DEMO MAVEN

AVEC ECLIPSE (WINDOWS 10)

PAR ELIAS ZGHEIB – 21/03/2016

Table des matières

1. INTRODUCTION

Ce document comprend la procédure à suivre pour installer, configurer et exécuter les fonctions principales de maven en utilisant eclipse.

2. PREREQUIS

- Maven 3 (dans notre cas 'apache-maven-3.3.9')
- Eclipse Kepler + (dans notre cas eclipse LUNA)
- JDK 1.5 + (dans notre cas JDK 1.8)

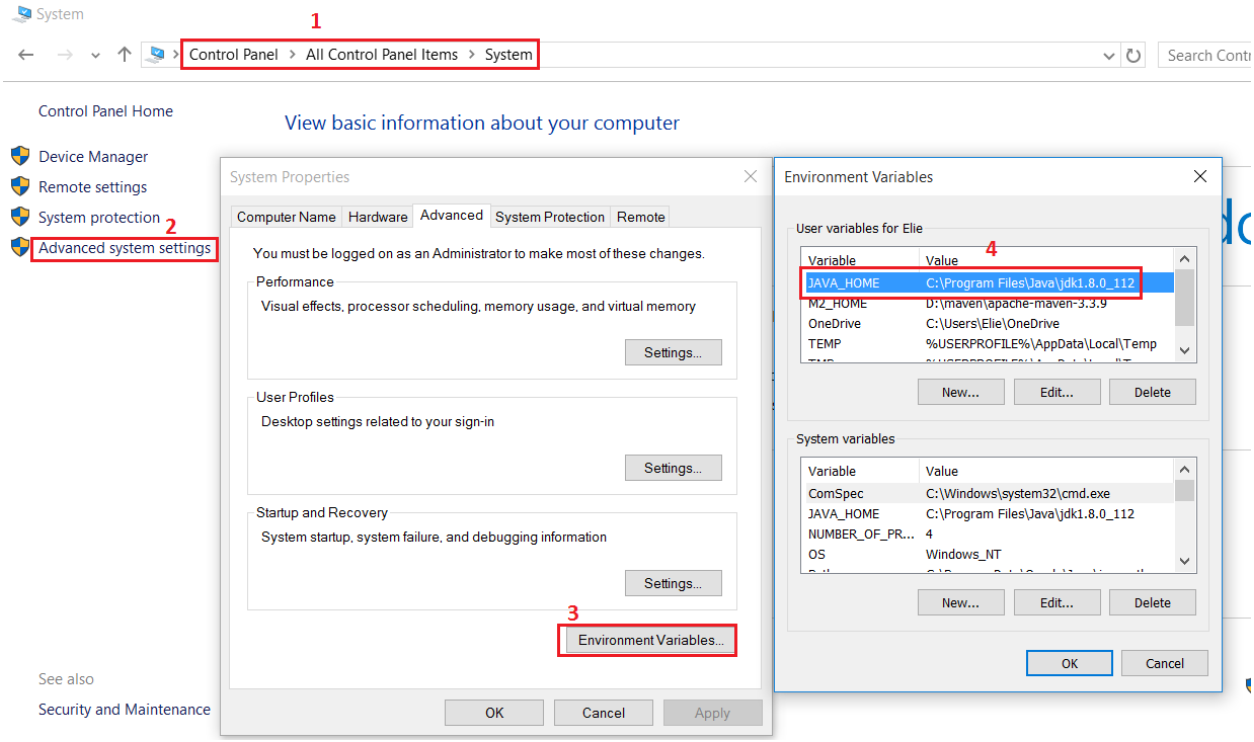
3. TELECHARGEMENT ET INSTALLATION

3.0 TELECHARGEMENT ET INSTALLATION JDK

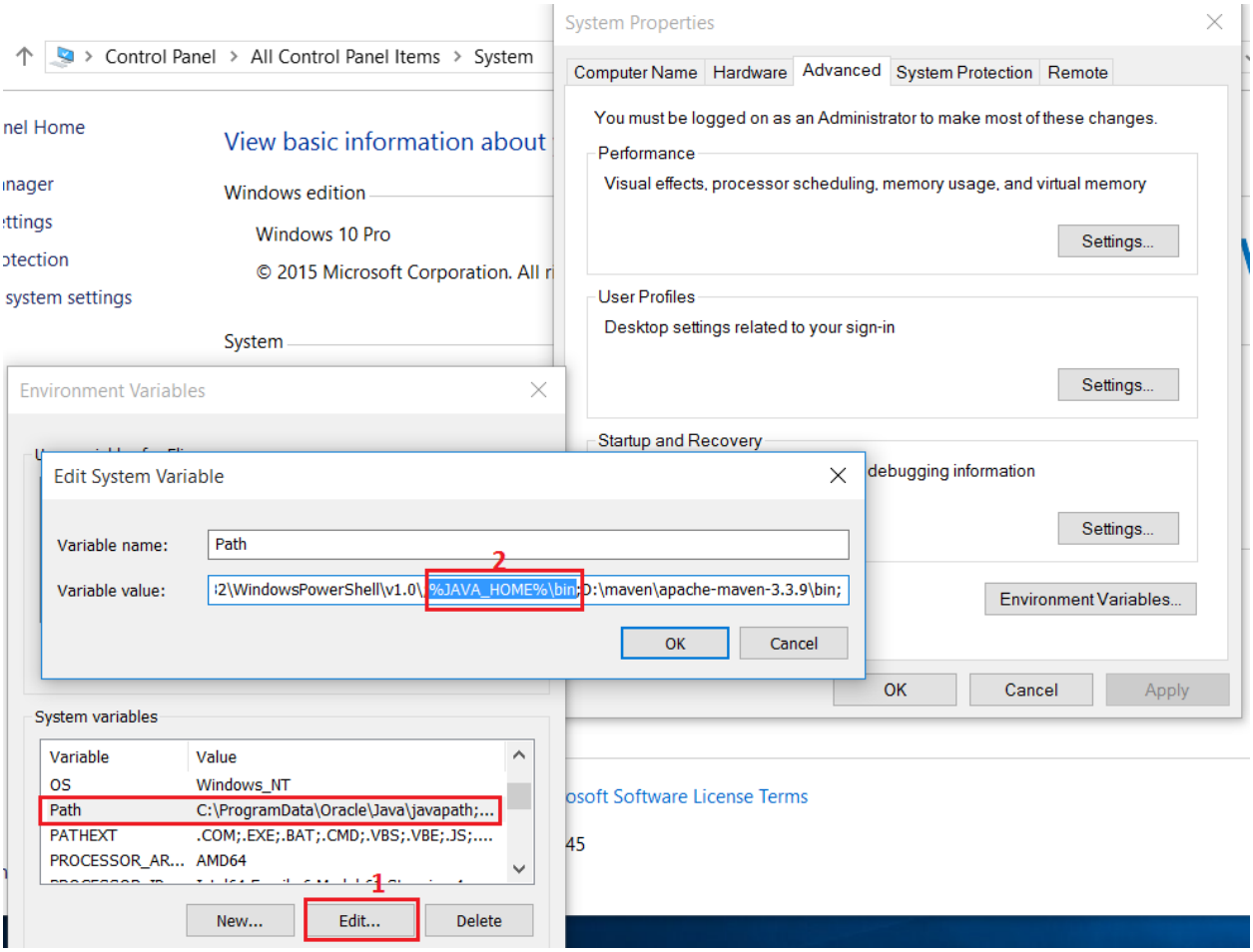
Maven est un outil écrit en Java : Java doit donc être installé sur la machine.

Donc il faut :

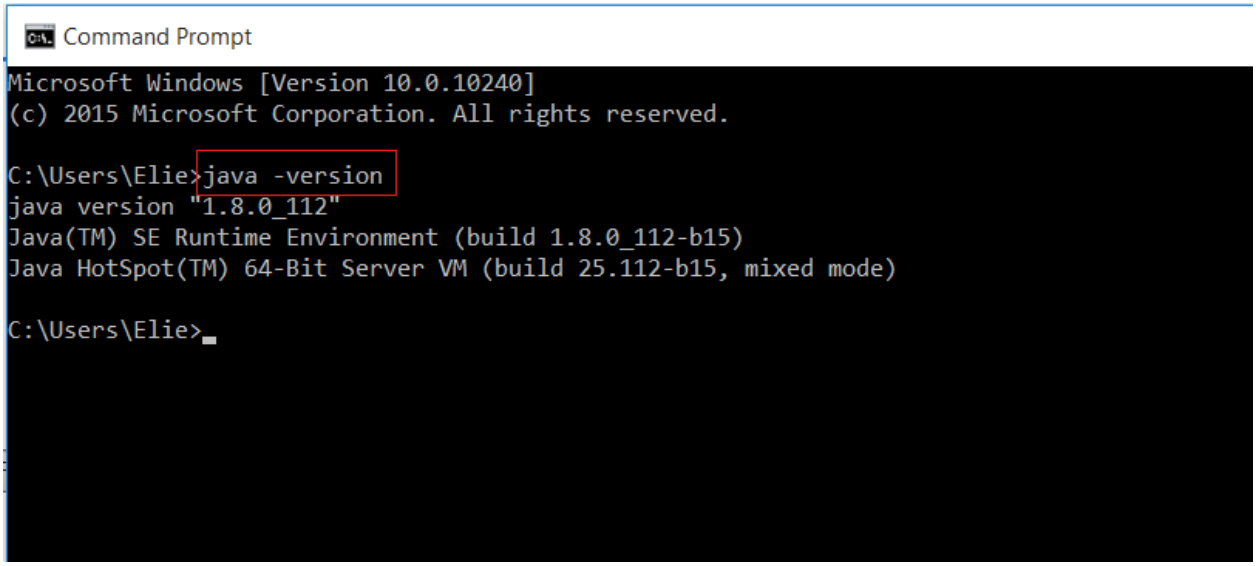
- Télécharger le JDK (version 1,5 ou plus) sur le site :http://www.oracle.com/technetwork/java/javase/downloads/index.html
- Décompresser l'archive dans un répertoire du système
- Créer la variable d'environnement JAVA_HOME qui pointe sur le répertoire contenant le JDK :



- Ajouter le chemin JAVA_HOME/bin à la variable PATH du système :



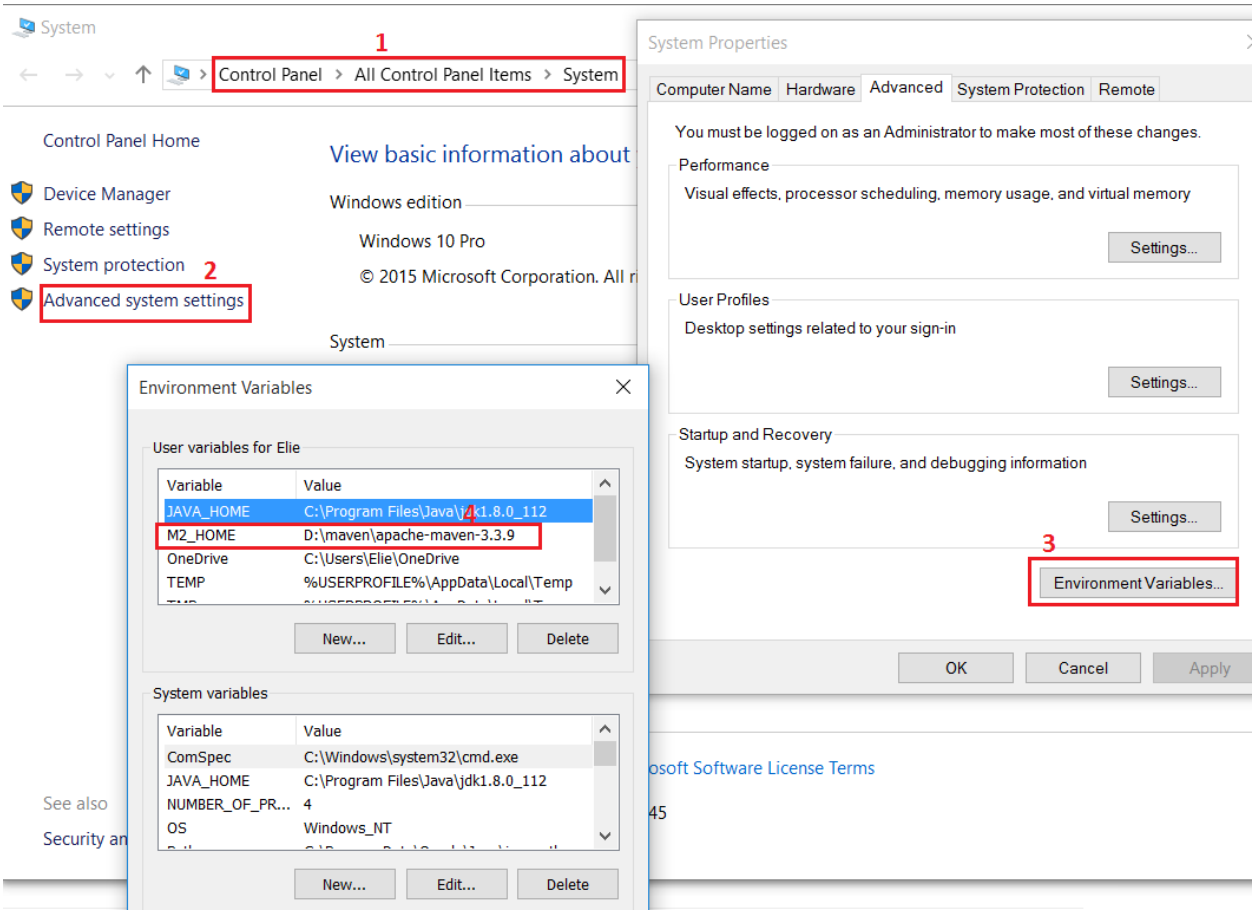
- Vérifier que le JDK est bien installé sur notre système en exécutant la commande java -version:



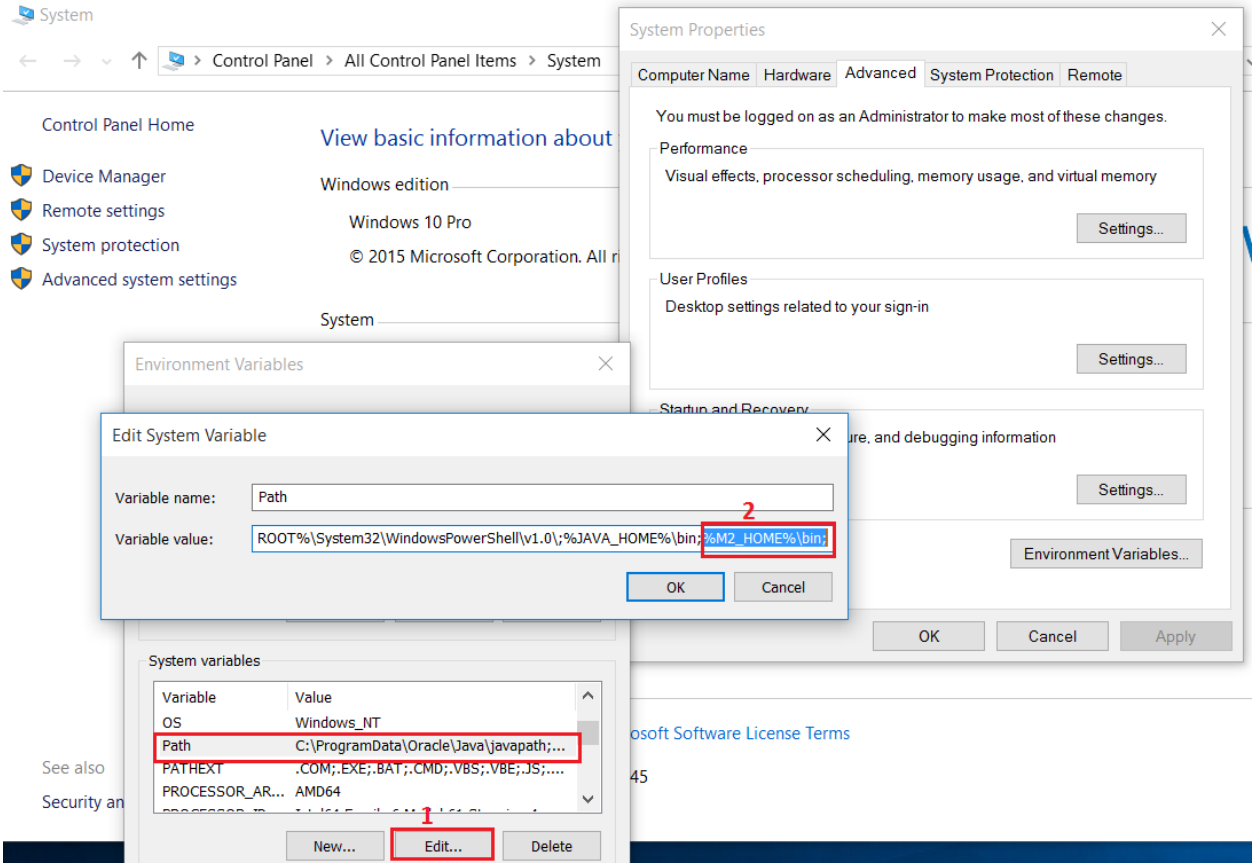
3.1 TELECHARGEMENT ET INSTALLATION MAVEN

Pour installer Maven il faut :

- Télécharger l'archive (apache-maven-3.3.3-bin.zip) sur le site : http://maven.apache.org/download.cgi
- Décompresser l'archive dans un répertoire du système
- Créer la variable d'environnement M2_HOME qui pointe sur le répertoire contenant Maven



- Ajouter le chemin M2_HOME/bin à la variable PATH du système



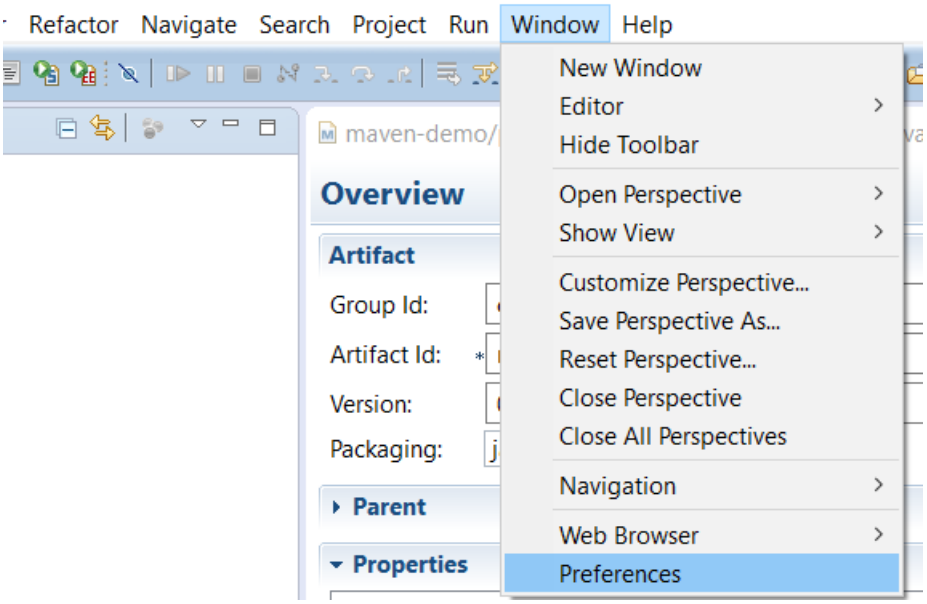
Pour vérifier l'installation, il faut lancer la commande mvn -version :

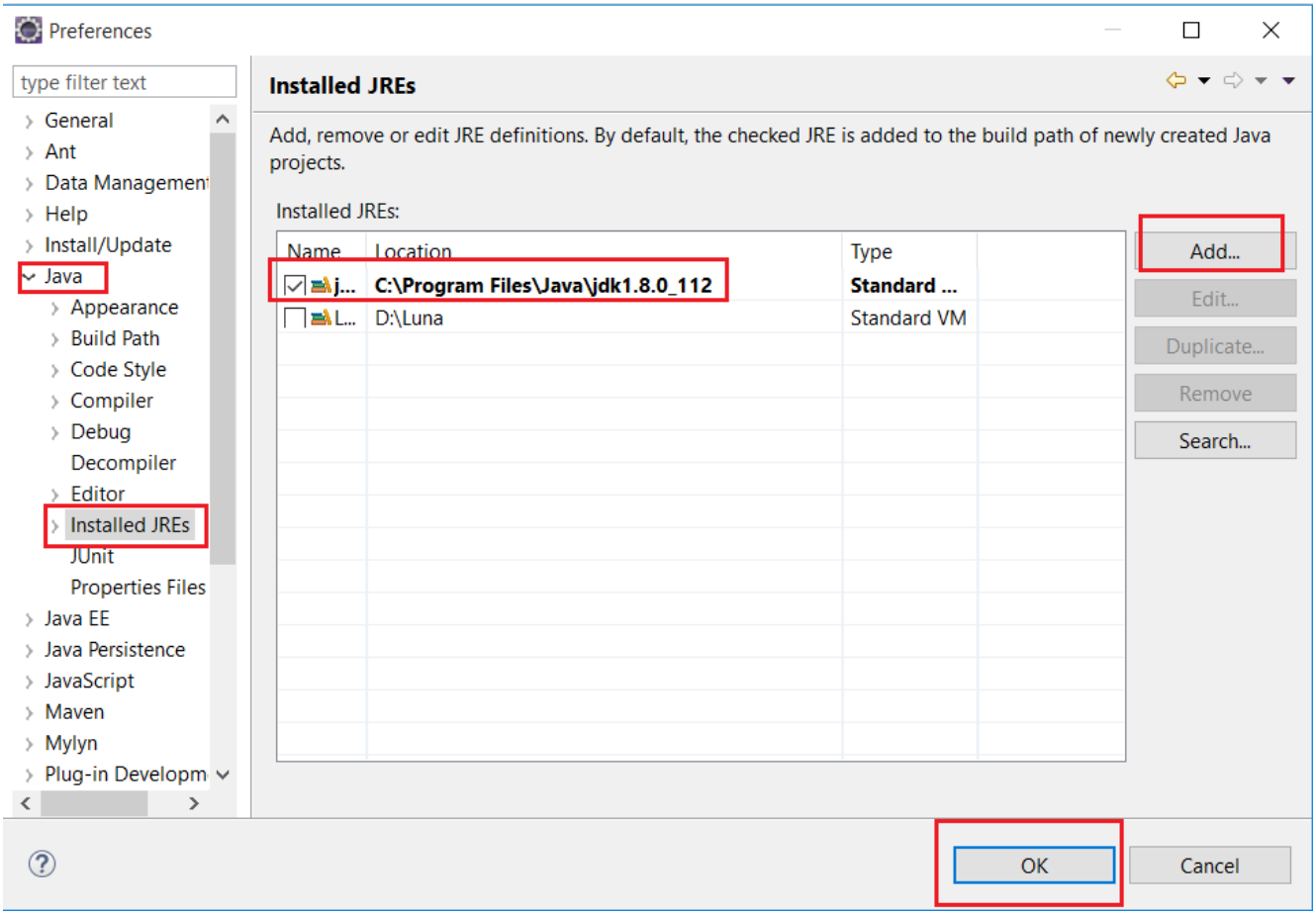
3.2 TELECHARGEMENT ET CONFIGURATION ECLIPSE

Pour télécharger eclipse, il faut aller au site : http://www.eclipse.org/downloads/packages/ , choisir 'Eclipse IDE for Java EE Developers' et télécharger la version désirée.

