

JENKINS - MAVEN EXERCISE

The purpose of this exercise is to generate a Maven project based on the <https://github.com/jitpack/maven-simple> repository. Since the output from this repository shows several warnings I have modified the original POM file included in this repository and forked it to a new repository which then was used to build and run the project. The modified POM file can be found in this repository <https://github.com/jasarmig/maven-simple>.

STEP BY STEP PROCESS

1. From the left hand menu on the Jenkins home page, click on New Item to create a new Project.

The screenshot shows the Jenkins home page. On the left sidebar, the '+ New Item' button is highlighted with a green box. Below it are links for People, Build History, Project Relationship, Check File Fingerprint, Manage Jenkins, and My Views. The main content area shows a table of recent builds. The table has columns for Status (S), Warnings (W), Name, Last Success, Last Failure, and Last Duration. Two builds are listed: 'Calculator Build' and 'Calculator Execution', both with a status of 'Success' (green checkmark) and a duration of 9.4 sec and 0.72 sec respectively. Below the table, there are links for 'Icon: S M L', 'Icon legend', and three 'Atom feed' links for all, failures, and latest builds.

S	W	Name	Last Success	Last Failure	Last Duration
✓	⚙️	Calculator Build	3 days 4 hr #1	N/A	9.4 sec
✓	⚙️	Calculator Execution	3 days 4 hr #1	N/A	0.72 sec

2. On the new screen enter a name for the project, choose Maven Project from the options and click OK to continue.

Enter an item name

Maven Exercise

Required field

Freestyle project
This is the central feature of Jenkins. Jenkins will build your project, combining any SCM with any build system, and this can be even used for something other than software build.

Maven project
Build a maven project. Jenkins takes advantage of your POM files and drastically reduces the configuration.

Pipeline
Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type.

Multi-configuration project
Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific builds, etc.

Folder
Creates a container that stores nested items in it. Useful for grouping things together. Unlike view, which is just a filter, a folder creates a separate namespace, so you can have multiple things of the same name as long as they are in different folders.

Multibranch Pipeline
Creates a set of Pipeline projects according to detected branches in one SCM repository.

Organization Folder
Creates a set of multibranch project subfolders by scanning for repositories.

OK

If you create a new item from other existing, you can use this option:

3. In the configuration window, begin by entering a description for the project, if you have more than one JDK available choose the one you want to work with, if you don't have more than one you will not see this option.

Configuration

General

Source Code Management

Build Triggers

Build Environment

Pre Steps

Build

Post Steps

Build Settings

Post-build Actions

General Enabled

Description

El objetivo del proyecto es utilizar Jenkins y Maven para crear un job en el cual se va a generar la build. (solo generarla más no ejecutarla), usando el comando clean package.

This project's objective is to use Jenkins and Maven to create a job which will generate the project build (generating the build not running it) using the clean package command.

☐ Discard old builds ?

☐ GitHub project

☐ This project is parameterized ?

☐ Throttle builds ?

☐ Execute concurrent builds if necessary ?

JDK

JDK to be used for this project

java11

Advanced...

4. Enable the Git configuration and enter the address of the repository you are working with. Continue scrolling down.

The screenshot shows the Jenkins Configuration page with the 'Git' tab selected. The 'Repositories' section is expanded, showing a 'Repository URL' field with the value 'https://github.com/jasarmig/maven-simple'. The 'Credentials' dropdown is set to '- none -'. There are buttons for '+ Add', 'Advanced...', and 'Add Repository'. The 'Branches to build' section is also expanded, showing a 'Branch Specifier (blank for \'any\')' field with the value '*/master'. There is a button for 'Add Branch'.

5. Choose the Maven version you will be using for the build if there is more than one available. Click on Save.

The screenshot shows the Jenkins Build page. The 'Build' tab is selected. The 'Maven Version' dropdown is set to 'Maven 3.8.6'. The 'Root POM' field contains 'pom.xml'. The 'Goals and options' field contains 'clean package'. There are buttons for 'Advanced...', 'Save', and 'Apply'.

6. Now that your project is properly configured, click on Build Now on the left hand menu, below the menu you will see a progress bar and after the project is done building you will see an indicator showing whether the project was successfully built or not. Click on the indicator for more information on the result.

↑ Back to Dashboard

- Status
- Changes
- Workspace
- Build Now**
- Configure
- Delete Maven project
- Modules
- Rename

Build History trend

#	Build
1	Nov 4, 2022, 7:05 PM

Atom feed for all Atom feed for failures

Maven project Maven Exercise

El objetivo del proyecto es utilizar Jenkins y Maven para crear un job en el cual se va a generar la build. (solo generarla más no ejecutarla), usando el comando clean package.

This project's objective is to use Jenkins and Maven to create a job which will generate the project build (generating the build not running it) using the clean package command.

[Edit description](#)

[Disable Project](#)

Permalinks

- Last build (#1), 19 sec ago

7. On the left hand menu click on Console Output to see the results of the built. Here you will see if the project was successfully built or not, if not it will show you the cause, in case it was successful it will say so on the last line of the Console Output.

