOKEN HERE. AS ACCORDING TO THE DOCS.
        CAN BE GENERATED AT https://github.com/settings/tokens</password>
    </server>
  </servers>
</settings>
```

After that, beacause we have made some changes to `pom.xml` , we need to first create a new release version. (in my case it is 7.0.0 because it took some retires to get it to work)

```
mvn --batch-mode release:update-versions -DdevelopmentVersion=7.0.0-SNAPSHOT
git add .
git commit -m "new version (7.0.0)"
git push
mvn release:prepare -DreleaseVersion=7.0.0 -DdevelopmentVersion=7.0.1-SNAPSHOT --batch-mode
```

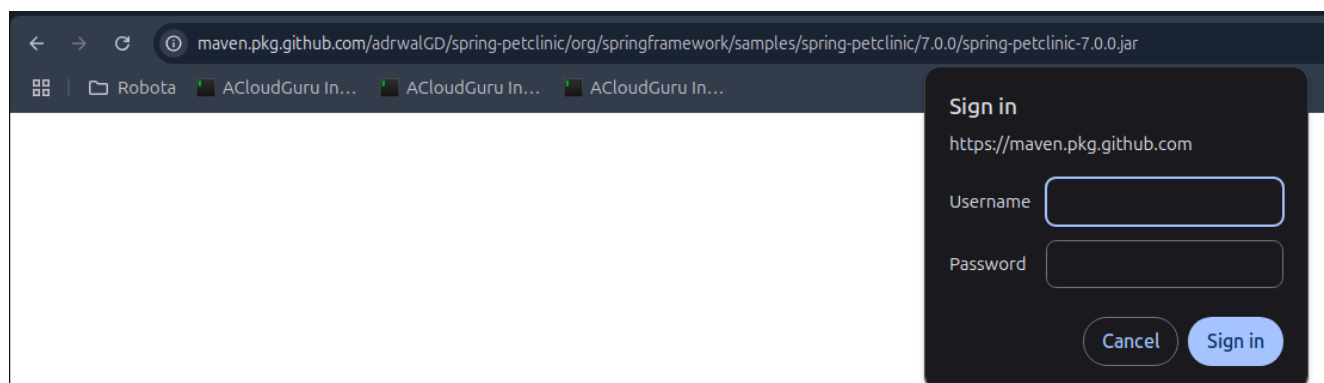


After this, we will have new release version, which now can be uploaded to artifacts repository, we have configured.

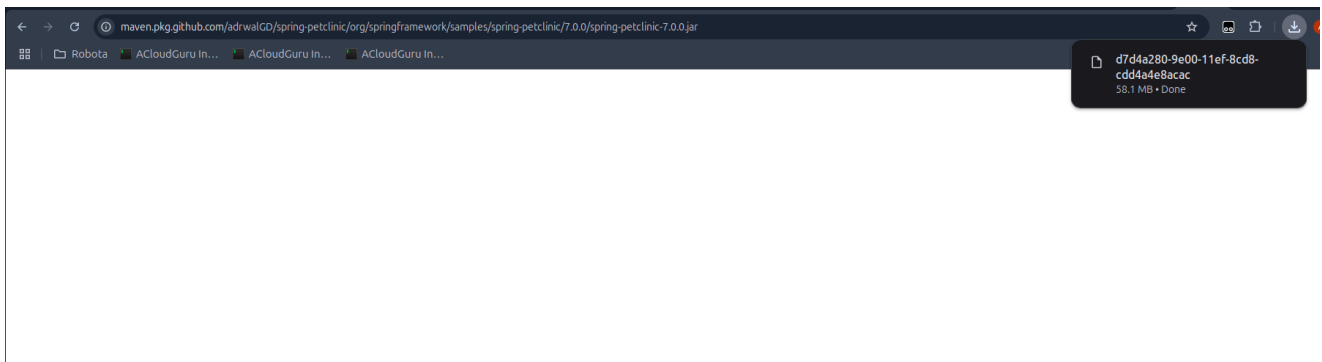
```
mvn release:perform
```