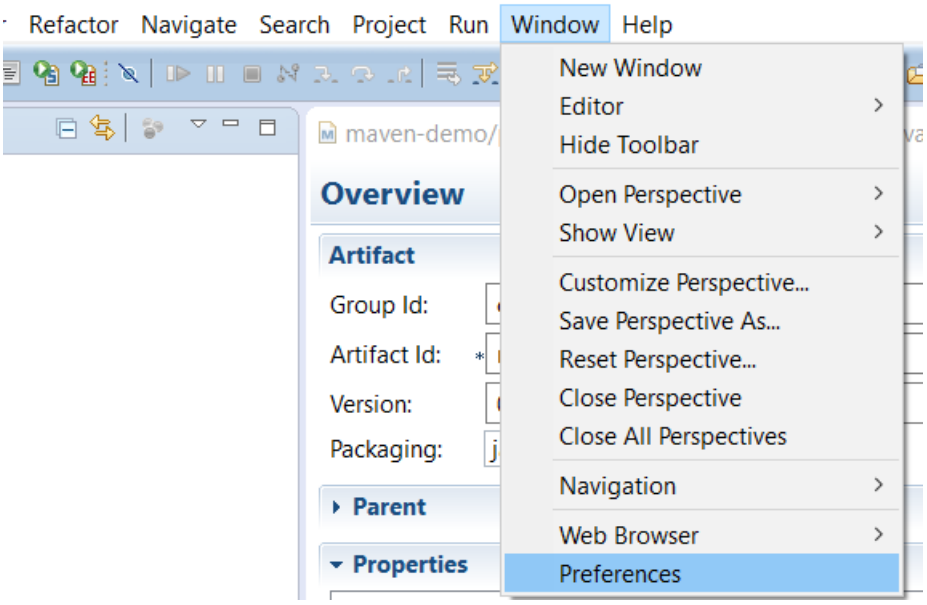
Choisir le JDK avec lequel on développera les projets :

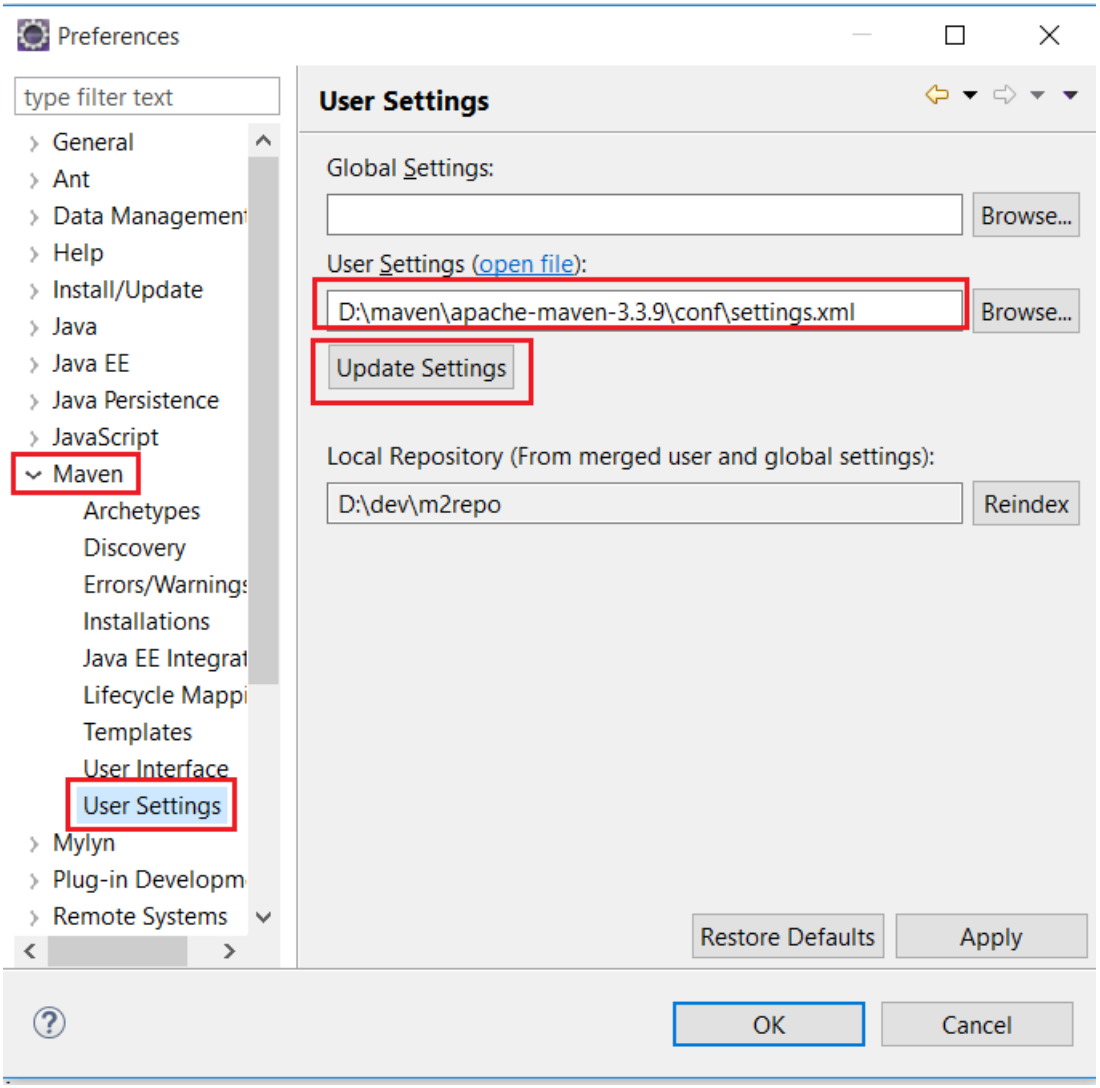
Windows → Préférences → Java → Installed JRE →Add →choisir le repertoire de notre JDK→OK :




Preferences
type filter text
General
Ant
Data Management
Help
Install/Update
Java
Appearance
Build Path
Code Style
Compiler
Debug
Decompiler
Editor
Installed JREs
JUnit
Properties Files
Java EE
Java Persistence
JavaScript
Maven
Mylyn
Plug-in Developm
Installed JREs
Add, remove or edit JRE definitions. By default, the checked JRE is added to the build path of newly created Java projects.
Installed JREs:
Name
Location
Type
j...
C:\Program Files\Java\jdk1.8.0_112
Standard ...
L...
D:\Luna
Standard VM
Add...
Edit...
Duplicate...
Remove
Search...
OK
Cancel

Pour configurer Maven : Window → Preference → Maven → User Settings → Browse →choisir le path du fichier settings.xml → update settings →OK:




Preferences
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General
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Data Management
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Java
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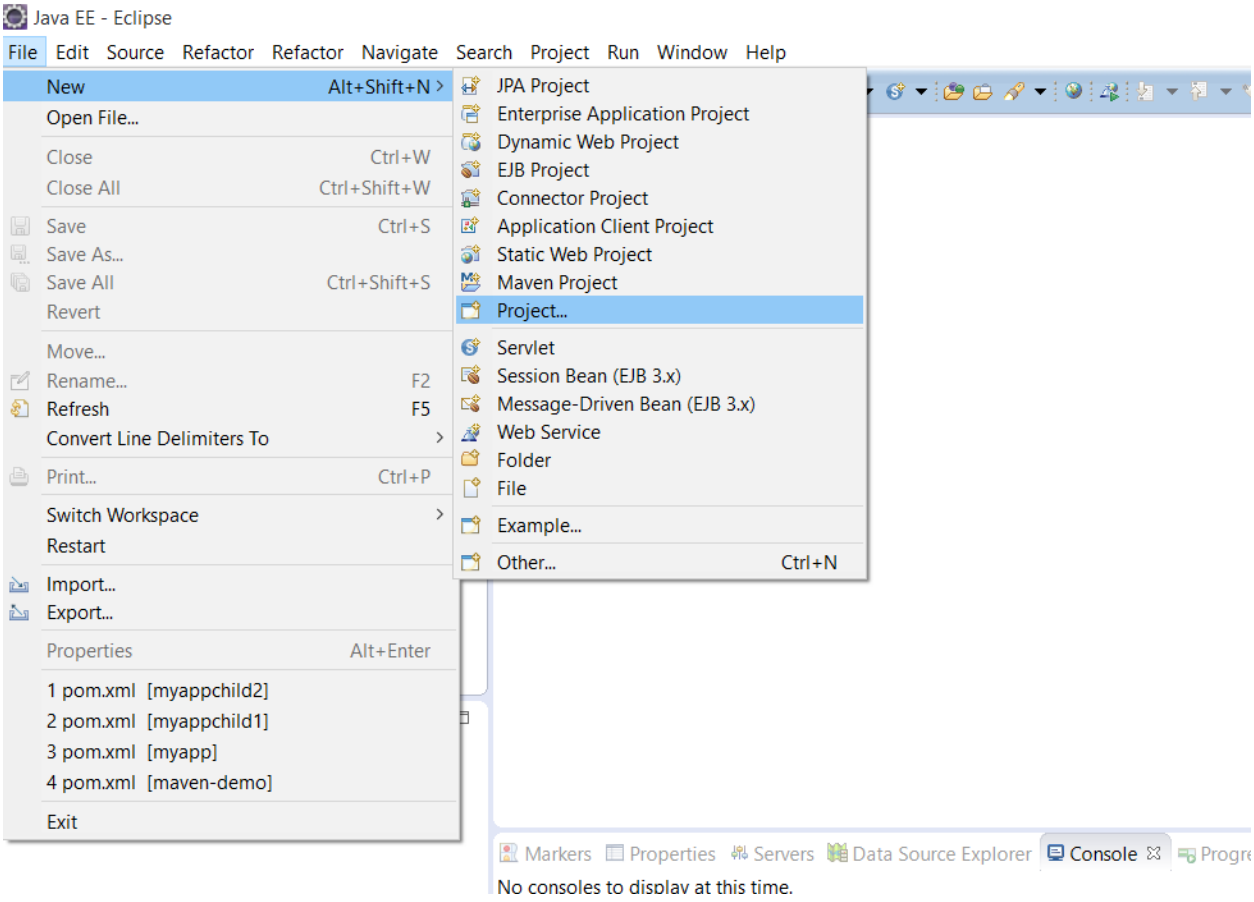
Java Persistence
JavaScript
Maven
Archetypes
Discovery
Errors/Warnings
Installations
Java EE Integrat
Lifecycle Mappi
Templates
User Interface
User Settings
Mylyn
Plug-in Developm
Remote Systems
User Settings
Global Settings:
Browse...
User Settings (open file):
D:\maven\apache-maven-3.3.9\conf\settings.xml
Browse...
Update Settings
Local Repository (From merged user and global settings):
D:\dev\m2repo
Reindex
Restore Defaults
Apply
OK
Cancel

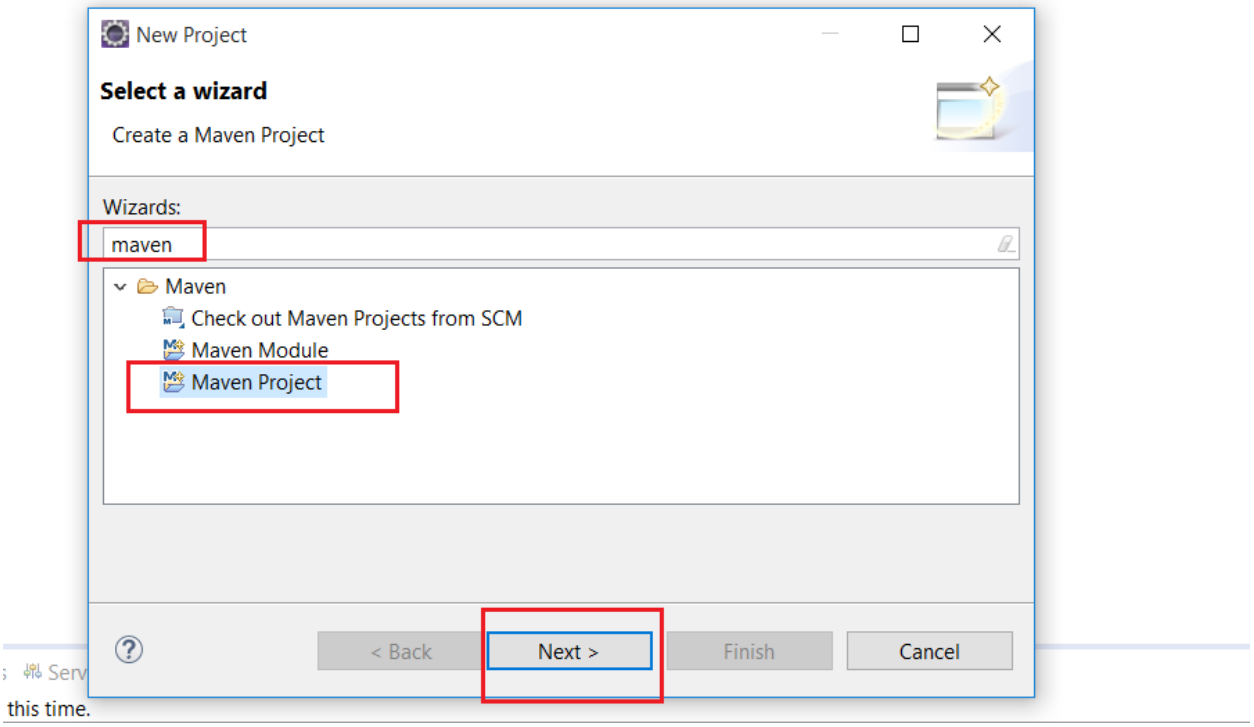
4. CREATION PROJET MAVEN

4.0 CREATION PROJET SIMPLE MAVEN

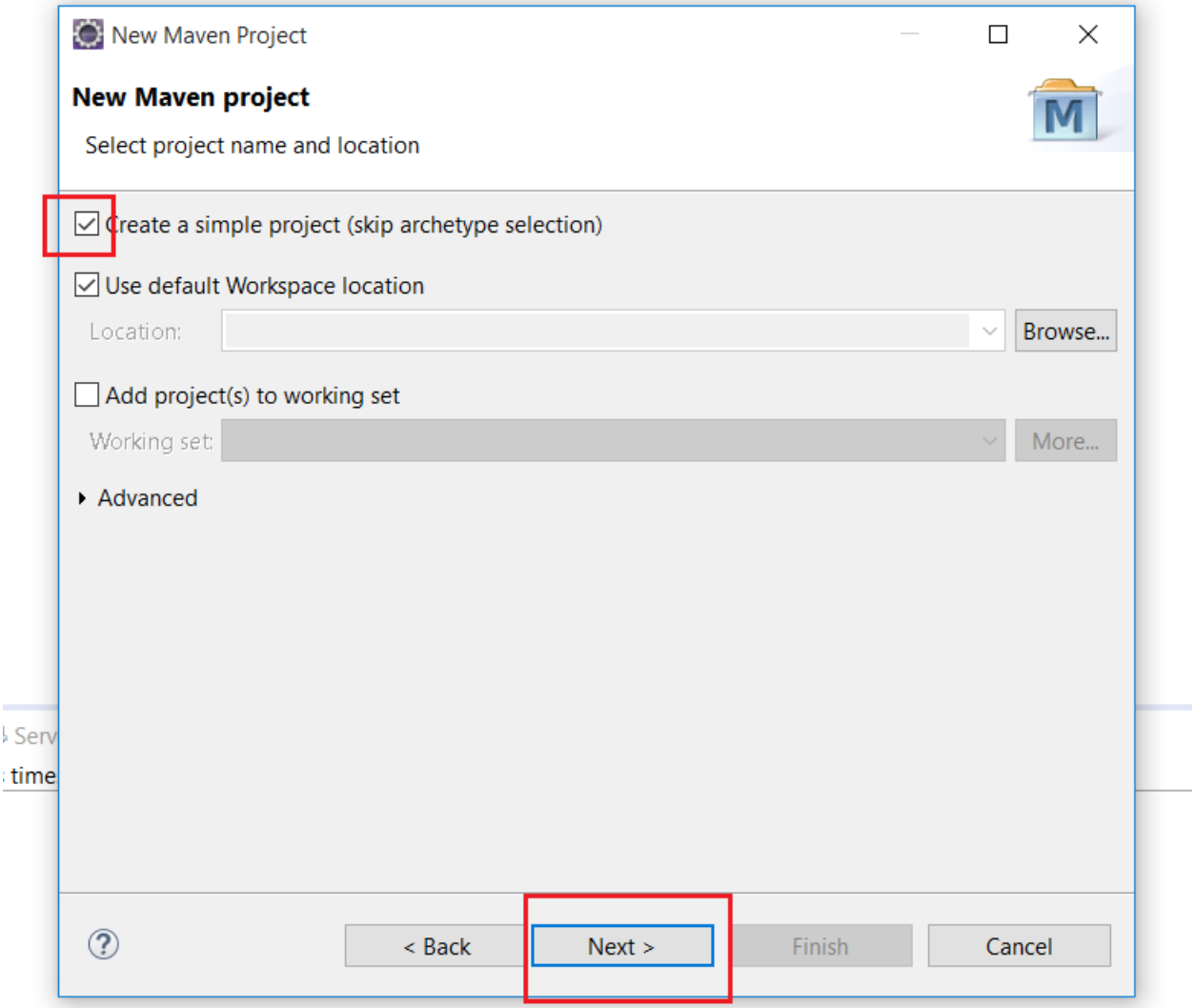
Sur le menu on clique sur 'File' → 'New' → 'Project'



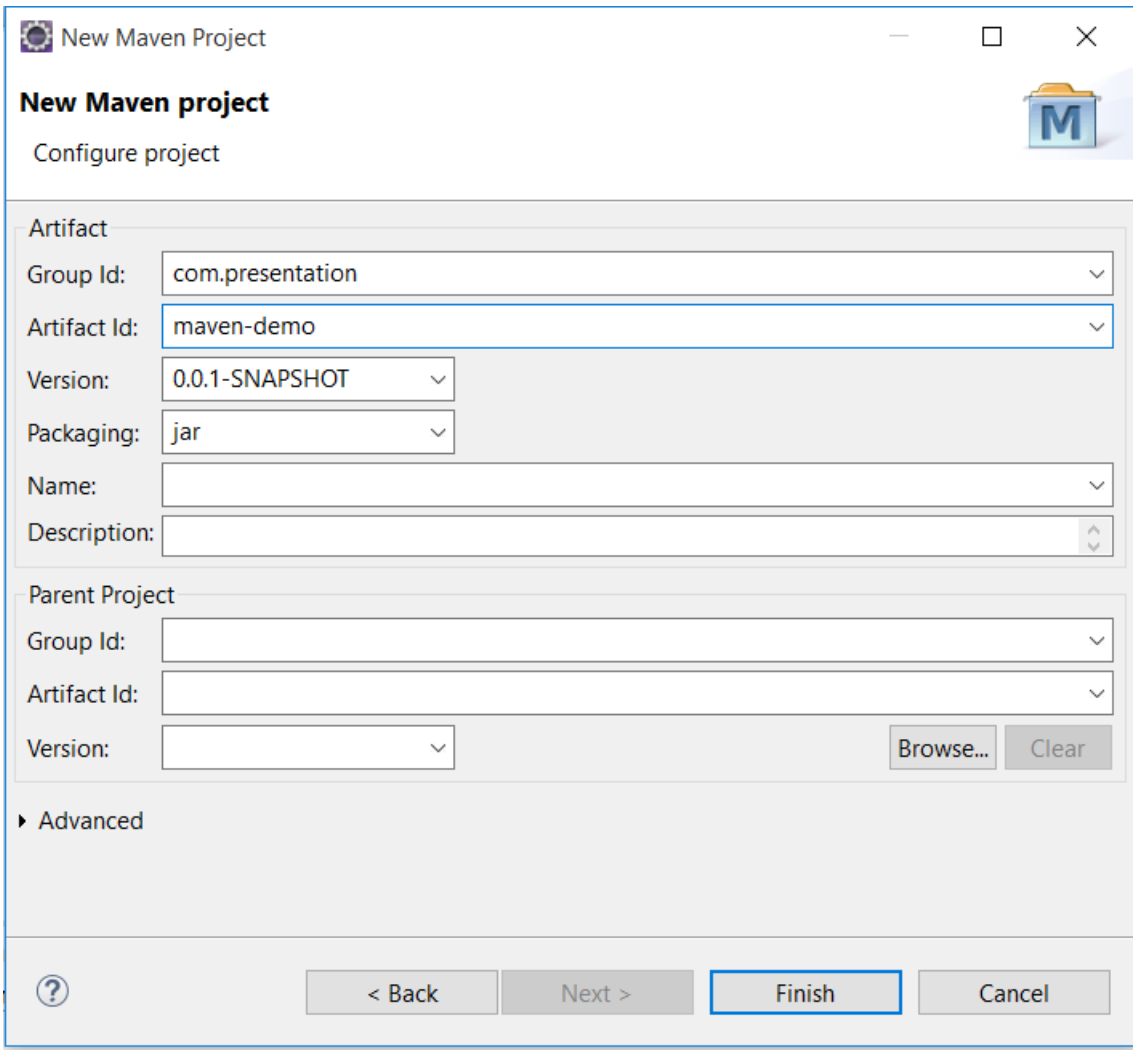
On tape 'maven' et on choisit 'Maven Project' →'Next'



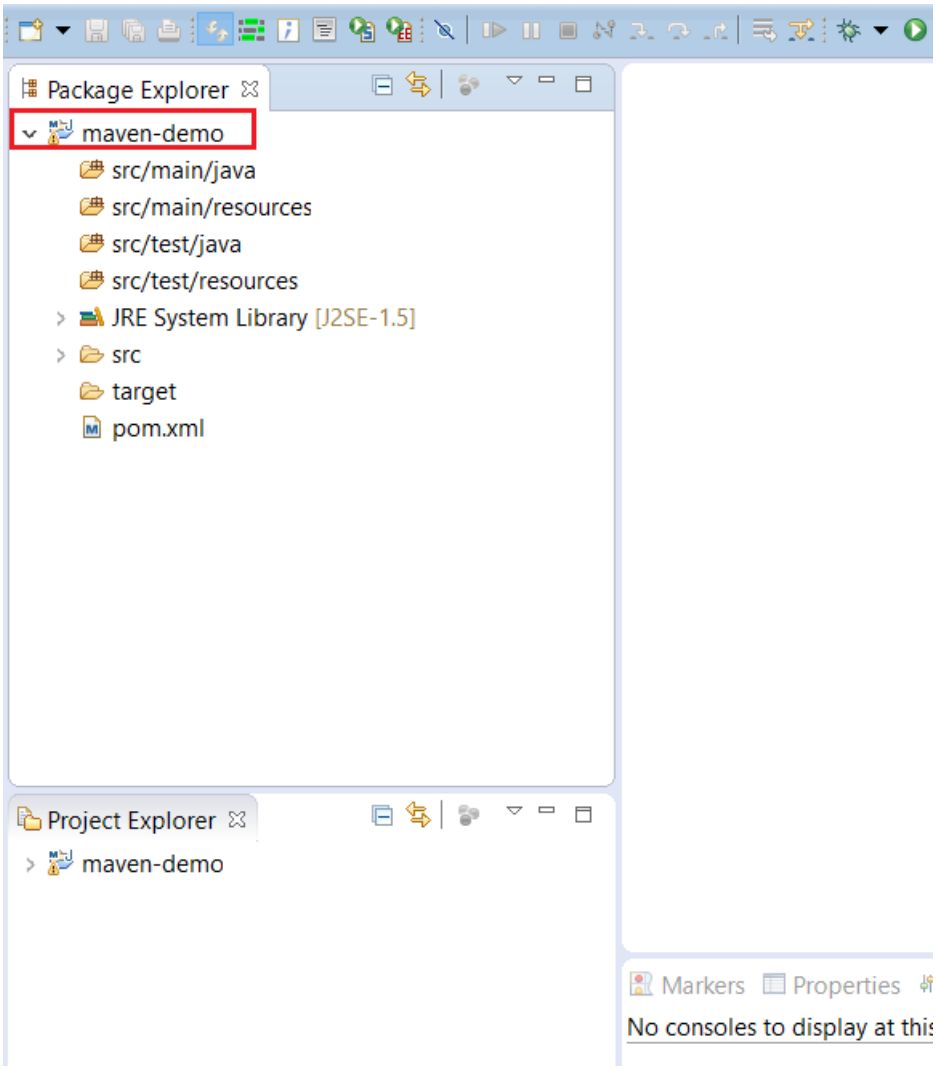
On sélectionne ‘Create simple project’ → ‘Next’


New Maven Project
New Maven project
Select project name and location
Create a simple project (skip archetype selection)
Use default Workspace location
Location:
Browse...
Add project(s) to working set
Working set:
More...
Advanced
< Back
Next >
Finish
Cancel

On saisit le ‘group Id’, ‘Artifac Id’ ; la version et Packaging étant remplis par défaut,
Puis on clique ‘Finish’

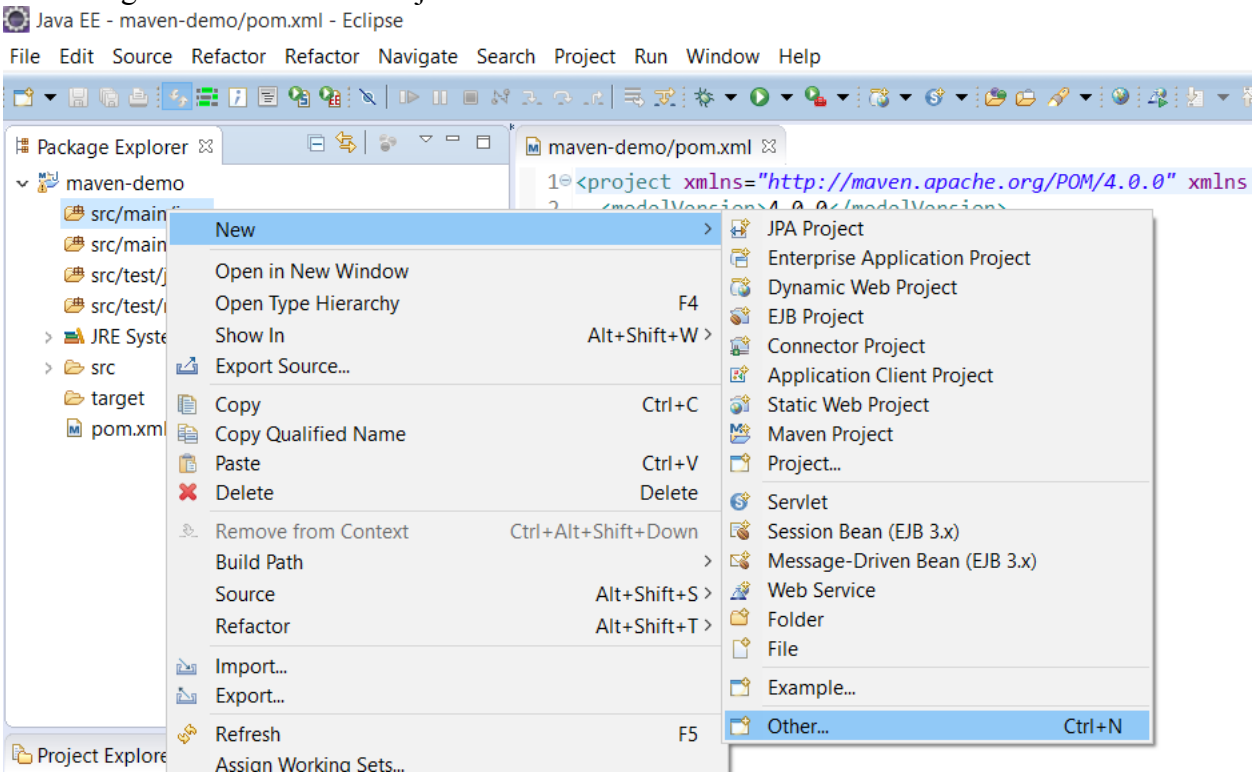


Eclipse va créer le projet Maven ‘maven-demo’