↑ Back to Project

- Status
- Changes
- Console Output**
- View as plain text
- Edit Build Information
- Delete build '#1'
- Git Build Data
- Test Result
- Redeploy Artifacts
- See Fingerprints

Console Output

```
Started by user Jaime Sarmiento Galeano
Running as SYSTEM
Building in workspace C:\ProgramData\Jenkins\.jenkins\workspace\Maven Exercise
The recommended git tool is: NONE
No credentials specified
> git rev-parse --resolve-git-dir C:\ProgramData\Jenkins\.jenkins\workspace\Maven Exercise\.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/jasarmig/maven-simple # timeout=10
Fetching upstream changes from https://github.com/jasarmig/maven-simple
> git --version # timeout=10
> git --version # 'git version 2.38.0.windows.1'
> git fetch --tags --force --progress -- https://github.com/jasarmig/maven-simple +refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse "refs/remotes/origin/master^{commit}" # timeout=10
Checking out Revision 445f1d1caa82ab26bc49cd47dc2d8774e984516e (refs/remotes/origin/master)
> git config core.sparsecheckout # timeout=10
> git checkout -f 445f1d1caa82ab26bc49cd47dc2d8774e984516e # timeout=10
Commit message: "Update pom.xml"
First time build. Skipping changelog.
```

MY PROJECT'S CONSOLE OUTPUT

```
Started by user Jaime Sarmiento Galeano
Running as SYSTEM
Building in workspace C:\ProgramData\Jenkins\.jenkins\workspace\Maven Exercise
The recommended git tool is: NONE
No credentials specified
> git rev-parse --resolve-git-dir C:\ProgramData\Jenkins\.jenkins\workspace\Maven Exercise\.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/jasarmig/maven-simple # timeout=10
Fetching upstream changes from https://github.com/jasarmig/maven-simple
> git --version # timeout=10
> git --version # 'git version 2.38.0.windows.1'
> git fetch --tags --force --progress -- https://github.com/jasarmig/maven-simple +refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse "refs/remotes/origin/master^{commit}" # timeout=10
```

```

Checking out Revision 445f1d1caa82ab26bc49cd47dc2d8774e984516e
(refs/remotes/origin/master)
> git config core.sparsecheckout # timeout=10
> git checkout -f 445f1d1caa82ab26bc49cd47dc2d8774e984516e # timeout=10
Commit message: "Update pom.xml"
First time build. Skipping changelog.
Parsing POMs
Discovered a new module com.github.jitpack:maven-simple Simple Maven example
Modules changed, recalculating dependency graph
Established TCP socket on 55694
[Maven Exercise] $ "C:\Program Files\Java\jdk-11.0.16.1\bin/java" -cp
"C:\ProgramData\Jenkins\.jenkins\plugins\maven-plugin\WEB-INF\lib\maven35-agent-
1.14.jar;C:\Program Files\Maven\apache-maven-3.8.6\boot\plexus-classworlds-
2.6.0.jar;C:\Program Files\Maven\apache-maven-3.8.6/conf/logging"
jenkins.maven3.agent.Maven35Main "C:\Program Files\Maven\apache-maven-3.8.6"
C:\ProgramData\Jenkins\war\WEB-INF\lib\remoting-3044.vb_940a_a_e4f72e.jar
C:\ProgramData\Jenkins\.jenkins\plugins\maven-plugin\WEB-INF\lib\maven35-
interceptor-1.14.jar C:\ProgramData\Jenkins\.jenkins\plugins\maven-plugin\WEB-
INF\lib\maven3-interceptor-commons-1.14.jar 55694
<===[JENKINS REMOTING CAPACITY]==>channel started
Executing Maven: -B -f C:\ProgramData\Jenkins\.jenkins\workspace\Maven
Exercise\pom.xml clean package
[INFO] Scanning for projects...
[INFO]
[INFO] -----< com.github.jitpack:maven-simple >-----
[INFO] Building Simple Maven example 0.2-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ maven-simple ---
[INFO] Deleting C:\ProgramData\Jenkins\.jenkins\workspace\Maven Exercise\target
[INFO]
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ maven-simple
---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory
C:\ProgramData\Jenkins\.jenkins\workspace\Maven Exercise\src\main\resources
[INFO]
[INFO] --- maven-compiler-plugin:3.2:compile (default-compile) @ maven-simple ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 1 source file to C:\ProgramData\Jenkins\.jenkins\workspace\Maven
Exercise\target\classes
[INFO]
[INFO] --- maven-resources-plugin:2.6:testResources (default-testResources) @
maven-simple ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory
C:\ProgramData\Jenkins\.jenkins\workspace\Maven Exercise\src\test\resources
[INFO]
[INFO] --- maven-compiler-plugin:3.2:testCompile (default-testCompile) @ maven-
simple ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 1 source file to C:\ProgramData\Jenkins\.jenkins\workspace\Maven
Exercise\target\test-classes
[INFO]