```
06:38:59 adrwal@adrwal-laptop-ubuntu spring-petclinic ±|main X|→ mvn release:perform
[INFO] Scanning for projects...
[INFO]
[INFO] -----< org.springframework.samples:spring-petclinic >-----
[INFO] Building petclinic 7.0.1-SNAPSHOT
[INFO] from pom.xml
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- release:3.0.1:perform (default-cli) @ spring-petclinic ---
[INFO] starting perform goal, composed of 3 phases: verify-completed-prepare-phases, c
[INFO] 1/3 perform:verify-completed-prepare-phases
[INFO] 2/3 perform:checkout-project-from-scm
[INFO] Checking out the project to perform the release ...
[INFO] Executing: /bin/sh -c cd '/home/adrwal/spring-petclinic/target' && 'git' 'clone
[INFO] Progress (1): 61/61 MB
[INFO] Progress (1): 61/61 MB
[INFO] Progress (1): 61/61 MB
[INFO] Progress (1): 61/61 MB
[INFO] Progress (1): 61/61 MB
[INFO] Progress (1): 61 MB
[INFO] Uploaded to github: https://maven.pkg.github.com/adrwalGD/spring-petclinic/org/springframework/samples/spring-petclinic/7.0.0/spring-petclinic-7.0.0.jar (61 MB at 2.8 MB/s)
[INFO] Downloading from github: https://maven.pkg.github.com/adrwalGD/spring-petclinic/org/springframework/samples/spring-petclinic/maven-metadata.xml
[INFO] Progress (1): 241 B
[INFO] Downloaded from github: https://maven.pkg.github.com/adrwalGD/spring-petclinic/org/springframework/samples/spring-petclinic/maven-metadata.xml (241 B at 288 B/s)
[INFO] Uploading to github: https://maven.pkg.github.com/adrwalGD/spring-petclinic/org/springframework/samples/spring-petclinic/maven-metadata.xml
[INFO] Progress (1): 350 B
[INFO] Uploaded to github: https://maven.pkg.github.com/adrwalGD/spring-petclinic/org/springframework/samples/spring-petclinic/maven-metadata.xml (350 B at 491 B/s)
[INFO] [INFO]
[INFO] [INFO] BUILD SUCCESS
[INFO] [INFO]
[INFO] [INFO] Total time: 44.241 s
[INFO] [INFO] Finished at: 2024-11-08T18:39:58+01:00
[INFO] [INFO]
[INFO] [INFO] Cleaning up after release...
[INFO] [INFO]
[INFO] [INFO] BUILD SUCCESS
[INFO] [INFO]
[INFO] [INFO] Total time: 51.959 s
[INFO] [INFO] Finished at: 2024-11-08T18:39:59+01:00
[INFO] [INFO]
```


Now our artifacts have been successfully deployed. We can verify that by visiting url given as a result:



username is our github username, and password is classic github access token we generated earlier



Released artifact has also been added to our github repository page:

 **org.springframework.samples.spring-petclinic** 7.0.0

Latest version

<> Install 1/2: Add this to pom.xml:


[Learn more about Maven](#) or [Gradle](#)

```
<dependency>
  <groupId>org.springframework.samples</groupId>
  <artifactId>spring-petclinic</artifactId>
  <version>7.0.0</version>
</dependency>
```

Install 2/2: Run via command line

```
$ mvn install
```

About this package





**Let's write down a good description for this version!**


A good description helps people understand the purpose of the package. Here are some suggestions to get started: listing new changes, features, and bug fixes.


Write a description

Details


 **adrwalGD**


 November 08, 2024


 20 dependencies


 Apache License 2.0


Assets


 spring-petclinic-7.0.0.jar.md5


 spring-petclinic-7.0.0.jar.sha1


 spring-petclinic-7.0.0.jar


 spring-petclinic-7.0.0-cyclonedx.json.md5

 spring-petclinic-7.0.0-cyclonedx.json.sha1

 spring-petclinic-7.0.0-cyclonedx.json

 spring-petclinic-7.0.0.pom.md5

 spring-petclinic-7.0.0.pom.sha1

 spring-petclinic-7.0.0.pom

## 9. Perform release cleanup.

```
07:03:29 adrwal@adrwal-laptop-ubuntu spring-petclinic ±|main|→ mvn release:clean
[INFO] Scanning for projects...
[INFO] -----< org.springframework.samples:spring-petclinic >-----
[INFO] Building petclinic 7.0.1-SNAPSHOT
[INFO]   from pom.xml
[INFO] -----[ jar ]-----
[INFO] --- release:3.0.1:clean (default-cli) @ spring-petclinic ---
[INFO] Cleaning up after release...
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time:  0.719 s
[INFO] Finished at: 2024-11-08T19:03:37+01:00
[INFO] -----
07:03:37 adrwal@adrwal-laptop-ubuntu spring-petclinic ±|main|→
```