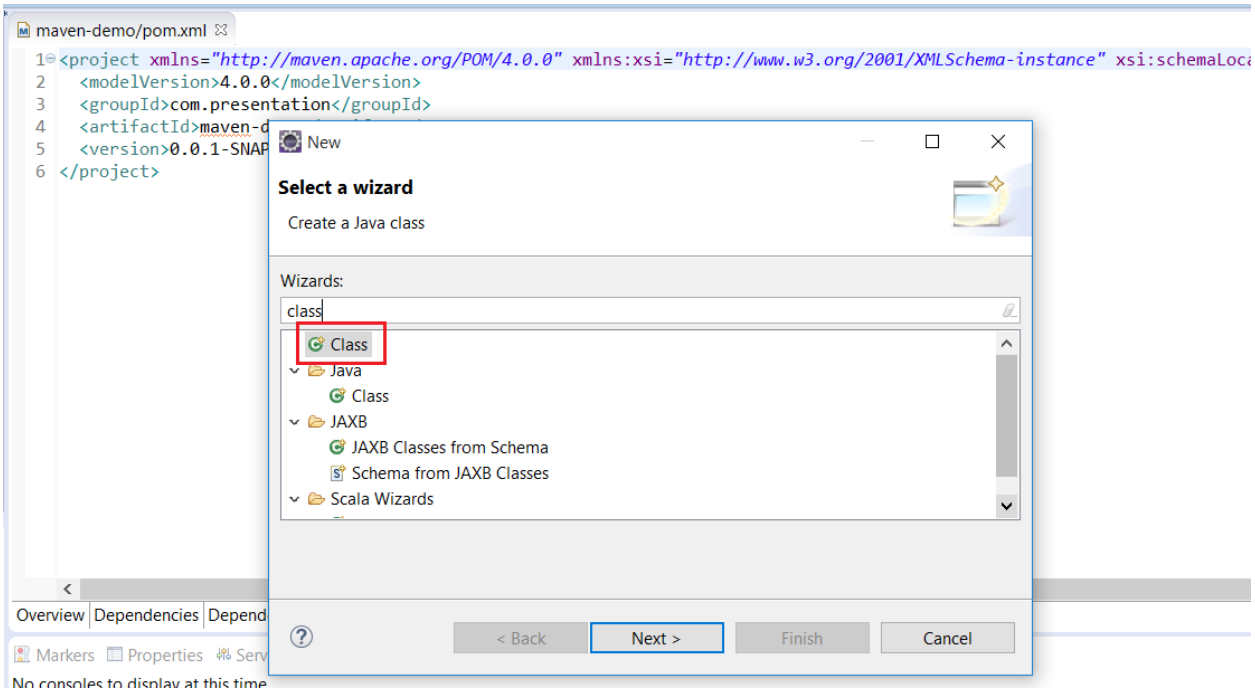


4.1 CREATION CLASSE JAVA DANS LA PARTIE SOURCE

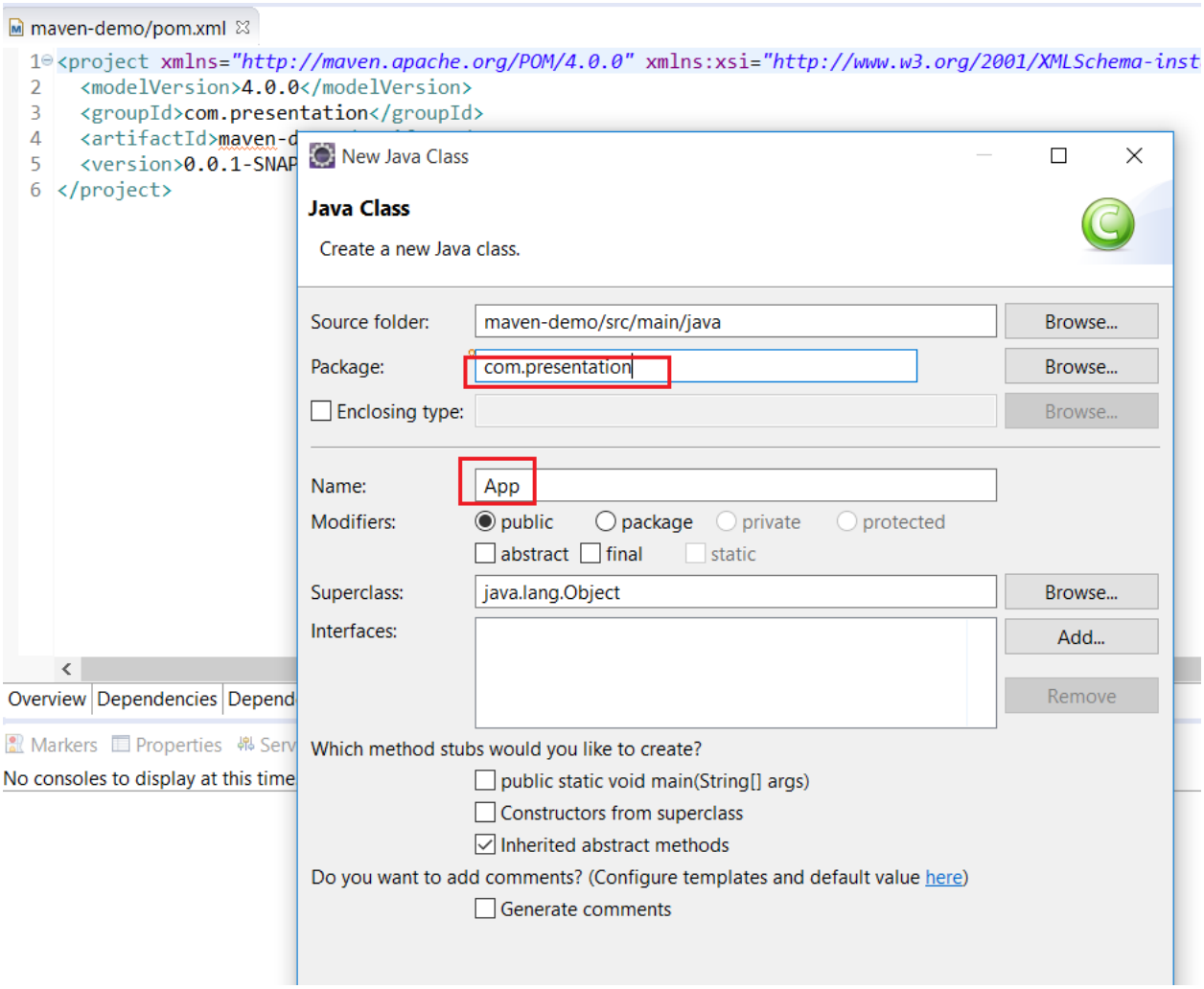
On va créer une classe java 'App.java':
On fait right click sur 'src/main/java' → 'New' → 'Other'



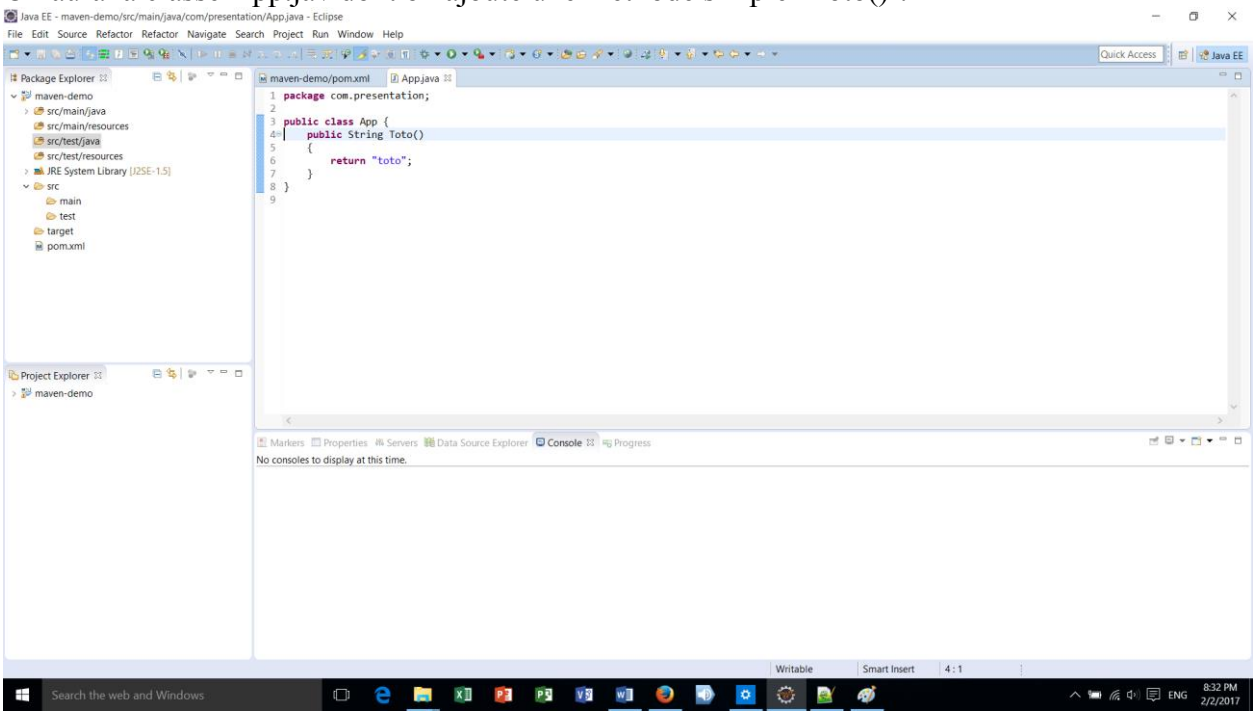
On tape 'Class' et on choisit 'Class' puis on clique 'Next'



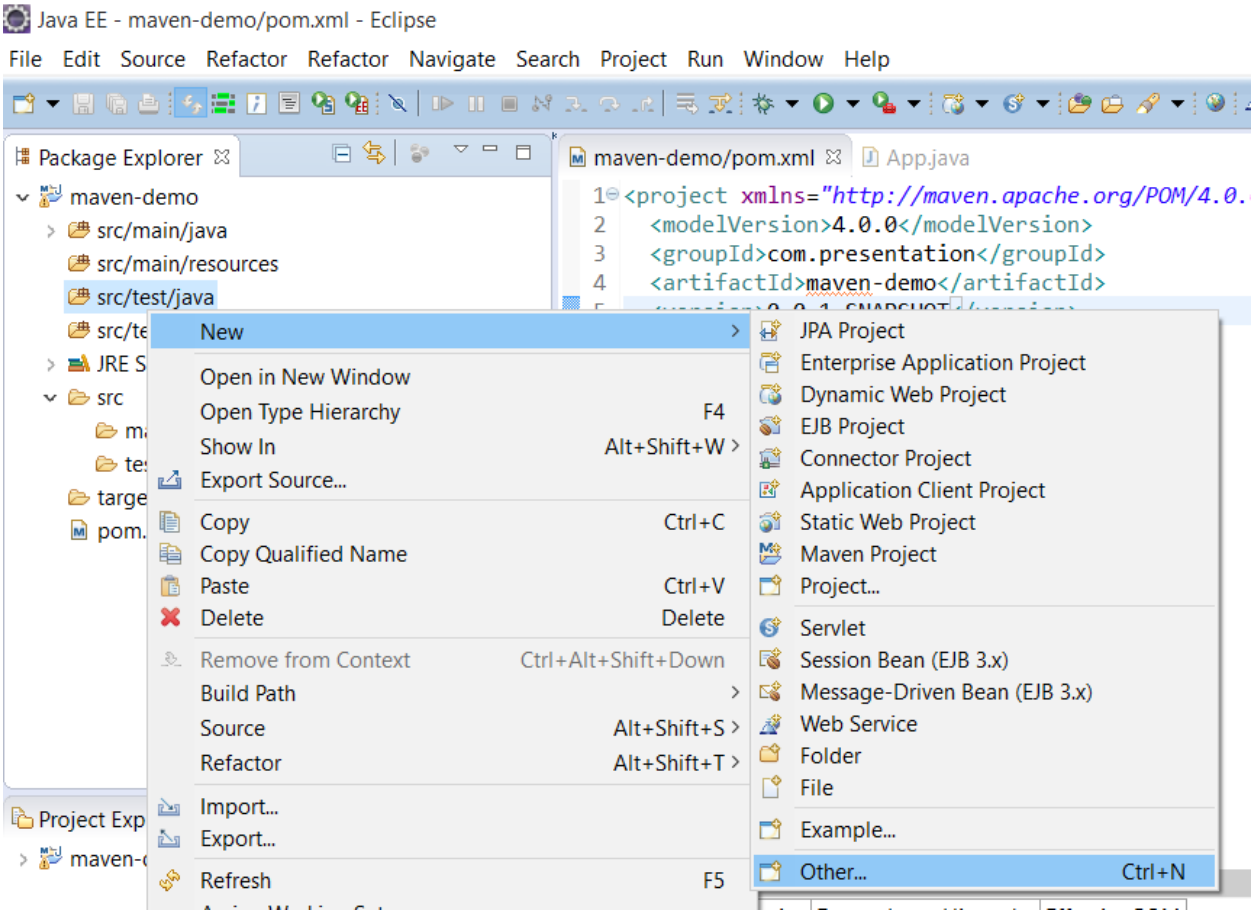
On saisit le package par la même valeur que celle du group Id.
Comme on saisit le nom de la classe , 'App' dans notre exemple.
On clique 'Finish'.

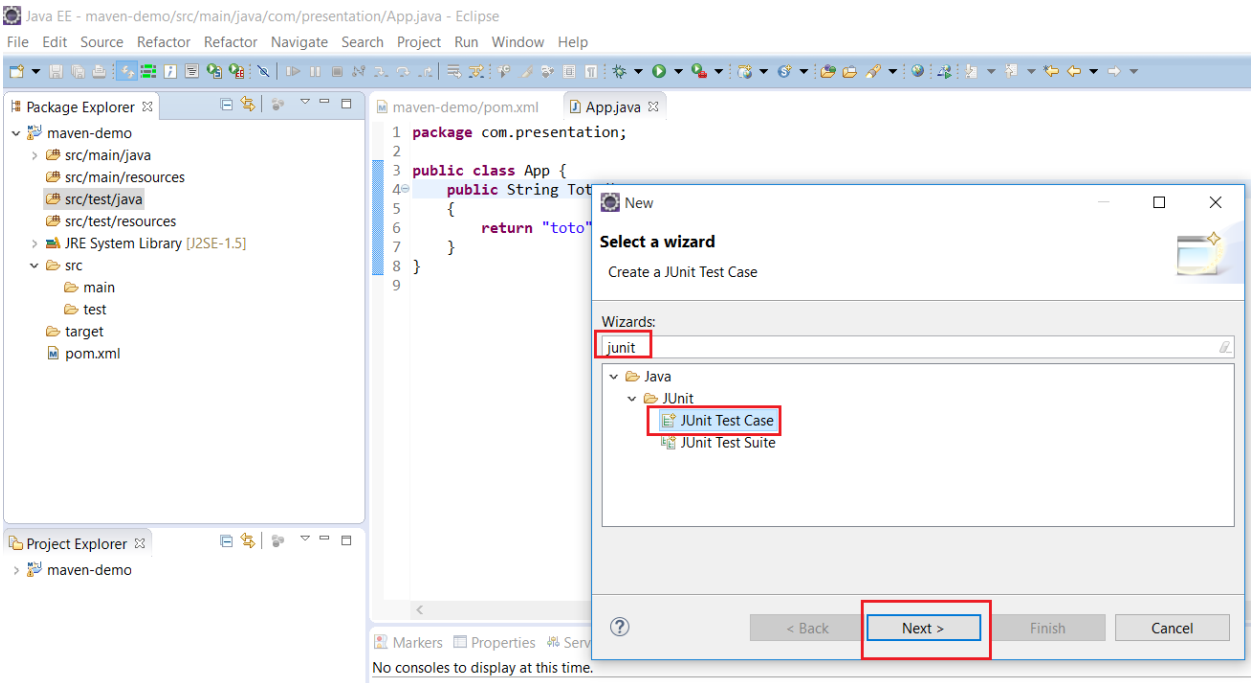


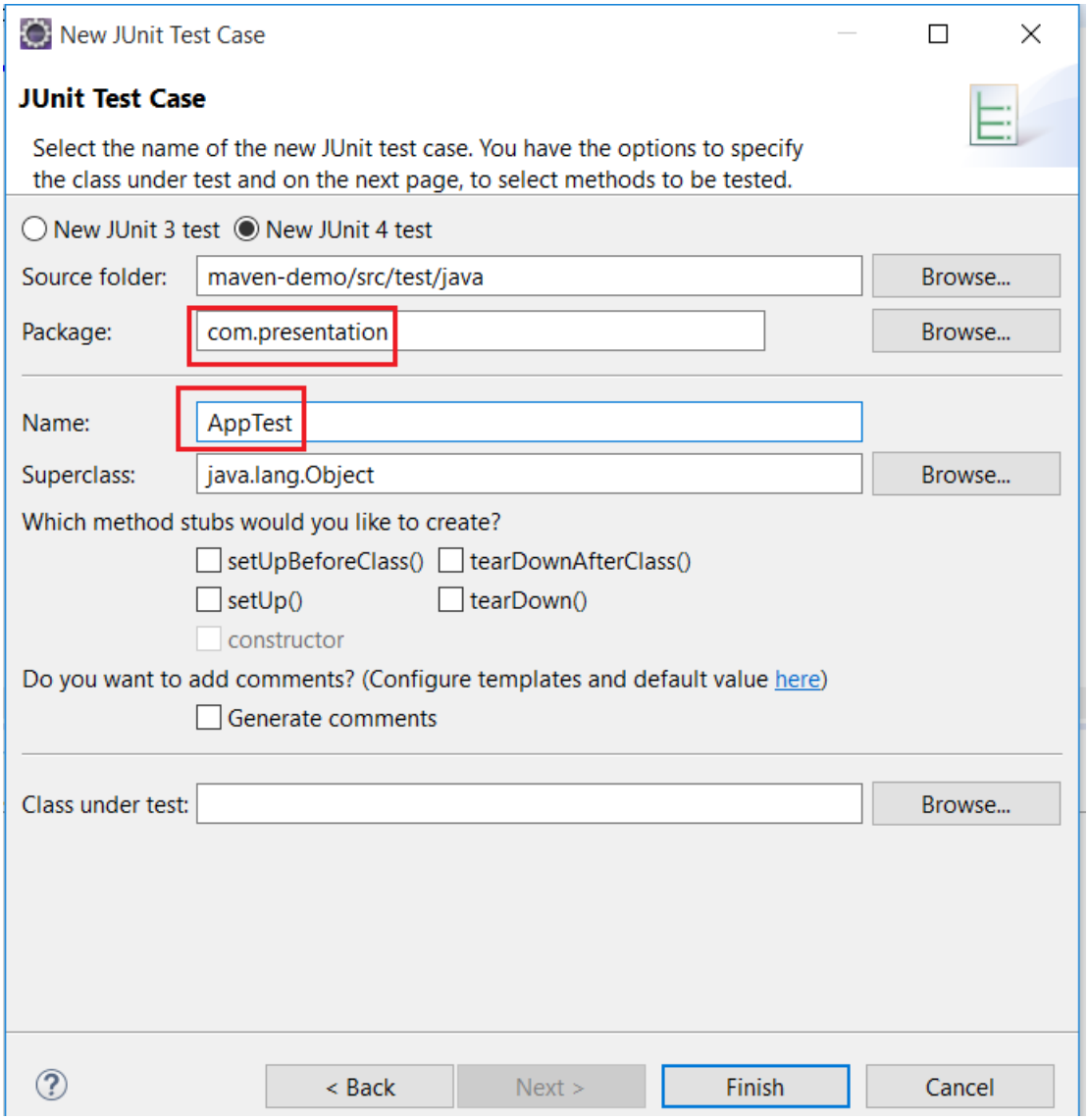
On aura la classe App.jav dont on ajoute une méthode simple ‘Toto()’.

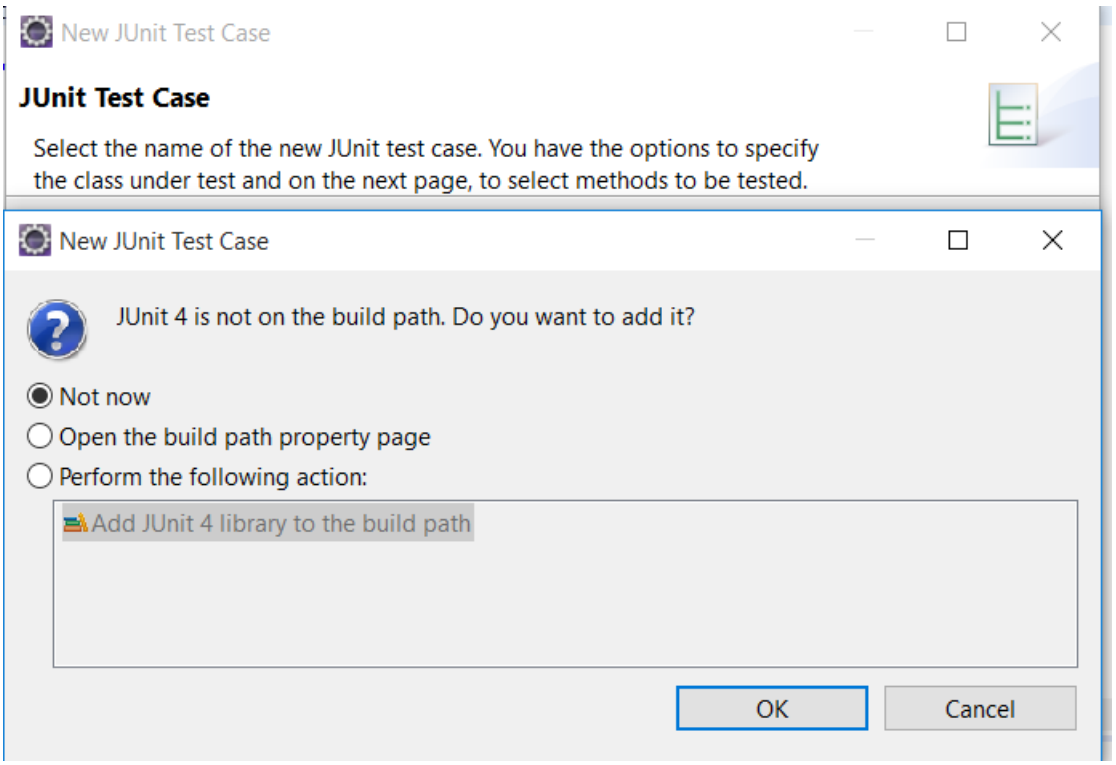


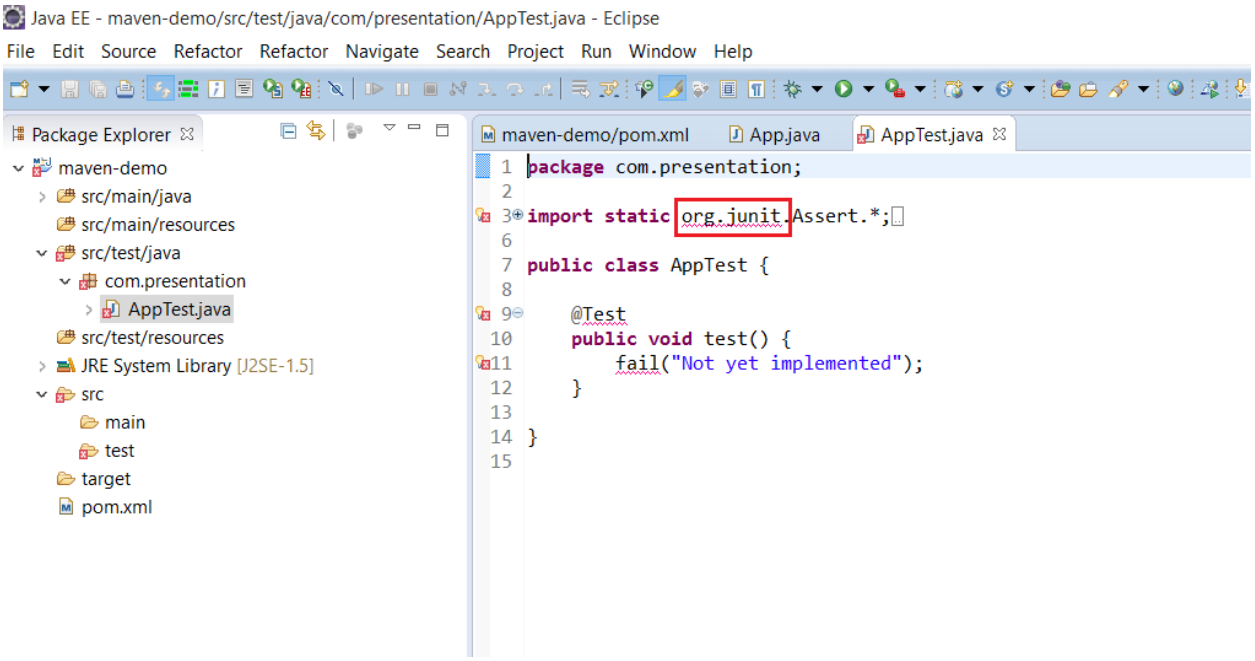
4.2 CREATION D'UNE CLASSE JAVA JUNIT TEST CASE