```

```
[INFO] --- maven-surefire-plugin:2.12.4:test (default-test) @ maven-simple ---
[INFO] Surefire report directory: C:\ProgramData\Jenkins\.jenkins\workspace\Maven
Exercise\target\surefire-reports

-----
T E S T S
-----

Running com.github.jitpack.AppTest
Tests run: 2, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.043 sec

Results :

Tests run: 2, Failures: 0, Errors: 0, Skipped: 0

[JENKINS] Recording test results
[INFO]
[INFO] --- maven-jar-plugin:2.4:jar (default-jar) @ maven-simple ---
[INFO] Building jar: C:\ProgramData\Jenkins\.jenkins\workspace\Maven
Exercise\target\maven-simple-0.2-SNAPSHOT.jar
[INFO]
[INFO] --- maven-source-plugin:3.2.1:jar-no-fork (attach-sources) @ maven-simple -
--
[INFO] Building jar: C:\ProgramData\Jenkins\.jenkins\workspace\Maven
Exercise\target\maven-simple-0.2-SNAPSHOT-sources.jar
[INFO]
[INFO] --- maven-javadoc-plugin:3.4.1:jar (attach-javadocs) @ maven-simple ---
[INFO] No previous run data found, generating javadoc.
[INFO]
Loading source file C:\ProgramData\Jenkins\.jenkins\workspace\Maven
Exercise\src\main\java\com\github\jitpack\App.java...
Loading source files for package com.github.jitpack...
Constructing Javadoc information...
Standard Doclet version 11.0.16.1
Building tree for all the packages and classes...
Generating C:\ProgramData\Jenkins\.jenkins\workspace\Maven
Exercise\target\apidocs\com\github\jitpack\App.html...
Generating C:\ProgramData\Jenkins\.jenkins\workspace\Maven
Exercise\target\apidocs\com\github\jitpack\package-summary.html...
Generating C:\ProgramData\Jenkins\.jenkins\workspace\Maven
Exercise\target\apidocs\com\github\jitpack\package-tree.html...
Generating C:\ProgramData\Jenkins\.jenkins\workspace\Maven
Exercise\target\apidocs\constant-values.html...
Generating C:\ProgramData\Jenkins\.jenkins\workspace\Maven
Exercise\target\apidocs\com\github\jitpack\class-use\App.html...
Generating C:\ProgramData\Jenkins\.jenkins\workspace\Maven
Exercise\target\apidocs\com\github\jitpack\package-use.html...
Building index for all the packages and classes...
Generating C:\ProgramData\Jenkins\.jenkins\workspace\Maven
Exercise\target\apidocs\overview-tree.html...
Generating C:\ProgramData\Jenkins\.jenkins\workspace\Maven
Exercise\target\apidocs\index-all.html...
Building index for all classes...
Generating C:\ProgramData\Jenkins\.jenkins\workspace\Maven
Exercise\target\apidocs\allclasses-index.html...
```

```
Generating C:\ProgramData\Jenkins\.jenkins\workspace\Maven
Exercise\target\apidocs\allpackages-index.html...
Generating C:\ProgramData\Jenkins\.jenkins\workspace\Maven
Exercise\target\apidocs\deprecated-list.html...
Building index for all classes...
Generating C:\ProgramData\Jenkins\.jenkins\workspace\Maven
Exercise\target\apidocs\allclasses.html...
Generating C:\ProgramData\Jenkins\.jenkins\workspace\Maven
Exercise\target\apidocs\allclasses.html...
Generating C:\ProgramData\Jenkins\.jenkins\workspace\Maven
Exercise\target\apidocs\index.html...
Generating C:\ProgramData\Jenkins\.jenkins\workspace\Maven
Exercise\target\apidocs\help-doc.html...
[INFO] Building jar: C:\ProgramData\Jenkins\.jenkins\workspace\Maven
Exercise\target\maven-simple-0.2-SNAPSHOT-javadoc.jar
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 12.382 s
[INFO] Finished at: 2022-11-04T19:06:22-05:00
[INFO] -----
Waiting for Jenkins to finish collecting data
[JENKINS] Archiving C:\ProgramData\Jenkins\.jenkins\workspace\Maven
Exercise\pom.xml to com.github.jitpack/maven-simple/0.2-SNAPSHOT/maven-simple-0.2-
SNAPSHOT.pom
[JENKINS] Archiving C:\ProgramData\Jenkins\.jenkins\workspace\Maven
Exercise\target\maven-simple-0.2-SNAPSHOT.jar to com.github.jitpack/maven-
simple/0.2-SNAPSHOT/maven-simple-0.2-SNAPSHOT.jar
[JENKINS] Archiving C:\ProgramData\Jenkins\.jenkins\workspace\Maven
Exercise\target\maven-simple-0.2-SNAPSHOT-sources.jar to com.github.jitpack/maven-
simple/0.2-SNAPSHOT/maven-simple-0.2-SNAPSHOT-sources.jar
[JENKINS] Archiving C:\ProgramData\Jenkins\.jenkins\workspace\Maven
Exercise\target\maven-simple-0.2-SNAPSHOT-javadoc.jar to com.github.jitpack/maven-
simple/0.2-SNAPSHOT/maven-simple-0.2-SNAPSHOT-javadoc.jar
channel stopped
Finished: SUCCESS
```