New JUnit Test Case
JUnit Test Case
Select the name of the new JUnit test case. You have the options to specify the class under test and on the next page, to select methods to be tested.
New JUnit 3 test
New JUnit 4 test
Source folder:
maven-demo/src/test/java
Browse...
Package:
com.presentation
Browse...
Name:
AppTest
Superclass:
java.lang.Object
Browse...
Which method stubs would you like to create?
setUpBeforeClass()
tearDownAfterClass()
setUp()
tearDown()
constructor
Do you want to add comments? (Configure templates and default value here)
Generate comments
Class under test:
Browse...
< Back
Next >
Finish
Cancel





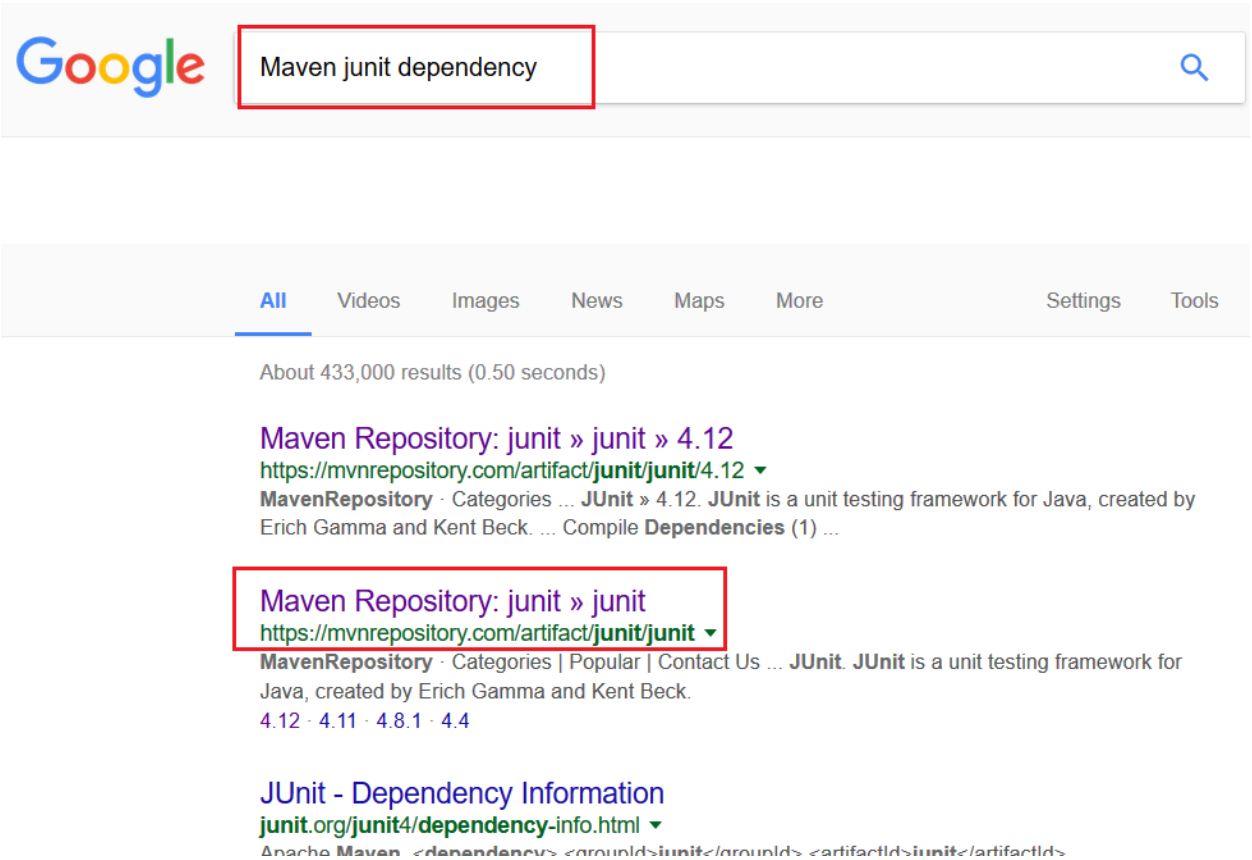
On remarque des erreurs, parce qu'on n'a pas le Junit.jar dans notre buildpath.

5. DEPEDANCE

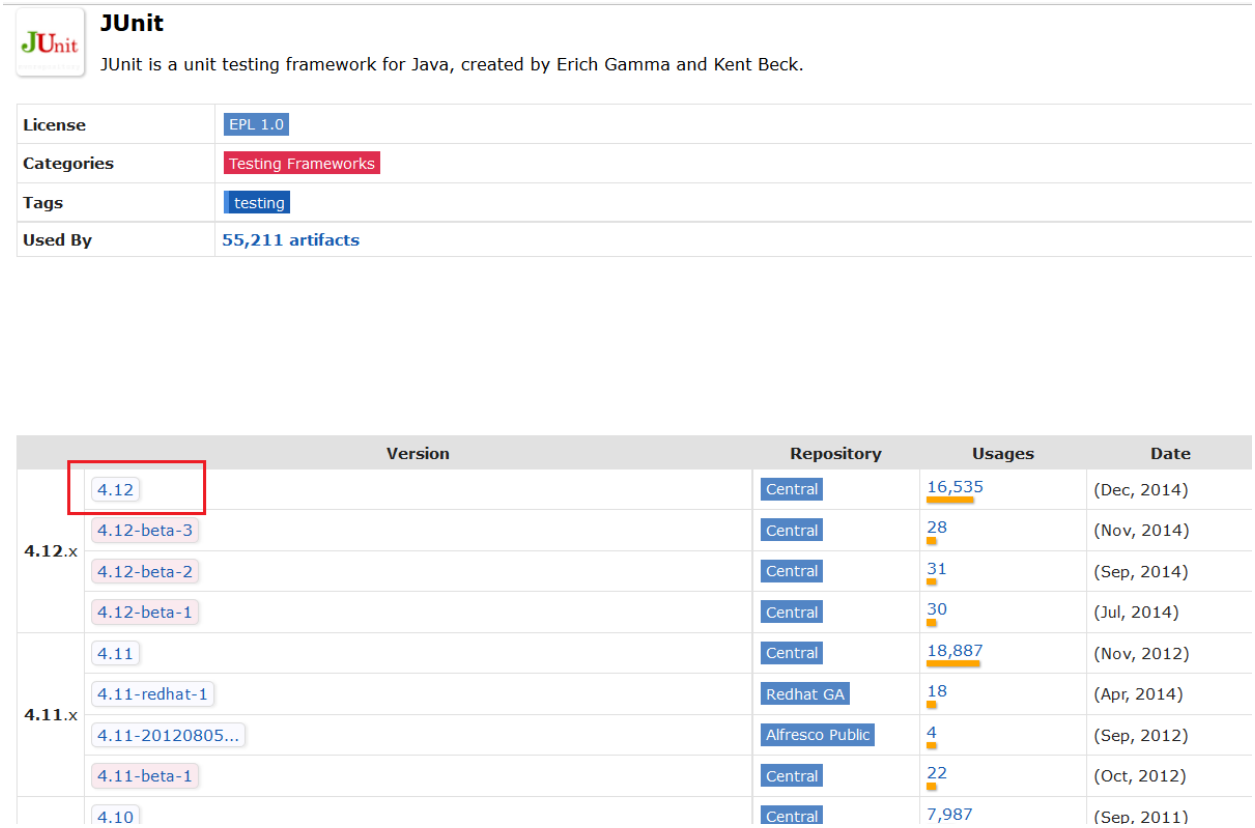
5.0 AJOUT D'UNE DEPENDANCE

Normalement si on n'a pas Maven, il faut télécharger le jar et l'ajouter au buildPath.
Mais comme ayant Maven, Il faut faire les etapes suivantes :

1. chercher dans google la dependance et choisir celle ayant l'url :https://mvnrepository.com/artifact/...



2. Choisir la version convenable



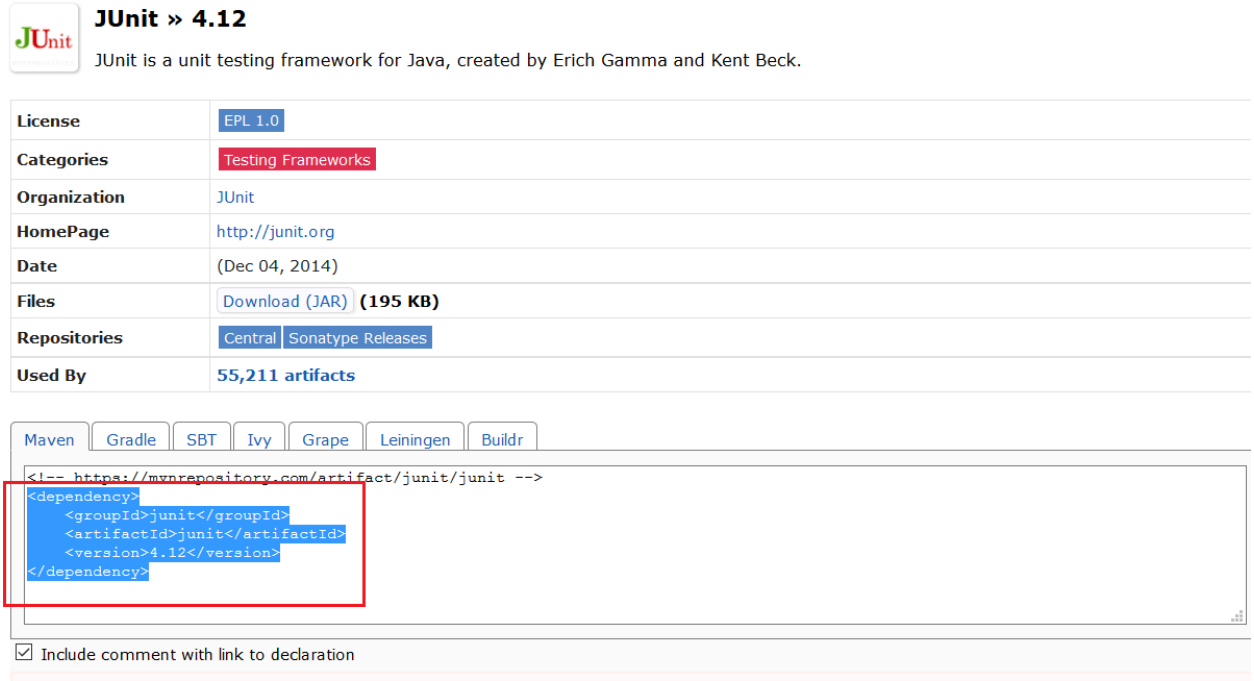
JUnit

JUnit is a unit testing framework for Java, created by Erich Gamma and Kent Beck.

License	EPL 1.0
Categories	Testing Frameworks
Tags	testing
Used By	55,211 artifacts

	Version	Repository	Usages	Date
4.12.x	4.12	Central	16,535	(Dec, 2014)
	4.12-beta-3	Central	28	(Nov, 2014)
	4.12-beta-2	Central	31	(Sep, 2014)
	4.12-beta-1	Central	30	(Jul, 2014)
4.11.x	4.11	Central	18,887	(Nov, 2012)
	4.11-redhat-1	Redhat GA	18	(Apr, 2014)
	4.11-20120805...	Alfresco Public	4	(Sep, 2012)
	4.11-beta-1	Central	22	(Oct, 2012)
	4.10	Central	7,987	(Sep, 2011)

3. Copier le code XML de la dependance



JUnit » 4.12

JUnit is a unit testing framework for Java, created by Erich Gamma and Kent Beck.

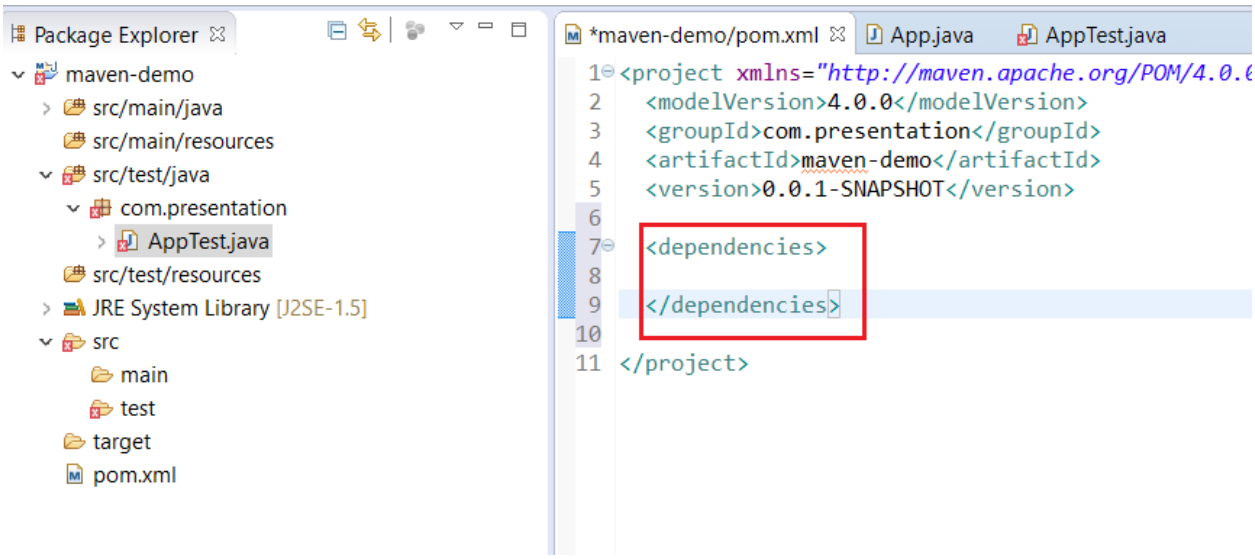
License	EPL 1.0
Categories	Testing Frameworks
Organization	JUnit
HomePage	http://junit.org
Date	(Dec 04, 2014)
Files	Download (JAR) **(195 KB)**
Repositories	Central Sonatype Releases
Used By	55,211 artifacts

Maven | Gradle | SBT | Ivy | Grape | Leiningen | Buildr

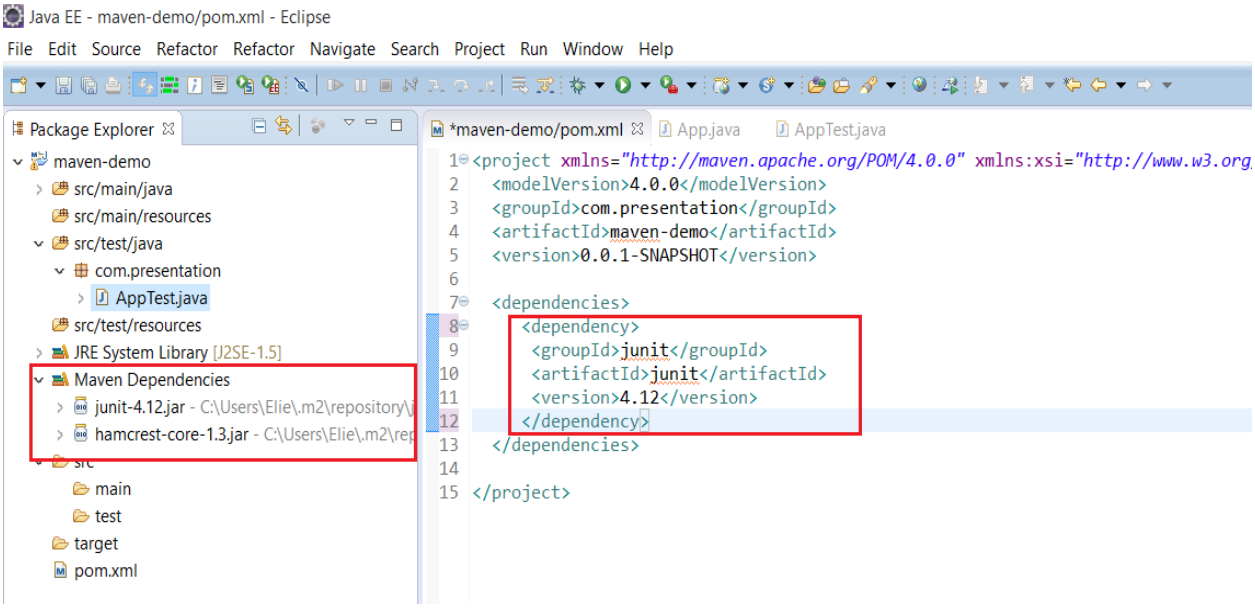
```
<!-- https://mvnrepository.com/artifact/junit/junit -->
<dependency>
    <groupId>junit</groupId>
    <artifactId>junit</artifactId>
    <version>4.12</version>
</dependency>
```

☑ Include comment with link to declaration

4. Ouvrir les balises <dependencies> dans notre pom.xml pour coller nos dépendances nécessaires.



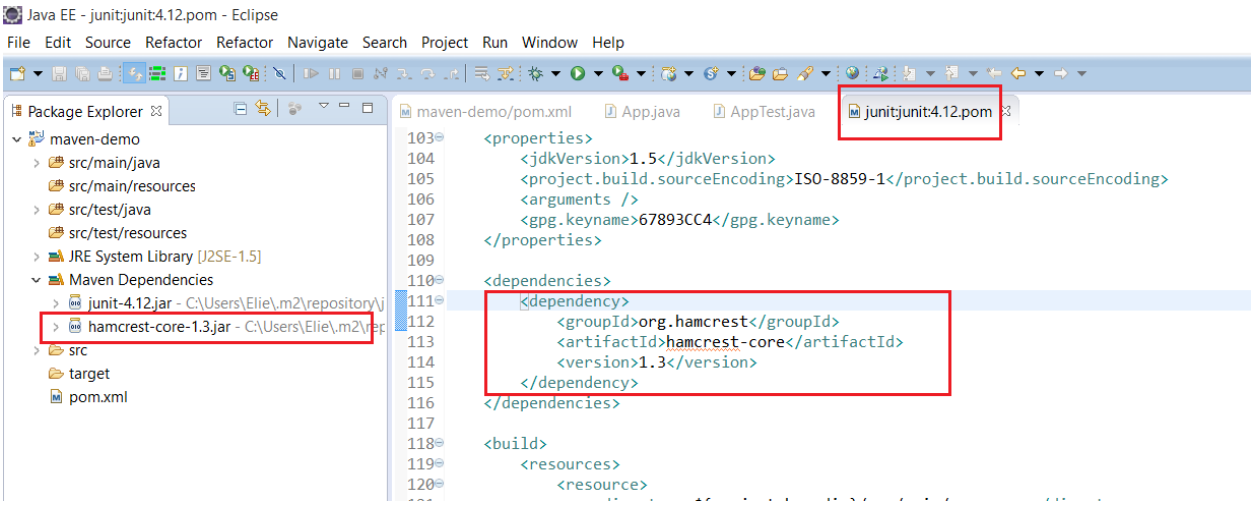
5. On colle notre dépendance JUnit et on sauvegarde ; On remarque l'apparition de la librairie 'Maven Dependencies' contenant les jars ajoutés.




```
<dependencies>
     <dependency>
      <groupId>junit</groupId>
      <artifactId>junit</artifactId>
      <version>4.12</version>
     </dependency>
</dependencies>
```

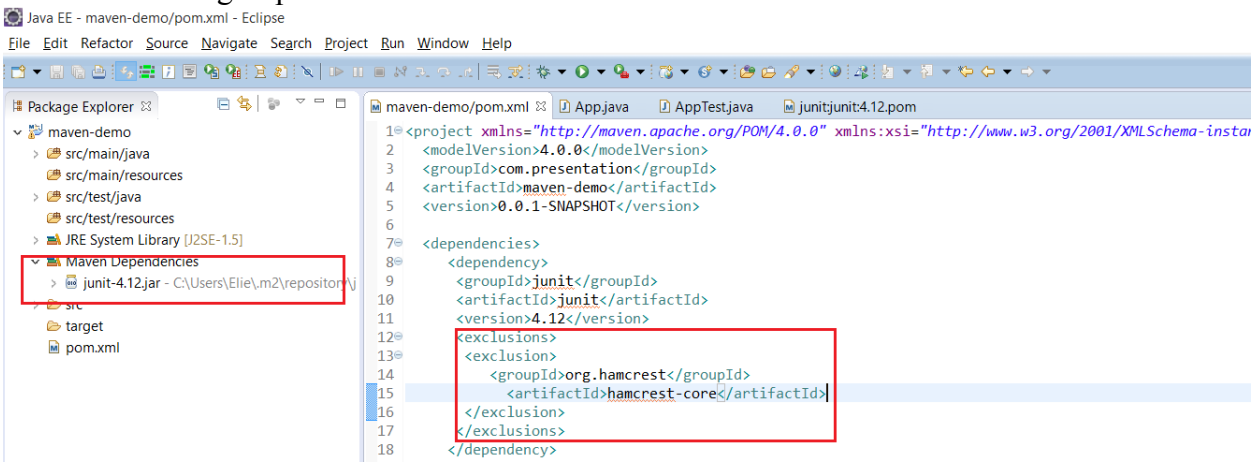
5.1 DEPENDANCE TRANSITIVE

Les dépendances dans maven sont transitives :
On remarque dans le pom.xml de la junit une dépendance vers hamcrest-core ce qui explique la présence du hamcrest-core.jar dans le 'Maven Dependencies'.



5.2 EXCLUSION DE DEPANDANCES

On peut aussi exclure des dépendances en utilisant les tags <exclusions><exclusion> Ou on ajoute l'artifact id et le group Id de celle à exclure :

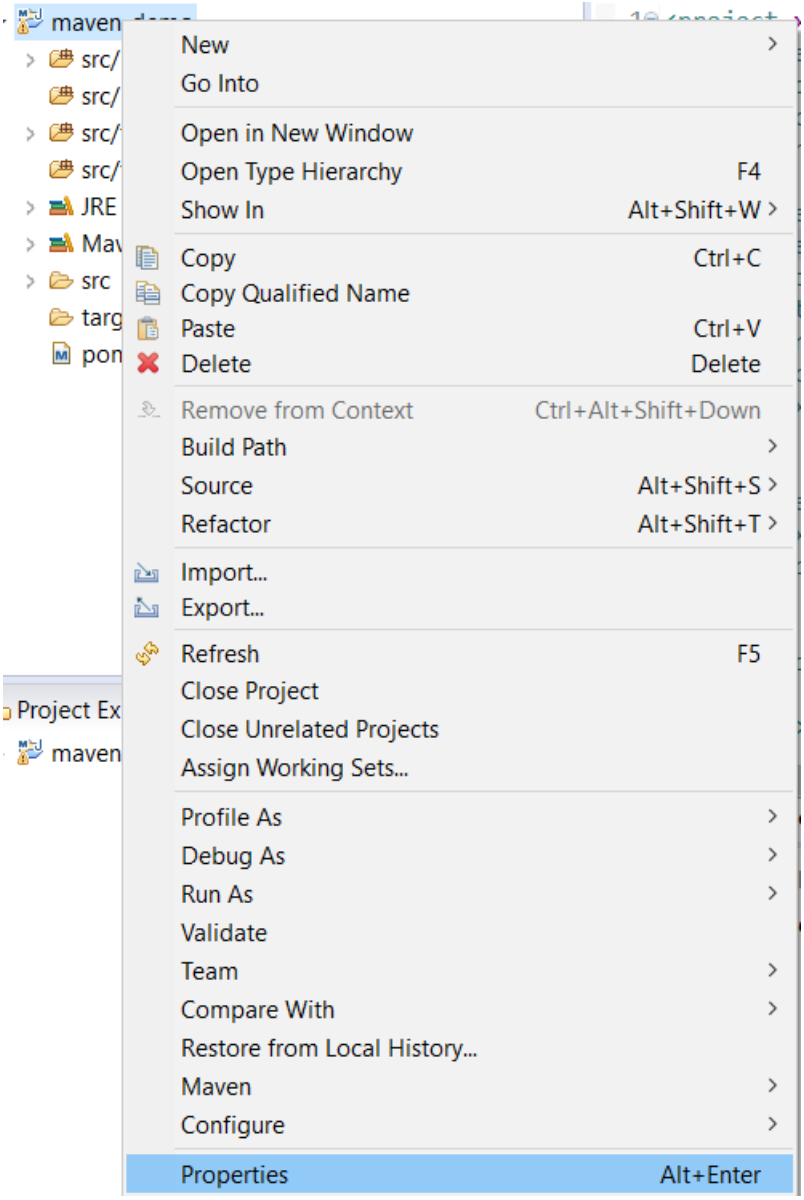


6. COMMANDES MAVEN

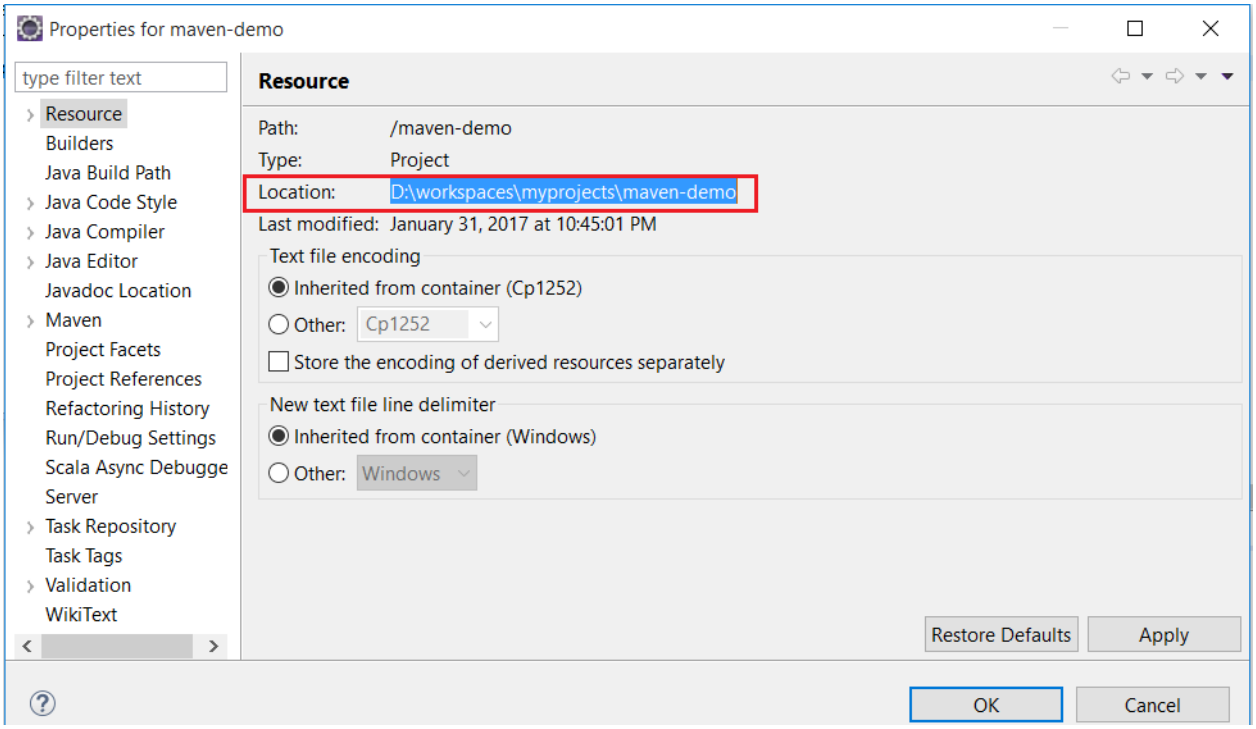
Pour créer un jar de notre projet :

1.Compiler mes fichiers .java en .class
2.Exécuter les tests
3.Créer le jar

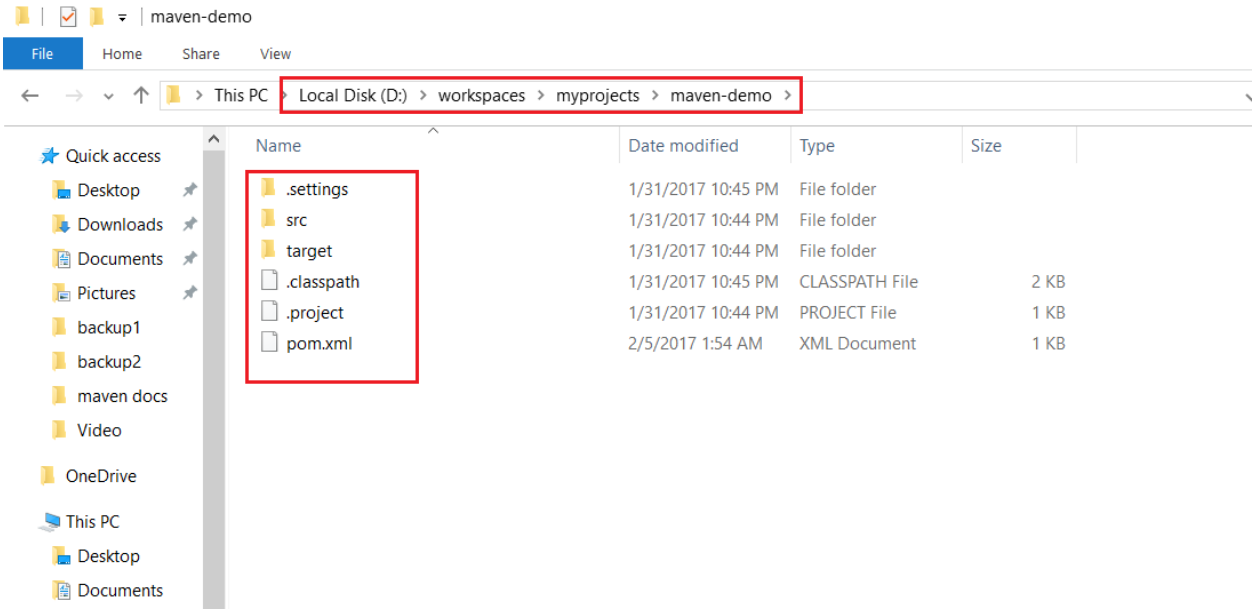
Pour connaitre le chemin du répertoire de notre projet :
Clic droit sur notre projet Maven → properties



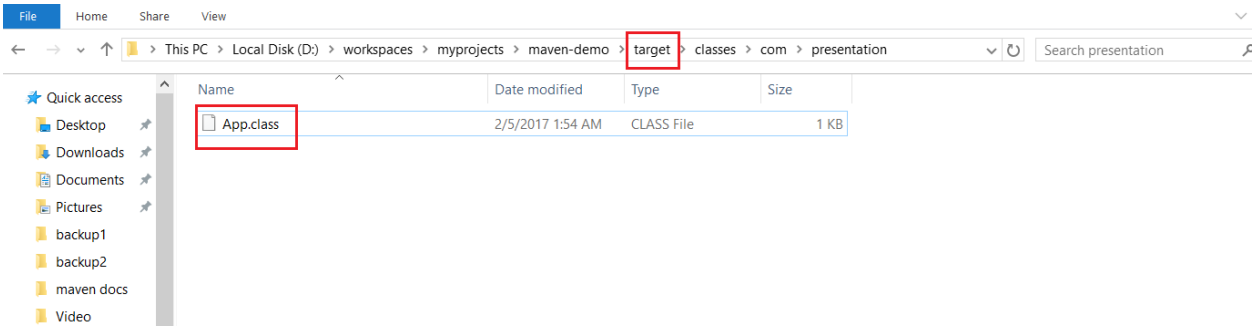
Copier l'url du projet Maven



Coller le path ; on remarque plusieurs fichiers et répertoires dans la répertoire maven-demo de notre projet 'pom.xml', 'src' et 'target'.

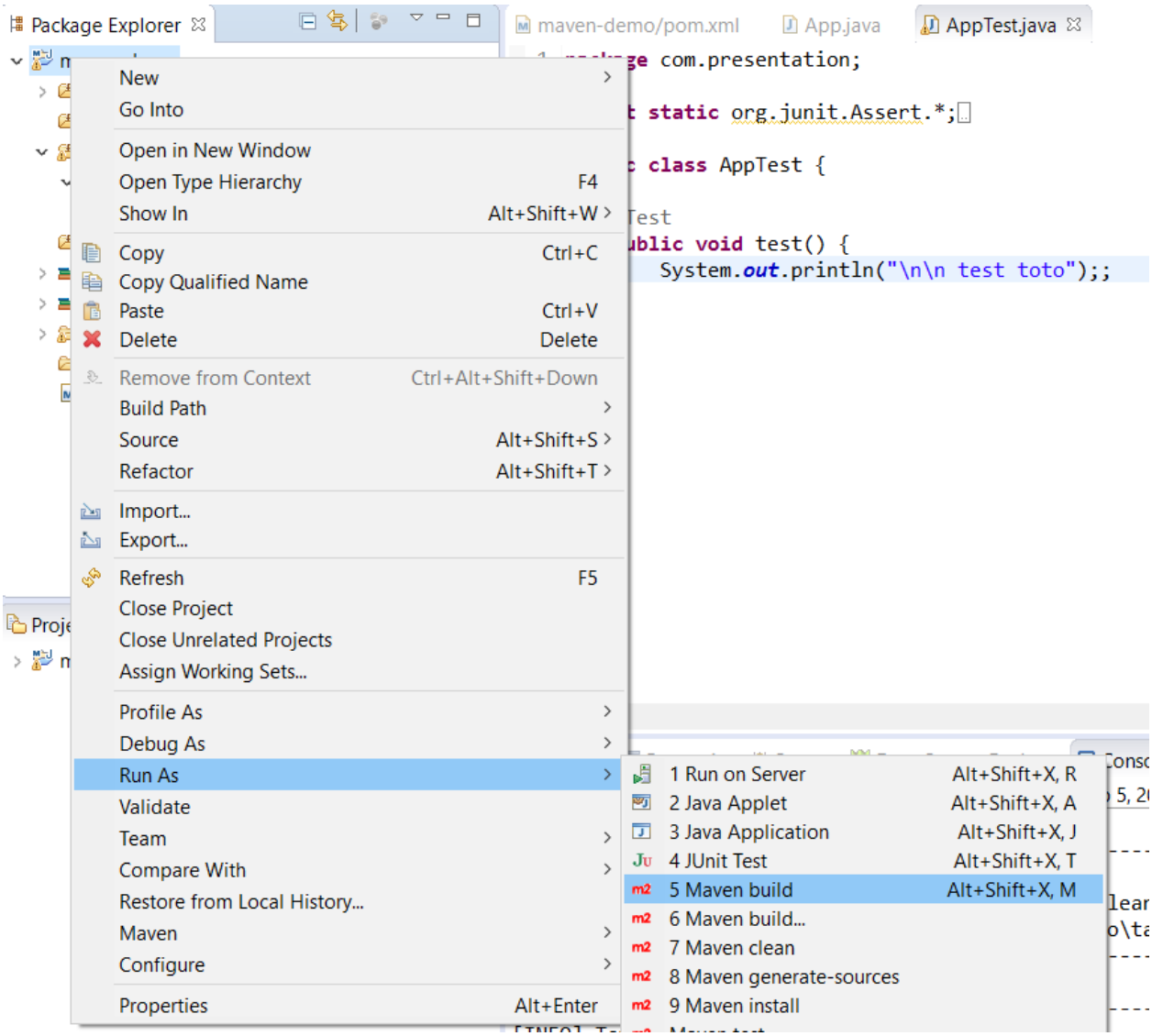


Le répertoire ‘target’ contient les classes compilées.

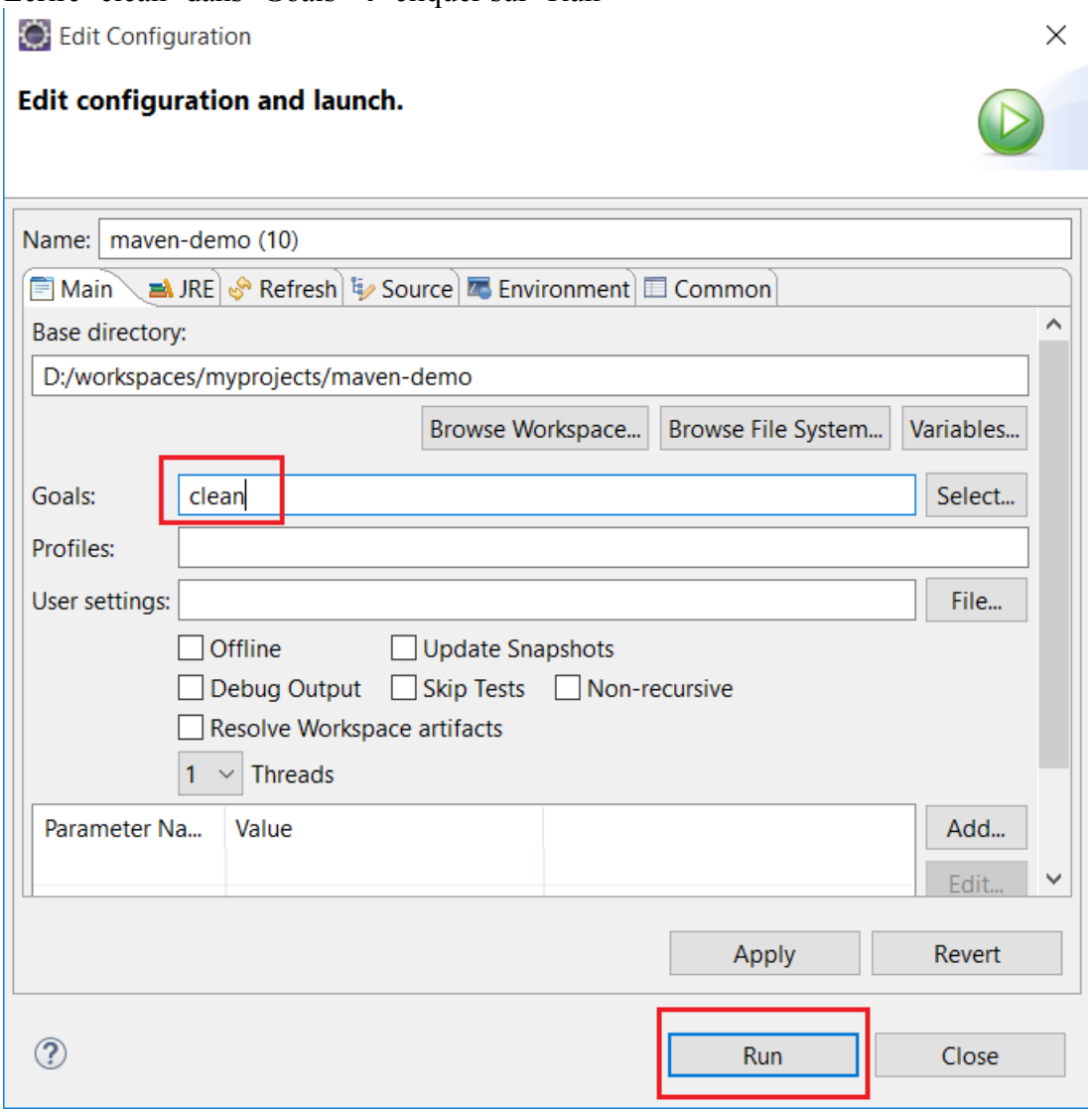


6.0 COMMANDE CLEAN

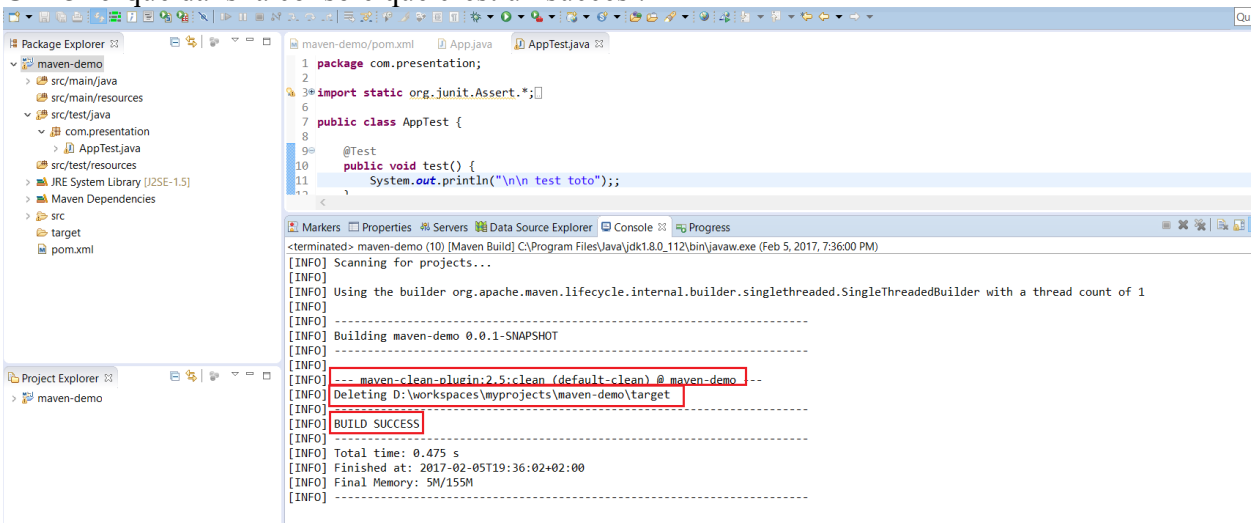
Commande clean :
Clic droit sur notre projet maven → Run As → Maven build



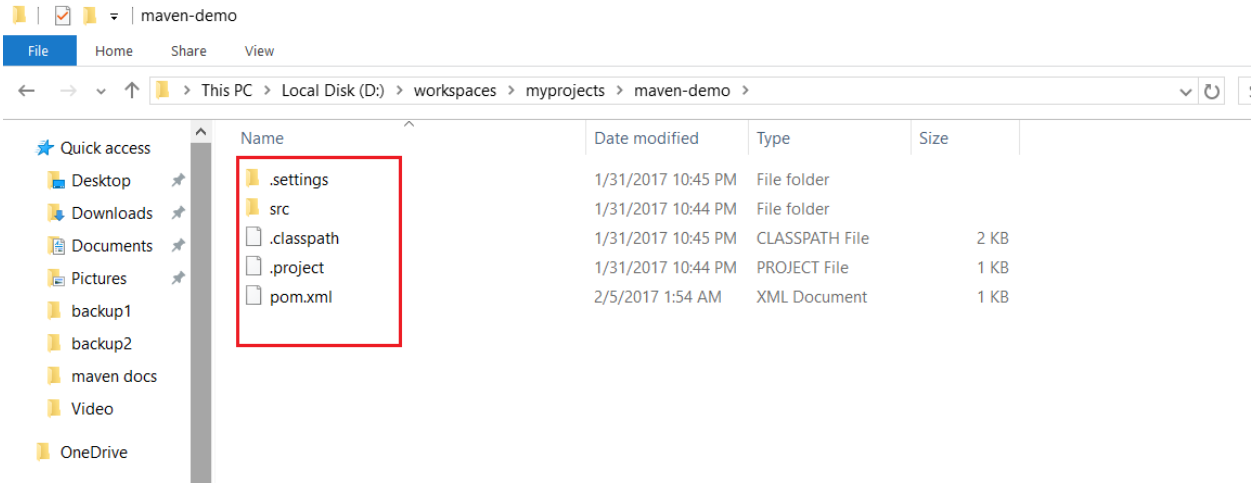
Ecrire ‘clean’ dans ‘Goals’ → cliquer sur ‘Run’



On remarque dans la console que c’est un succès :

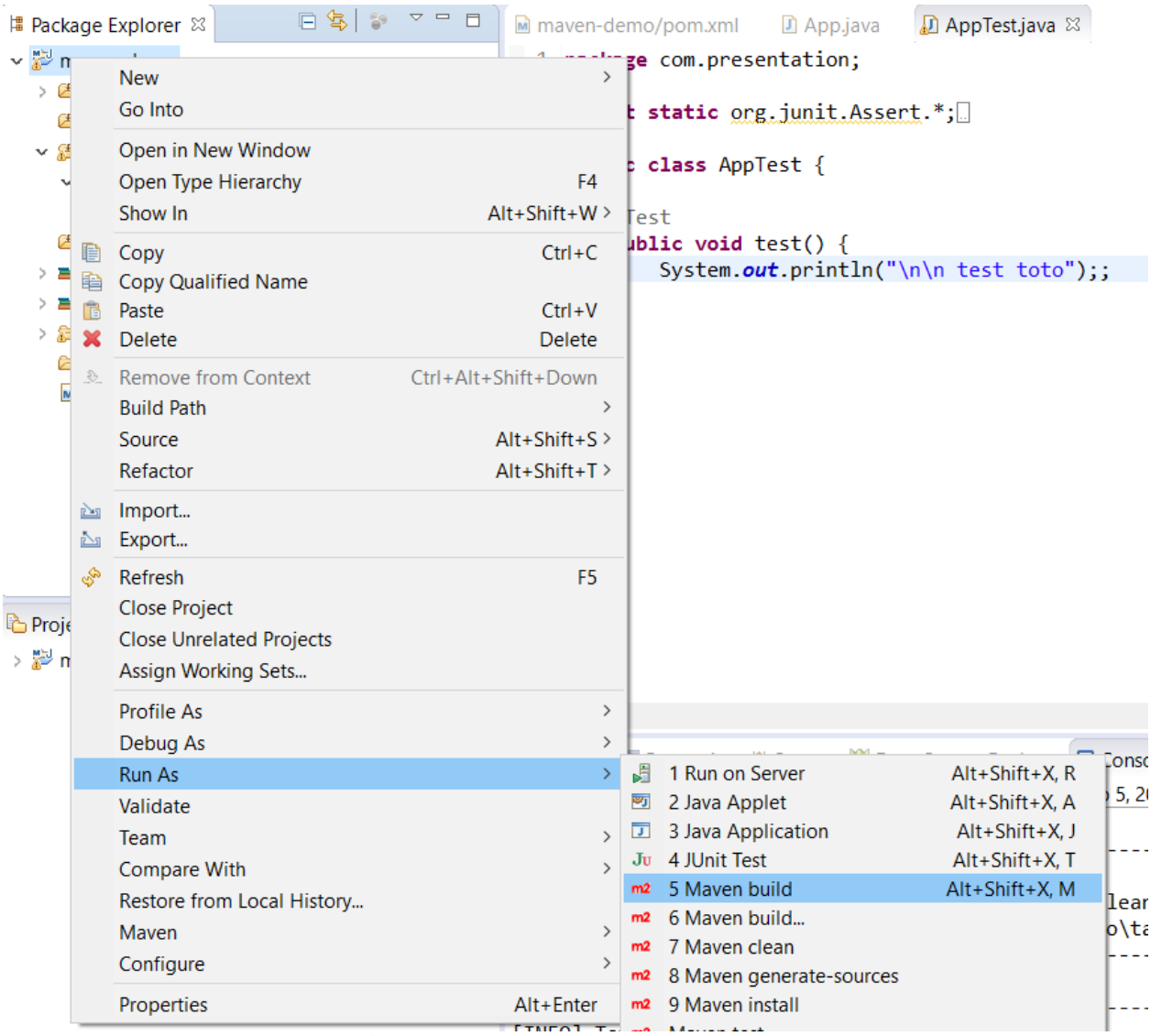


On remarque que le répertoire ‘target ‘ a disparu.

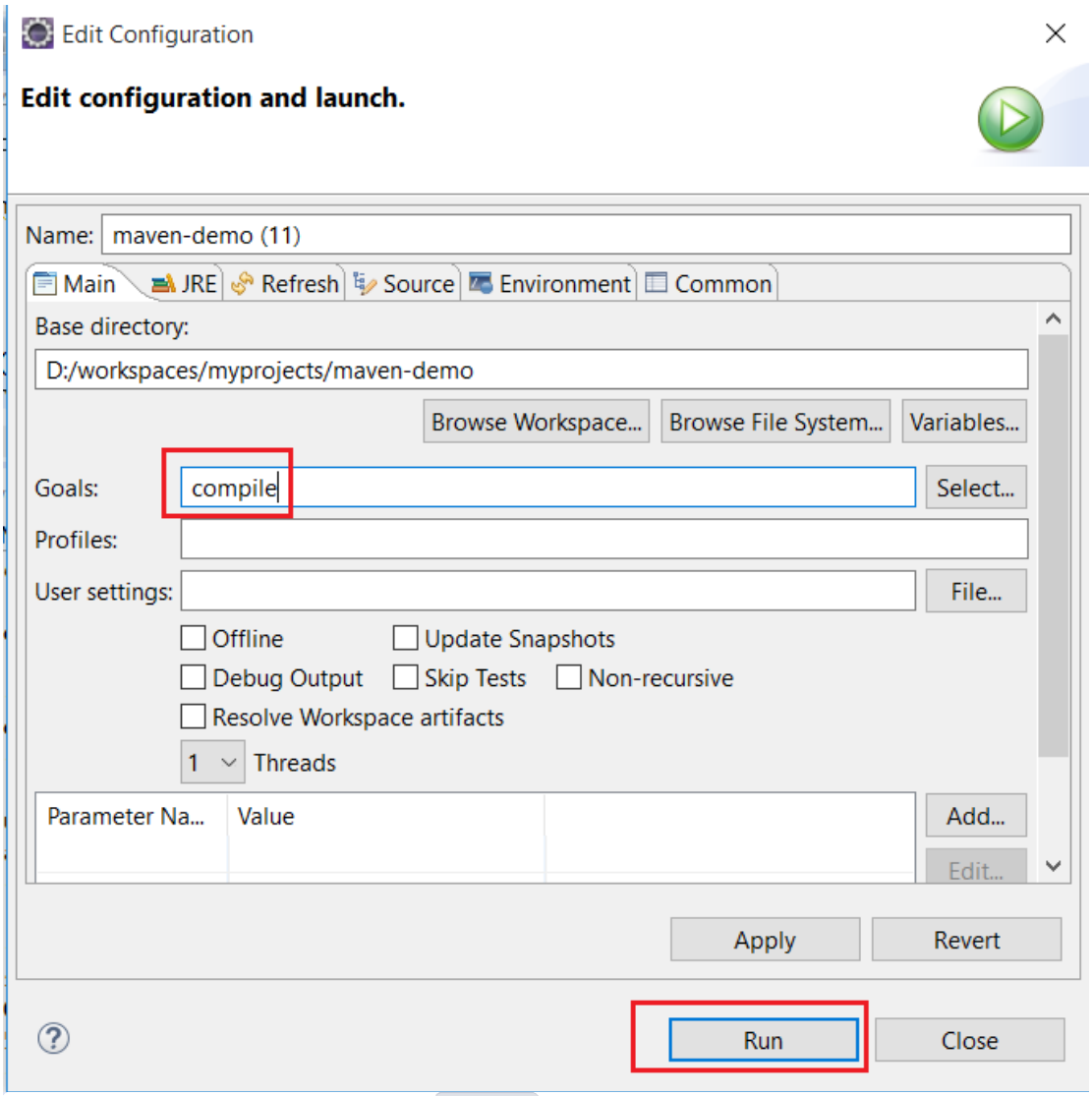


6.1 COMMANDE COMPILE

Commande compile (compilation des fichiers sources) :



Ecrire ‘compile’ dans ‘Goals’ → cliquer sur ‘Run’

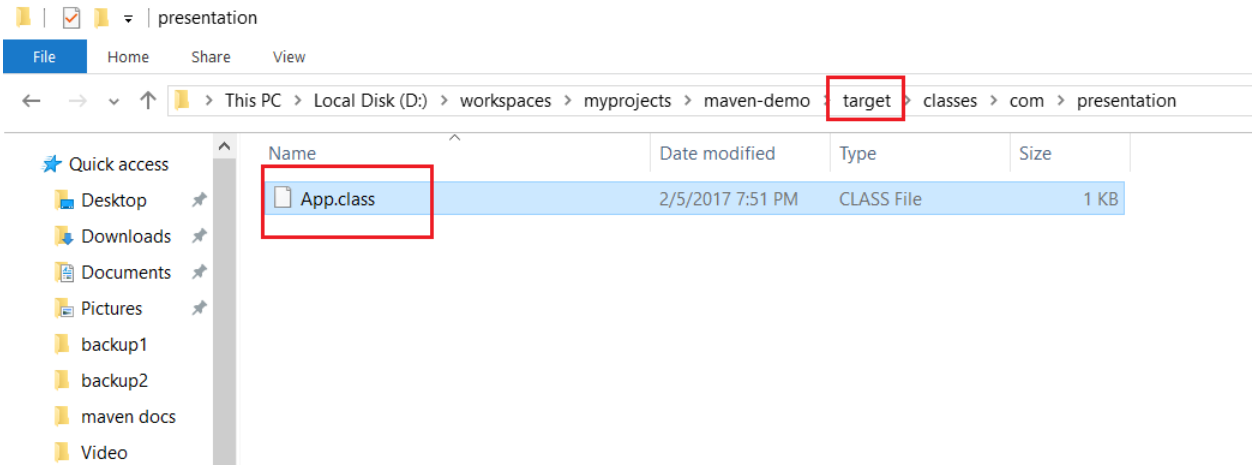


Markers Properties Servers Data Source Explorer Console Progress

<terminated> maven-demo (11) [Maven Build] C:\Program Files\Java\jdk1.8.0_112\bin\javaw.exe (Feb 5, 2017, 7:51:36 PM)

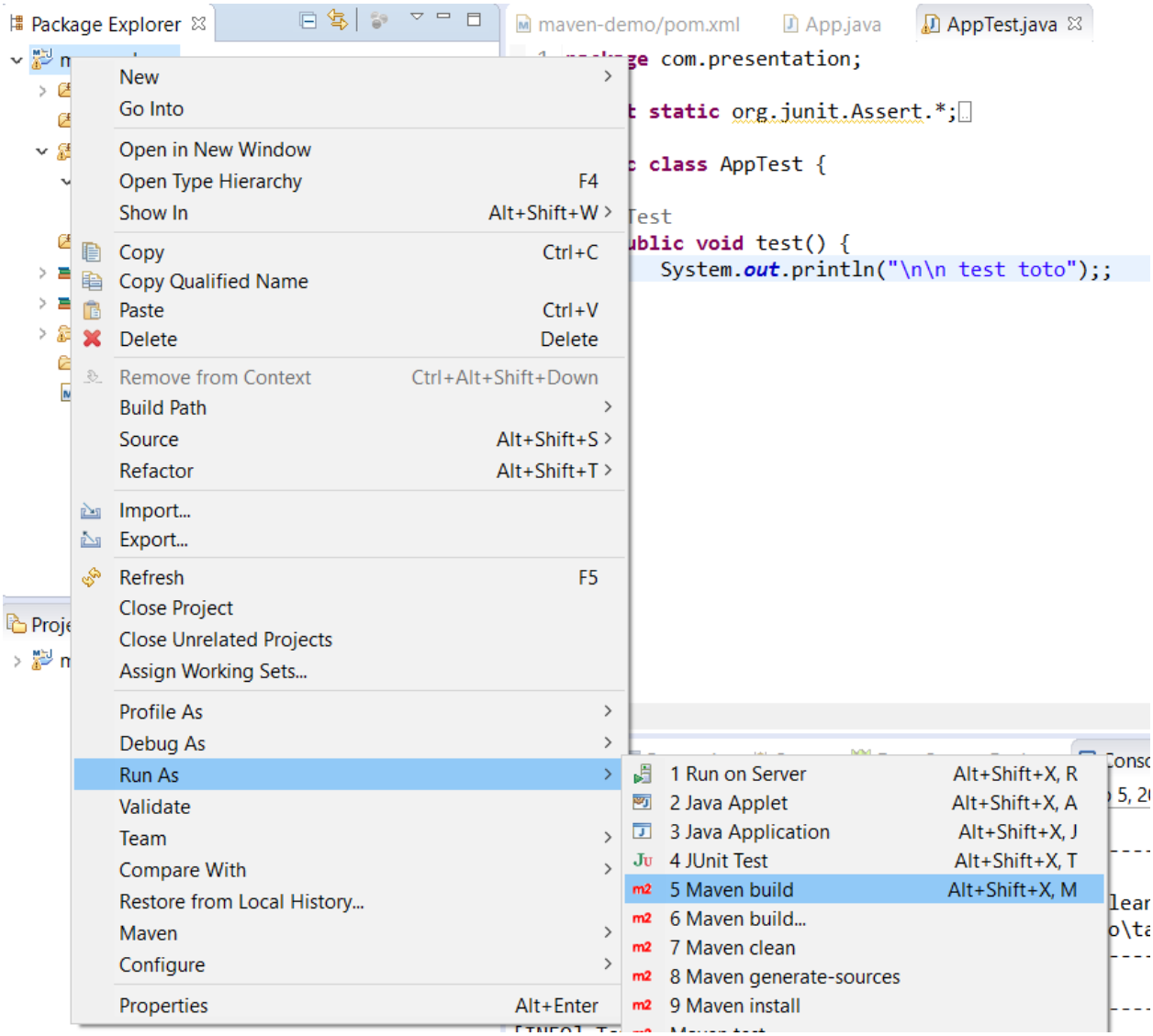
```
[INFO] Scanning for projects...
[INFO]
[INFO] Using the builder org.apache.maven.lifecycle.internal.builder.singlethreaded.SingleThreadedBuilder with a thread count of 1
[INFO]
[INFO] ------------------------------------------------------------------------
[INFO] Building maven-demo 0.0.1-SNAPSHOT
[INFO] ------------------------------------------------------------------------
[INFO]
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ maven-demo ---
[WARNING] Using platform encoding (Cp1252 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] Copying 0 resource
[INFO]
[INFO] --- maven-compiler-plugin:2.5.1:compile (default-compile) @ maven-demo ---
[WARNING] File encoding has not been set, using platform encoding Cp1252, i.e. build is platform dependent!
[INFO] Compiling 1 source file to D:\workspaces\myprojects\maven-demo\target\classes
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time: 2.891 s
[INFO] Finished at: 2017-02-05T19:51:40+02:00
[INFO] Final Memory: 10M/123M
[INFO] ------------------------------------------------------------------------
```

On remarque l'apparition du repertoire 'target' ; La classe App.java est compilé en 'App.class'.

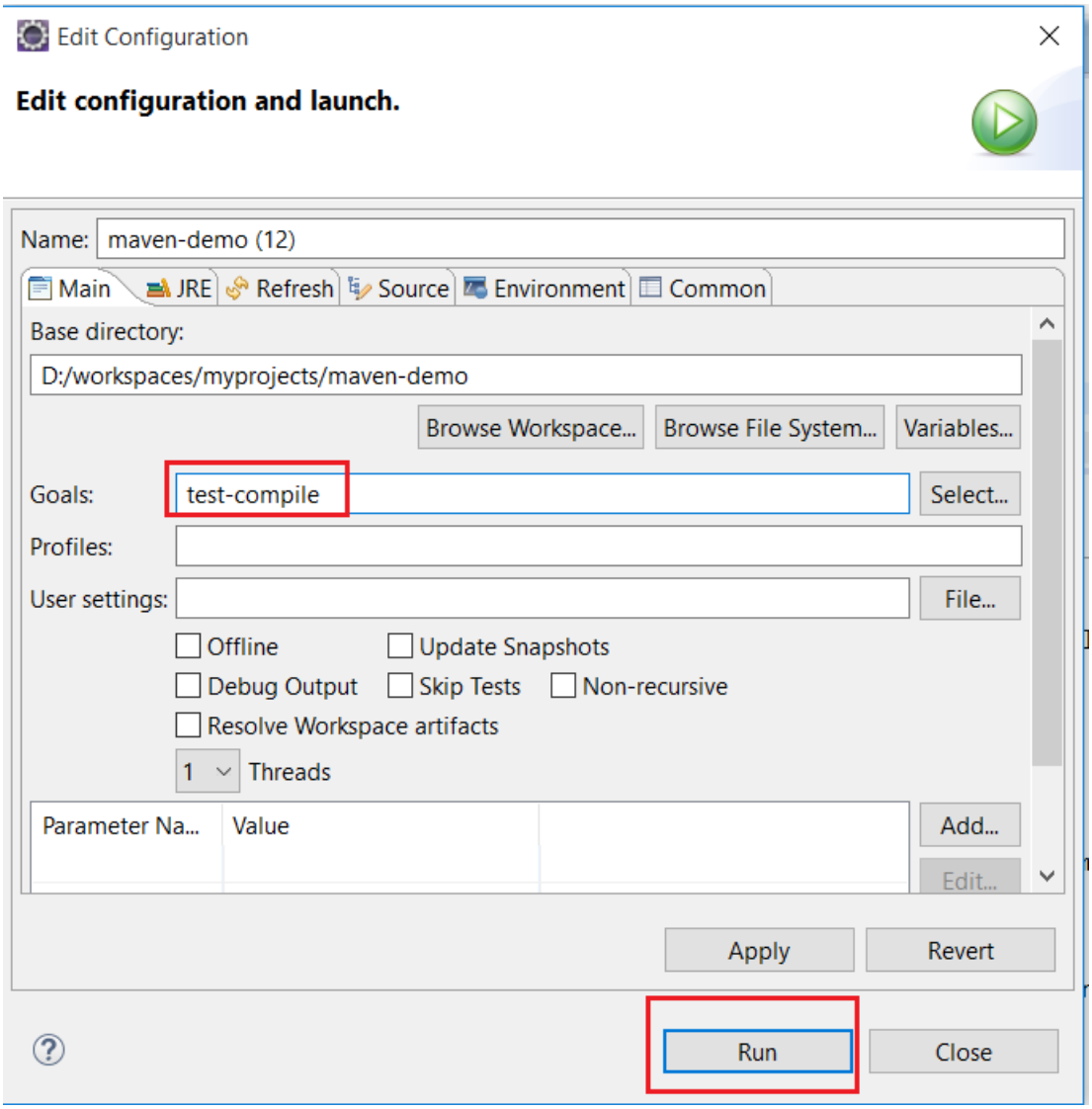


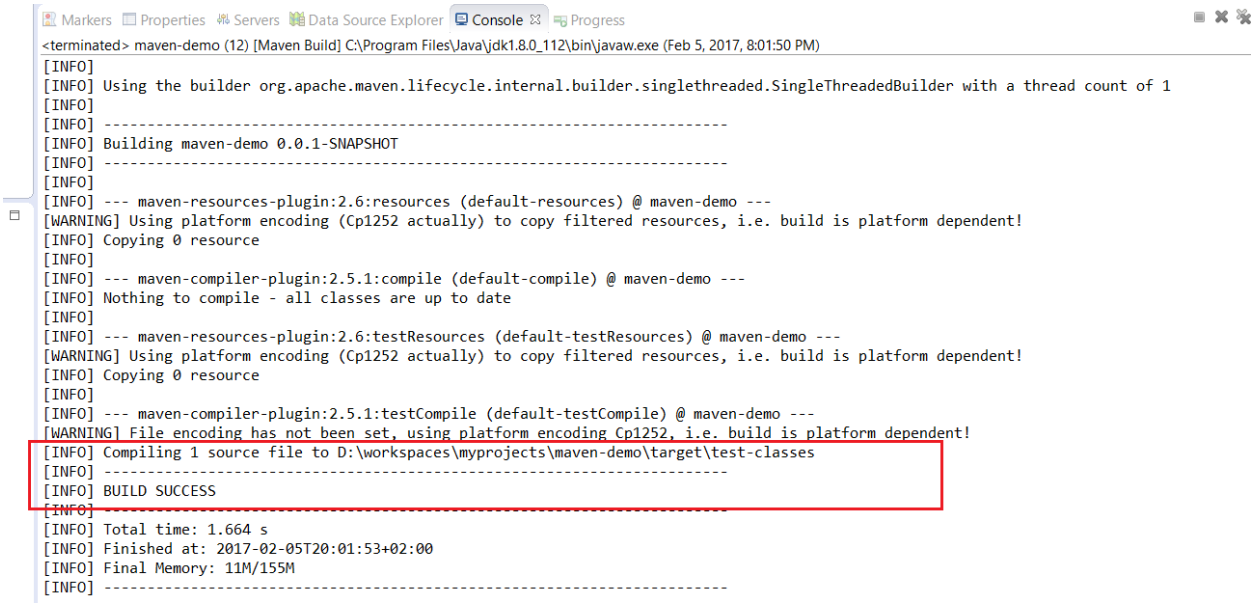
6.2 COMMANDE TEST-COMPILE

Commande test-compile (compilation des fichiers tests) :

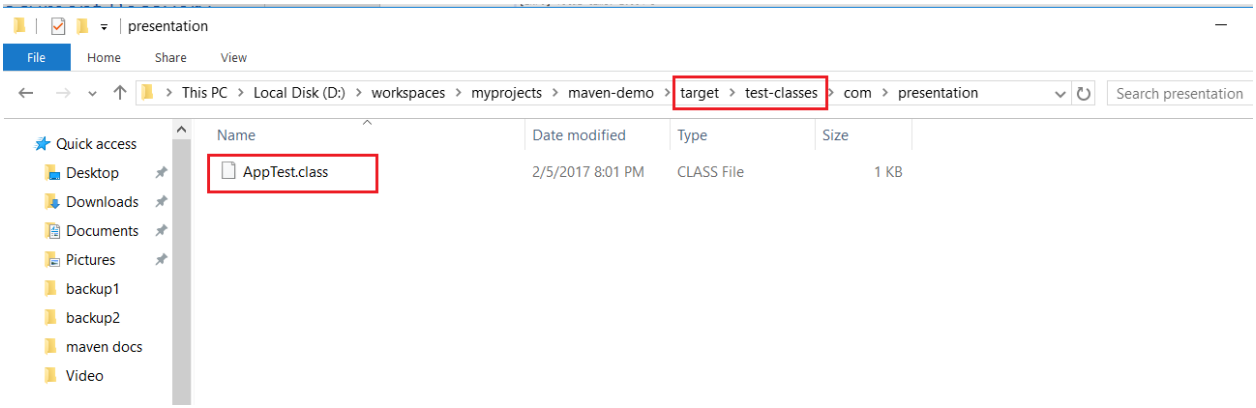


Ecrire ‘test-compile’ dans ‘Goals’ et cliquer sur ‘Run’ :

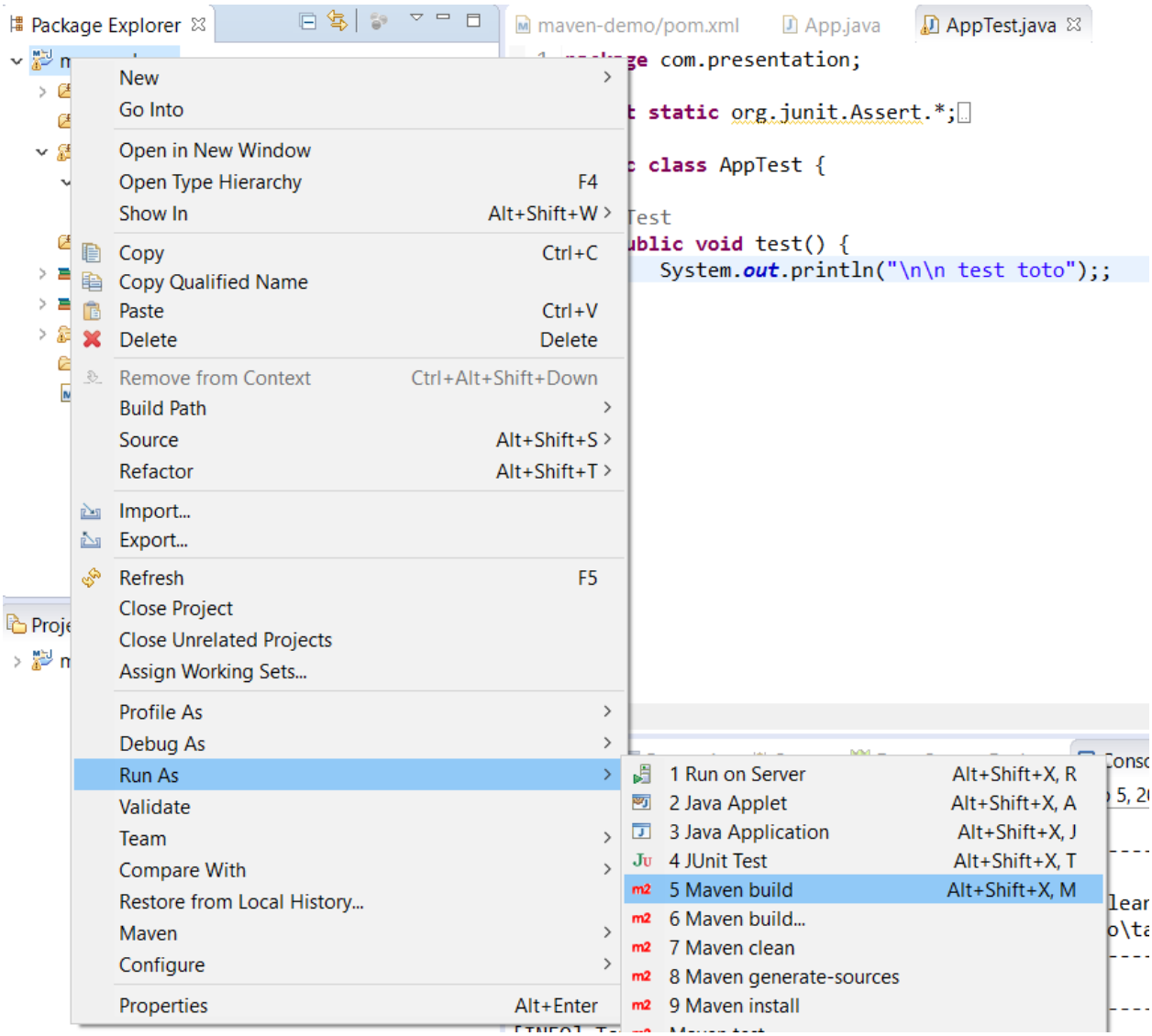




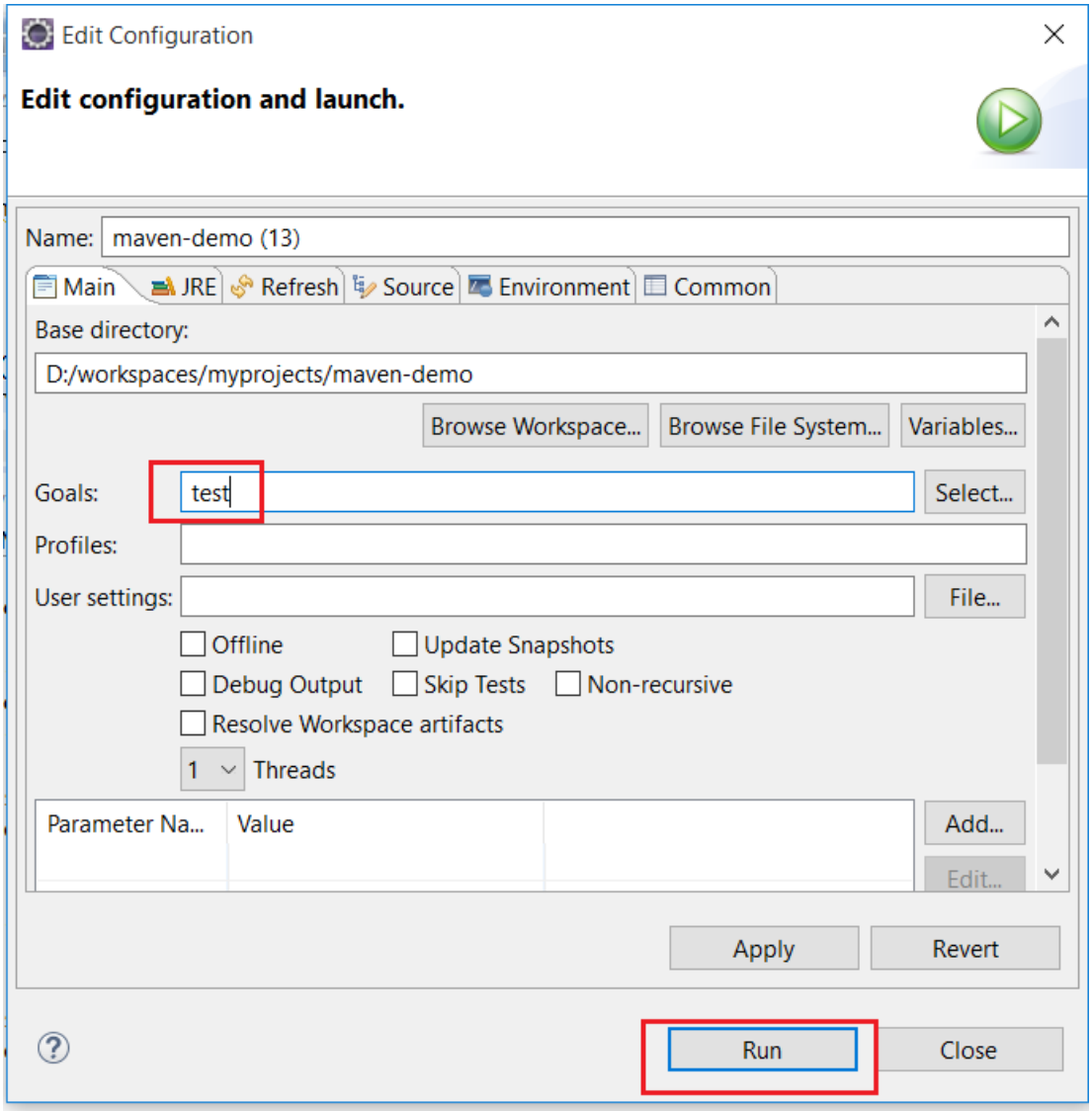
On remarque que la classe AppTest.java est compilé en ‘AppTest.class’.



6.3 COMMANDE TEST



On tape ‘test’ dans ‘Goals’ et on clique ‘Run’ :



Dans notre exemple on remarque que notre test a échoué

```
[INFO] --- maven-surefire-plugin:2.12.4:test (default-test) @ maven-demo ---
[INFO] Surefire report directory: D:\workspaces\myprojects\maven-demo\target\surefire-reports

-------------------------------------------------------
 T E S T S
-------------------------------------------------------
Running com.presentation.AppTest
Tests run: 1, Failures: 0, Errors: 1, Skipped: 0, Time elapsed: 0.062 sec <<< FAILURE!
initializationError(com.presentation.AppTest)  Time elapsed: 0.014 sec  <<< ERROR!
java.lang.NoClassDefFoundError: org/hamcrest/SelfDescribing
        at java.lang.ClassLoader.defineClass1(Native Method)
        at java.lang.ClassLoader.defineClass(ClassLoader.java:763)
        at java.security.SecureClassLoader.defineClass(SecureClassLoader.java:142)
        at java.net.URLClassLoader.defineClass(URLClassLoader.java:467)
        at java.net.URLClassLoader.access$100(URLClassLoader.java:73)
        at java.net.URLClassLoader$1.run(URLClassLoader.java:368)
        at java.net.URLClassLoader$1.run(URLClassLoader.java:362)
        at java.security.AccessController.doPrivileged(Native Method)
        at java.net.URLClassLoader.findClass(URLClassLoader.java:361)
        at java.lang.ClassLoader.loadClass(ClassLoader.java:424)
        at sun.misc.Launcher$AppClassLoader.loadClass(Launcher.java:331)
        at java.lang.ClassLoader.loadClass(ClassLoader.java:357)
        at org.junit.internal.builders.JUnit4Builder.runnerForClass(JUnit4Builder.java:10)
        at org.junit.runners.model.RunnerBuilder.safeRunnerForClass(RunnerBuilder.java:59)
        at org.junit.internal.builders.AllDefaultPossibilitiesBuilder.runnerForClass(AllDefaultPossibilitiesBuilder.java:26)
        at org.junit.runners.model.RunnerBuilder.safeRunnerForClass(RunnerBuilder.java:59)
        at org.junit.internal.requests.ClassRequest.getRunner(ClassRequest.java:33)
        at org.apache.maven.surefire.junit4.JUnit4Provider.execute(JUnit4Provider.java:250)
        at org.apache.maven.surefire.junit4.JUnit4Provider.executeTestSet(JUnit4Provider.java:141)
        at org.apache.maven.surefire.junit4.JUnit4Provider.invoke(JUnit4Provider.java:112)
        at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
        at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:62)
        at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
        at java.lang.reflect.Method.invoke(Method.java:498)
        at org.apache.maven.surefire.util.ReflectionUtils.invokeMethodWithArray(ReflectionUtils.java:189)
        at org.apache.maven.surefire.booter.ProviderFactory$ProviderProxy.invoke(ProviderFactory.java:165)
        at org.apache.maven.surefire.booter.ProviderFactory.invokeProvider(ProviderFactory.java:85)
        at org.apache.maven.surefire.booter.ForkedBooter.runSuitesInProcess(ForkedBooter.java:115)
        at org.apache.maven.surefire.booter.ForkedBooter.main(ForkedBooter.java:75)
Caused by: java.lang.ClassNotFoundException: org.hamcrest.SelfDescribing
Caused by: java.lang.ClassNotFoundException: org.hamcrest.SelfDescribing
        at java.net.URLClassLoader.findClass(URLClassLoader.java:381)
        at java.lang.ClassLoader.loadClass(ClassLoader.java:424)
        at sun.misc.Launcher$AppClassLoader.loadClass(Launcher.java:331)
        at java.lang.ClassLoader.loadClass(ClassLoader.java:357)
        ... 29 more


Results :

Tests in error:
  initializationError(com.presentation.AppTest): org/hamcrest/SelfDescribing

Tests run: 1, Failures: 0, Errors: 1, Skipped: 0

[INFO] ------------------------------------------------------------------------
[INFO] BUILD FAILURE
[INFO] ------------------------------------------------------------------------
[INFO] Total time: 3.976 s
[INFO] Finished at: 2017-02-05T20:16:37+02:00
[INFO] Final Memory: 7M/123M
[INFO] ------------------------------------------------------------------------
[ERROR] Failed to execute goal org.apache.maven.plugins:maven-surefire-plugin:2.12.4:test (default-test) on project maven-demo: There are test failures.
[ERROR]
```

L'erreur est due à l'exclusion de la dépendance 'hmcrest-core'. On enlève l'exclusion et on exécute la commande test de nouveau.

maven-demo/pom.xml | App.java | AppTest.java

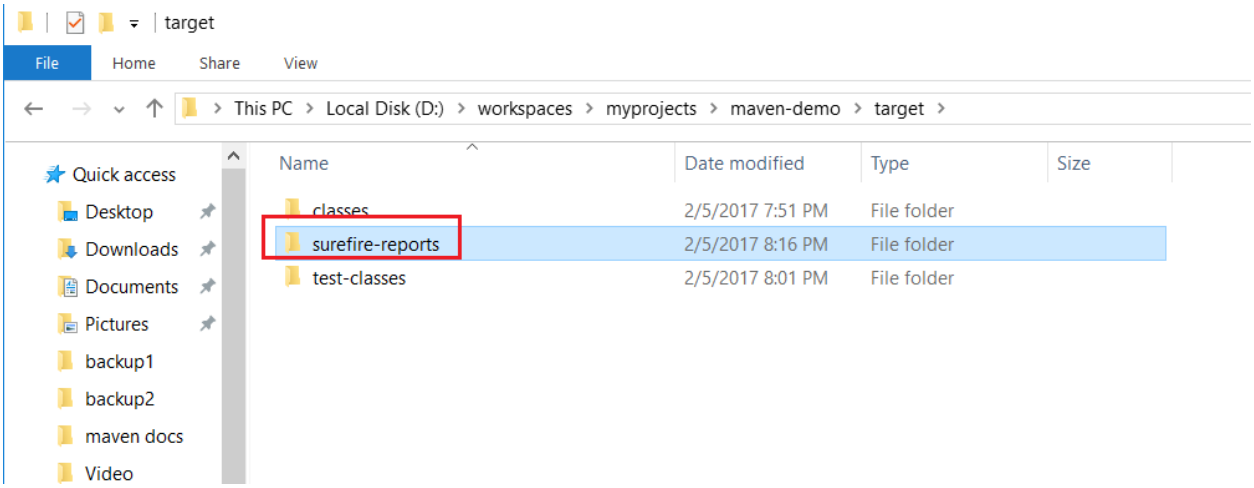
```
1  <project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="h
2    <modelVersion>4.0.0</modelVersion>
3    <groupId>com.presentation</groupId>
4    <artifactId>maven-demo</artifactId>
5    <version>0.0.1-SNAPSHOT</version>
6
7    <dependencies>
8       <dependency>
9        <groupId>junit</groupId>
10       <artifactId>junit</artifactId>
11       <version>4.12</version>
12      </dependency>
13
14   </dependencies>
15
16 </project>
```

Le test est un succès

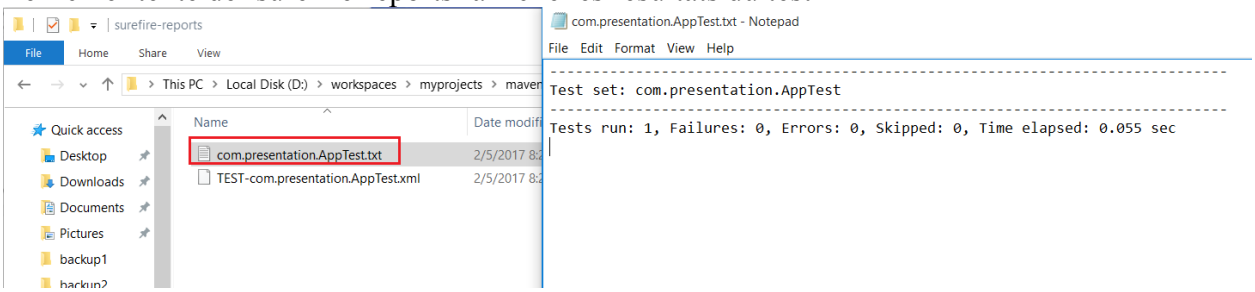
Markers | Properties | Servers | Data Source Explorer | Console | Progress

```
<terminated> maven-demo (8) [Maven Build] C:\Program Files\Java\jdk1.8.0_112\bin\javaw.exe (Feb 5, 2017, 8:24:38 PM)
[INFO]
[INFO] --- maven-compiler-plugin:2.5.1:compile (default-compile) @ maven-demo ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- maven-resources-plugin:2.6:testResources (default-testResources) @ maven-demo ---
[WARNING] Using platform encoding (Cp1252 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] Copying 0 resource
[INFO]
[INFO] --- maven-compiler-plugin:2.5.1:testCompile (default-testCompile) @ maven-demo ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- maven-surefire-plugin:2.12.4:test (default-test) @ maven-demo ---
[INFO] Surefire report directory: D:\workspaces\myprojects\maven-demo\target\surefire-reports

-------------------------------------------------------
 T E S T S
-------------------------------------------------------
Running com.presentation.AppTest


 test toto
Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.055 sec

Results :

Tests run: 1, Failures: 0, Errors: 0, Skipped: 0

[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time: 1.884 s
[INFO] Finished at: 2017-02-05T20:24:41+02:00
[INFO] Final Memory: 8M/155M
[INFO] ------------------------------------------------------------------------
```

On remarque l'apparition d'un nouveau répertoire 'surefire-reports' dans le répertoire 'target'

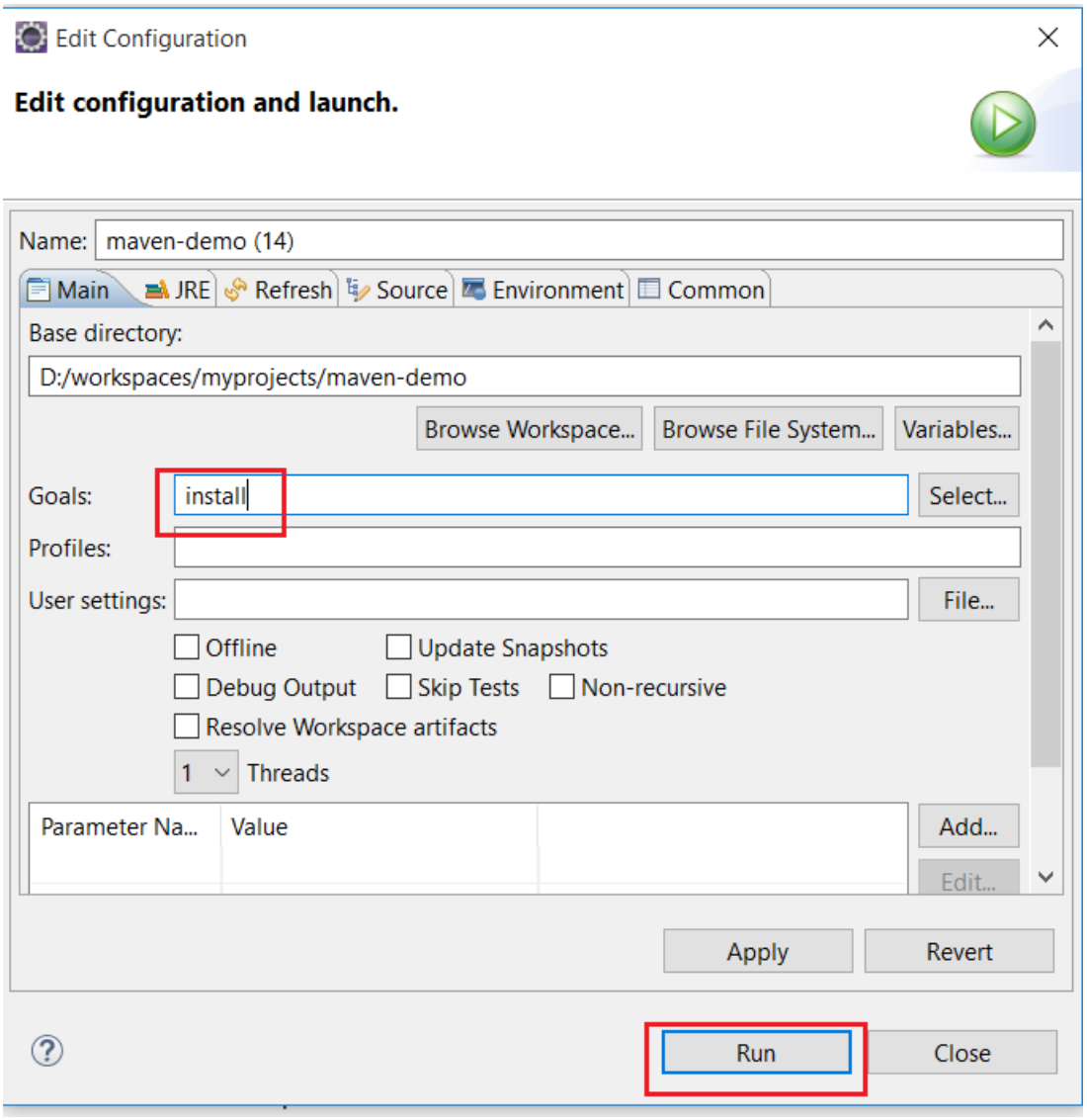


Le fichier texte de 'surefire-reports' affiche les résultats du test



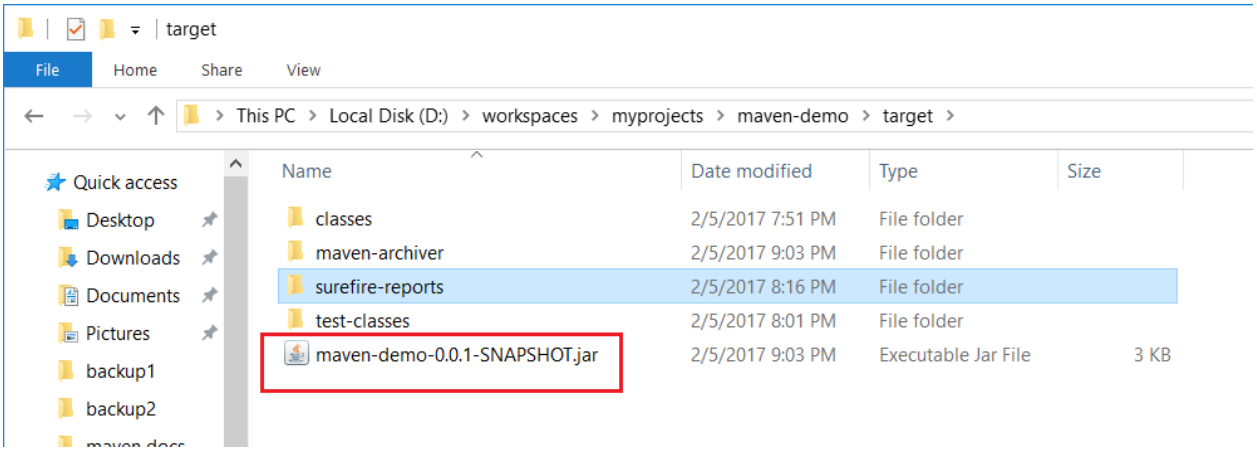
6.4 COMMANDE INSTALL

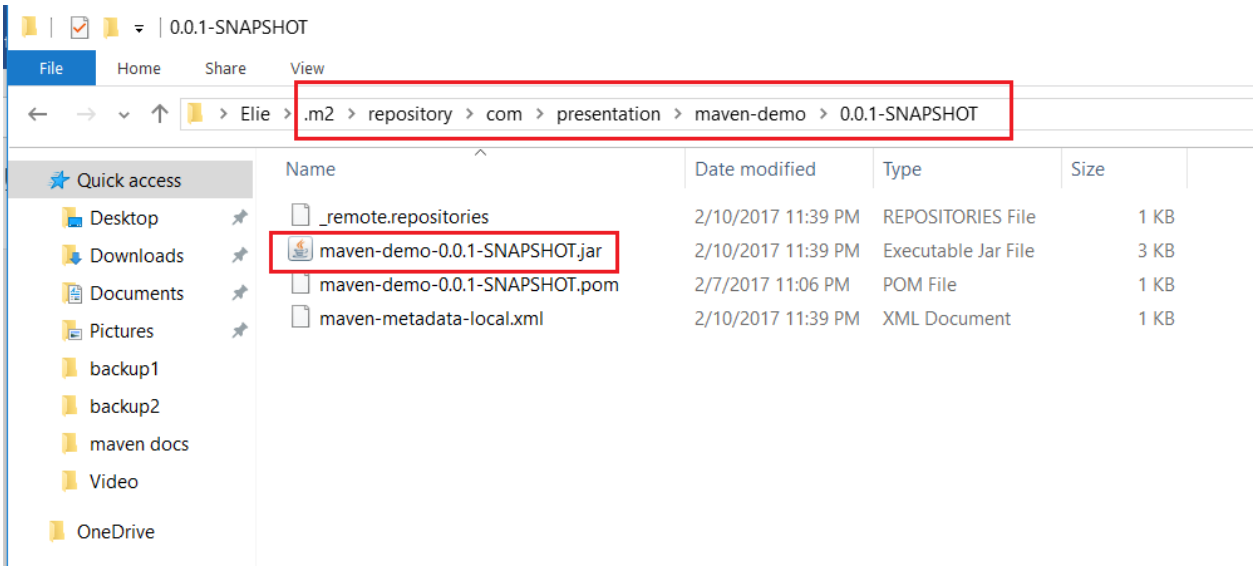
On tape ‘install’ dans ‘Goals’ et on clique sur ‘Run’



```
Markers  Properties  Servers  Data Source Explorer  Console  Progress
<terminated> maven-demo (14) [Maven Build] C:\Program Files\Java\jdk1.8.0_112\bin\javaw.exe (Feb 5, 2017, 9:03:19 PM)
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- maven-surefire-plugin:2.12.4:test (default-test) @ maven-demo ---
[INFO] Surefire report directory: D:\workspaces\myprojects\maven-demo\target\surefire-reports

-------------------------------------------------------
 T E S T S
-------------------------------------------------------
Running com.presentation.AppTest


 test toto
Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.081 sec

Results :

Tests run: 1, Failures: 0, Errors: 0, Skipped: 0

[INFO]
[INFO] --- maven-jar-plugin:2.4:jar (default-jar) @ maven-demo ---
[INFO] Building jar: D:\workspaces\myprojects\maven-demo\target\maven-demo-0.0.1-SNAPSHOT.jar
[INFO]
[INFO] --- maven-install-plugin:2.4:install (default-install) @ maven-demo ---
[INFO] Installing D:\workspaces\myprojects\maven-demo\target\maven-demo-0.0.1-SNAPSHOT.jar to C:\Users\Elie\.m2\repository\com\presentation\maven-demo\0.0.1-SNAPSHOT\
[INFO] Installing D:\workspaces\myprojects\maven-demo\pom.xml to C:\Users\Elie\.m2\repository\com\presentation\maven-demo\0.0.1-SNAPSHOT\maven-demo-0.0.1-SNAPSHOT.pom
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time: 3.559 s
[INFO] Finished at: 2017-02-05T21:03:24+02:00
[INFO] Final Memory: 9M/155M
[INFO] ------------------------------------------------------------------------
```

Le jar est créé dans ‘target’ et dans notre dépôt local





7. PROJET MULTI-MODULES

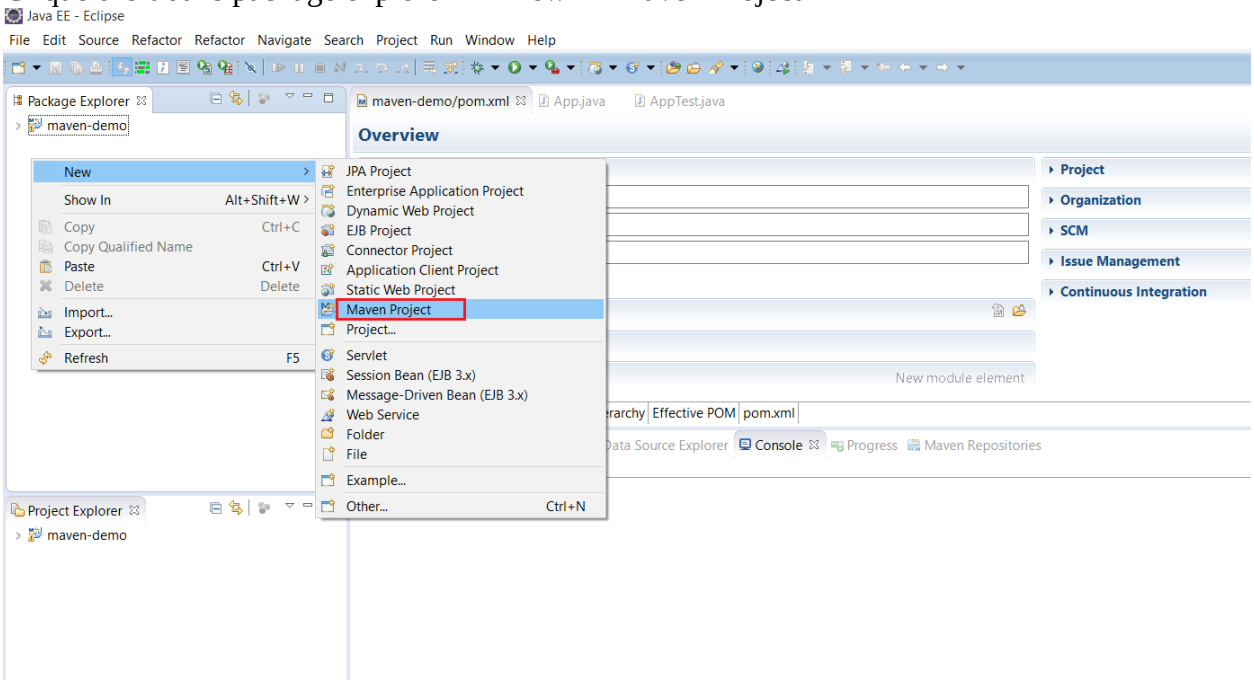
Exemple : web server et son client ; le client dépend du serveur et il faut qu'il y a une sorte de synchronisation entre les deux. Maven va faire ce travail.

On va créer un projet parent ayant 2 modules :

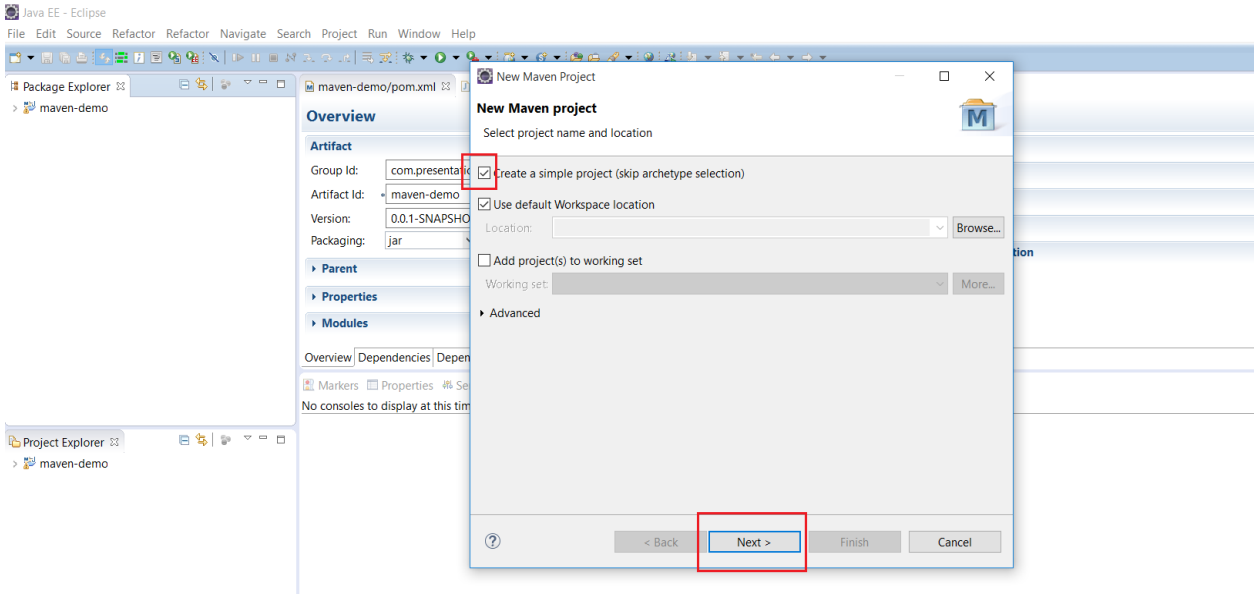
a. Web server
b. Client

6.0 CREATION D'UN PROJET PARENT

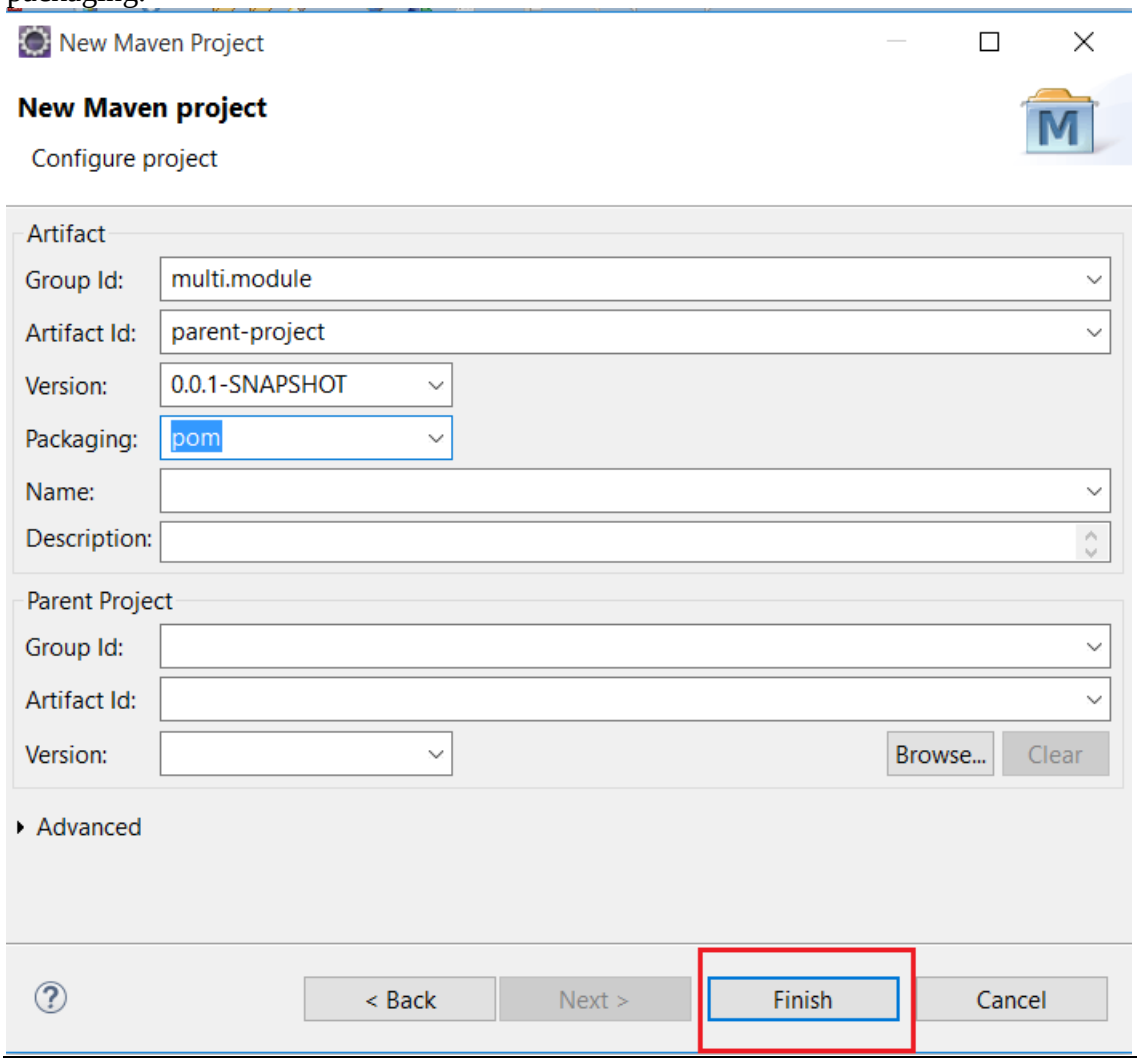
Clique droit dans package explorer → New → Maven Project



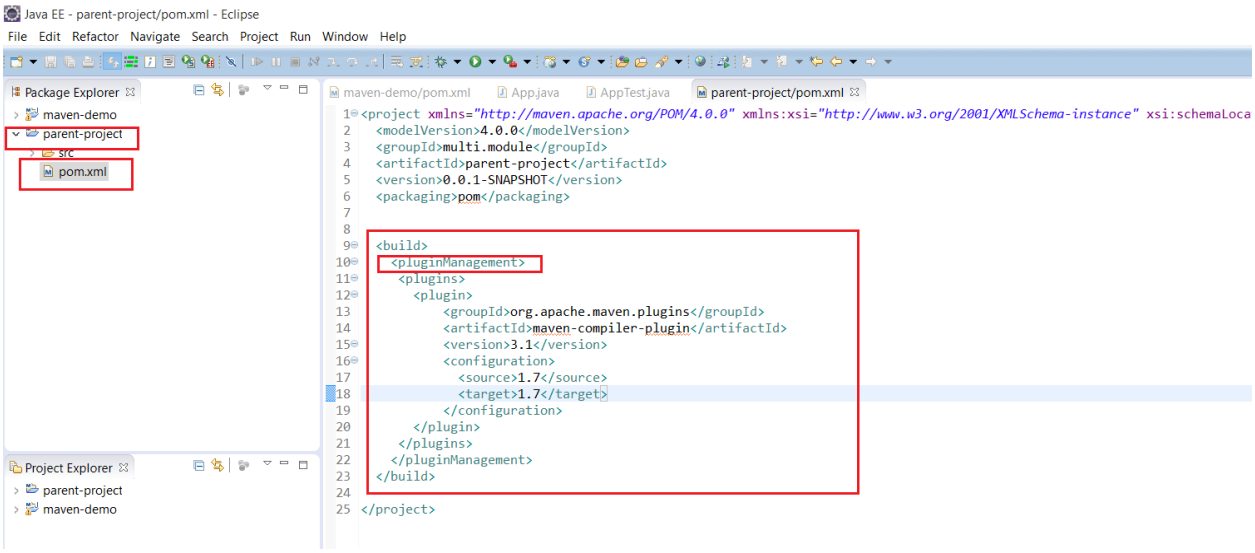
Cocher ‘Create a simple project’ → Next



Saisir ‘multi.module’ comme group Id, ‘parent-project’ comme artifact Id et choisir ‘pom’ pour packaging.



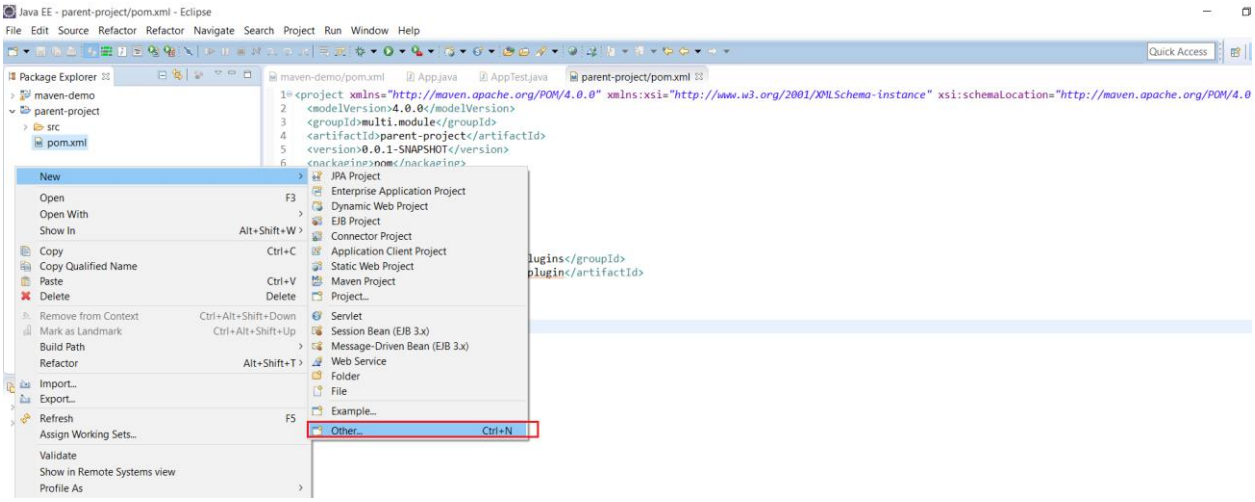
Configuration de la java compiler pour que tous les modules puissent l'utiliser cela :



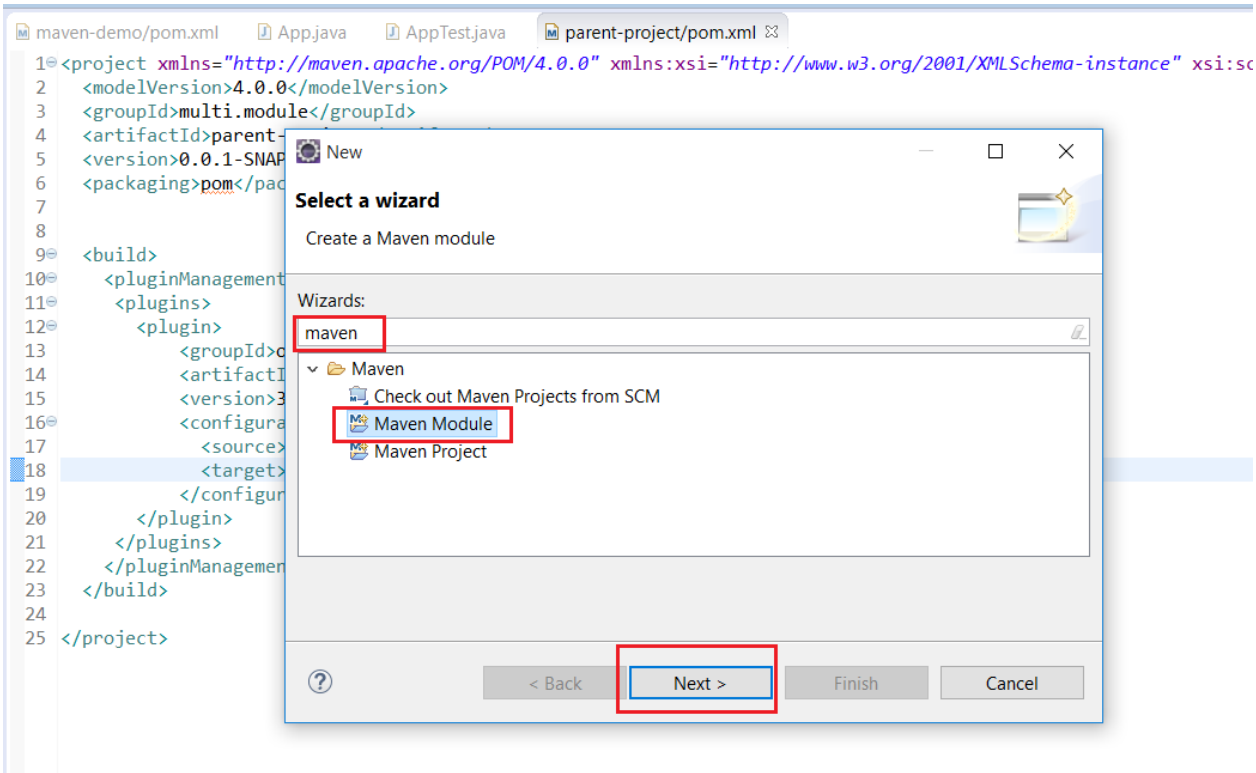

```
<build>
	<pluginManagement>
		<plugins>
			<plugin>
			  <groupId>org.apache.maven.plugins</groupId>
			  <artifactId>maven-compiler-plugin</artifactId>
			  <version>3.1</version>
			  <configuration>
			     <source>1.7</source>
			     <target>1.7</target>
			  </configuration>
			</plugin>
		</plugins>
	</pluginManagement>
</build>
```

6.1 CREATION DU MODULE SERVEUR

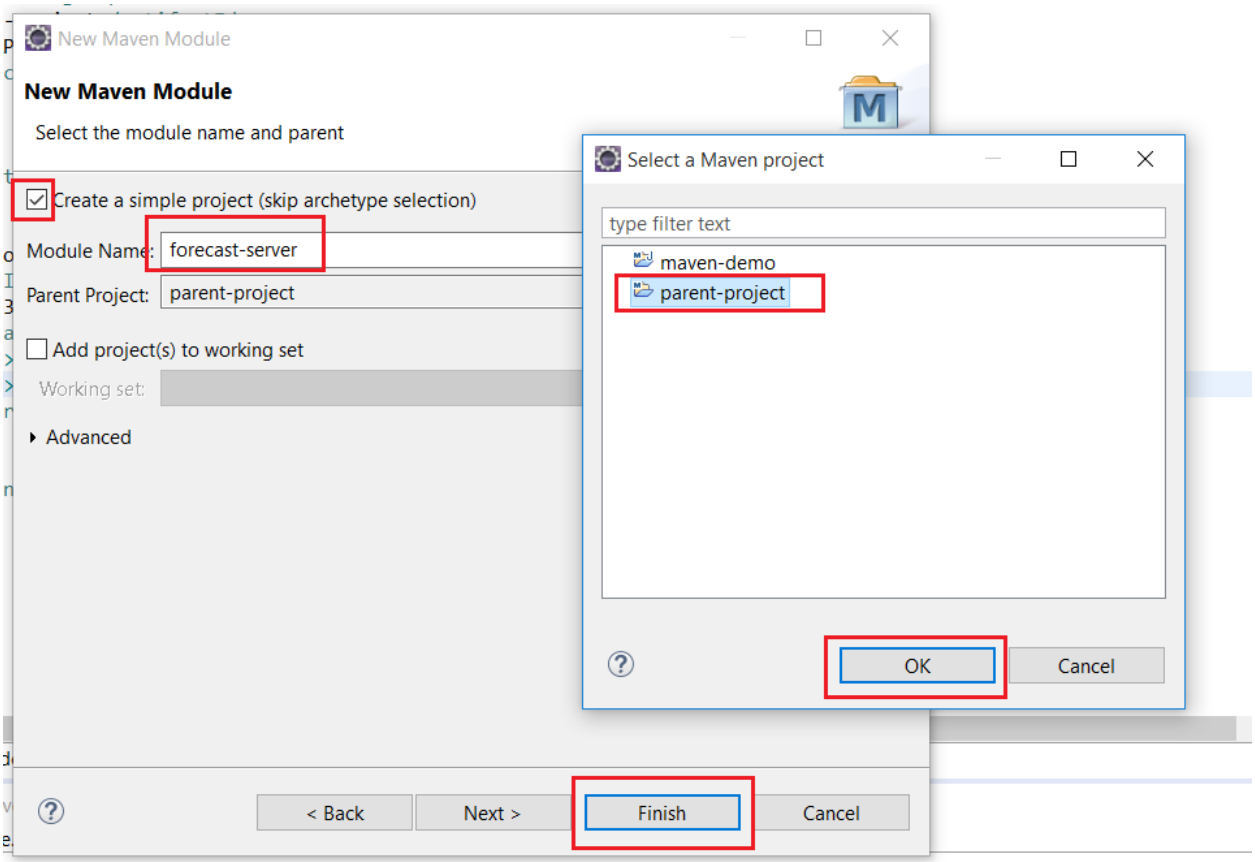
Clique droit dans le package explorer → New → Other



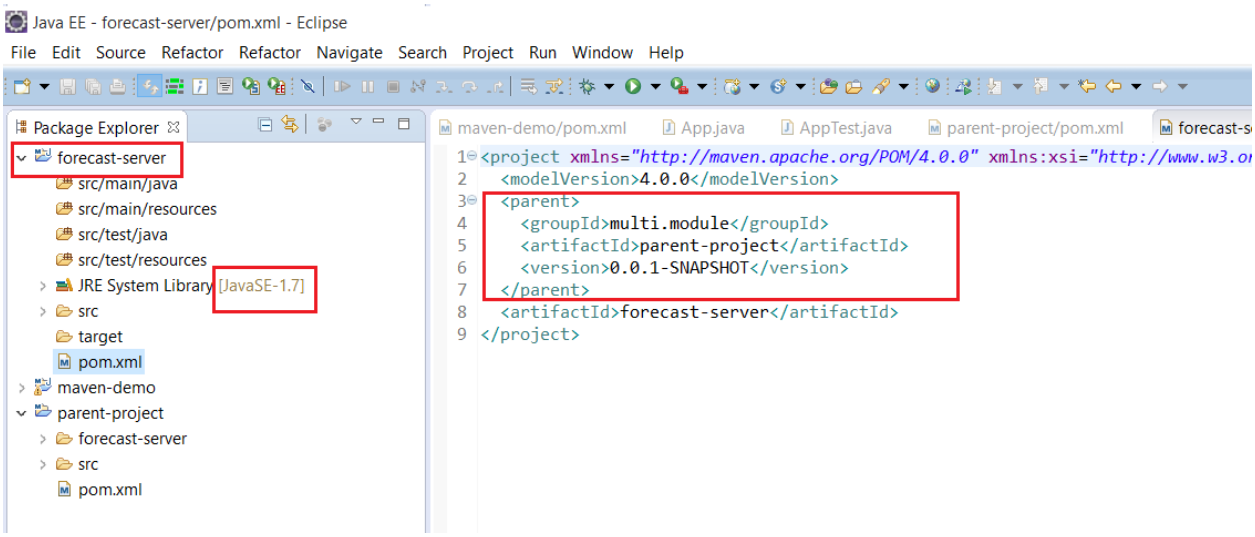
Saisir 'maven' → choisir 'Maven Modules' → Next



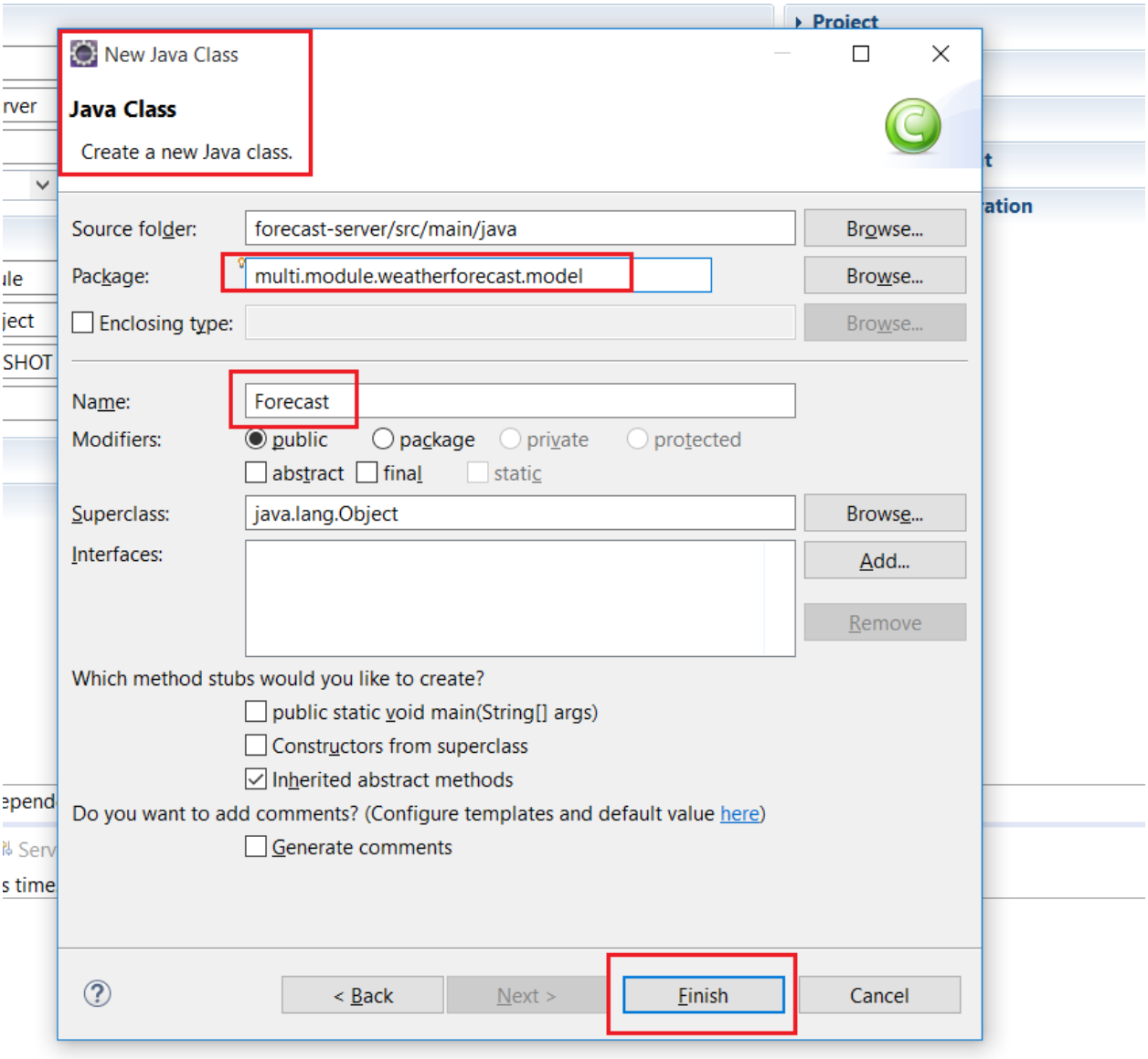
Cocher 'Create simple project' → saisir le module name 'forecast-server' → cliquer sur browse→ choisir 'parent-project' pour Parent project→ cliquer Finish

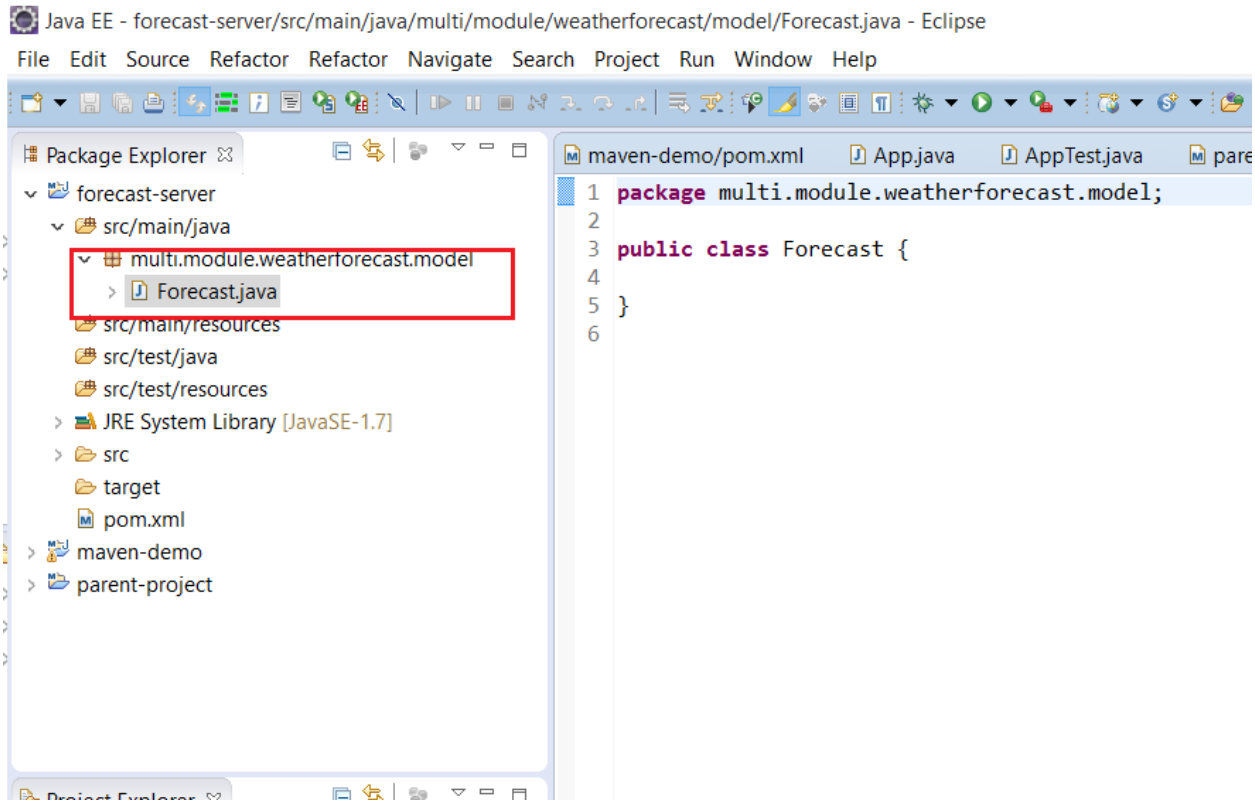


Le module forecast-server étant créé, on remarque qu'on le javaSE 1.7 comme on a déjà configuré dans le POM du parent. On remarque aussi que dans le POM de notre module, on a la balise <parent>



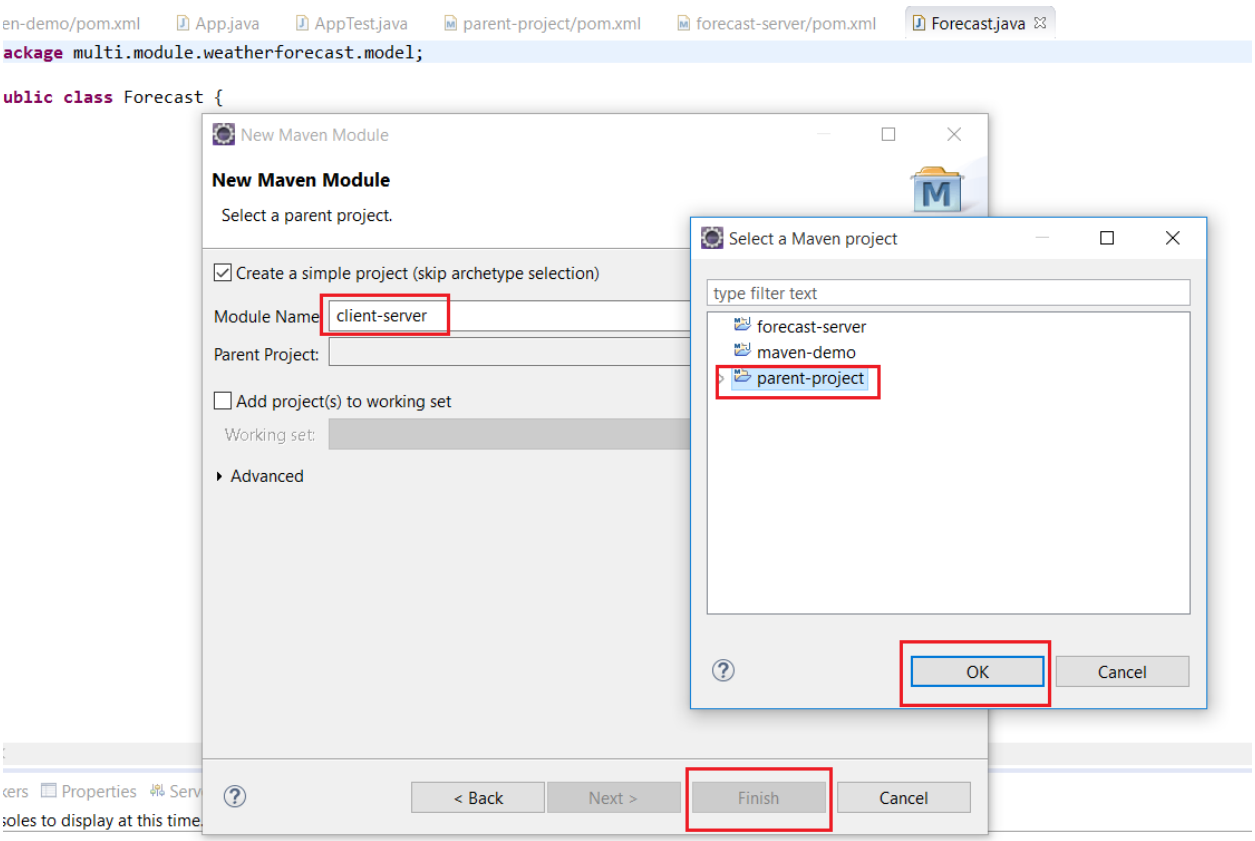
Ajoutons une classe java à notre serveur :
Package :multi.module.weatherforecast.model
Classe: Forecast

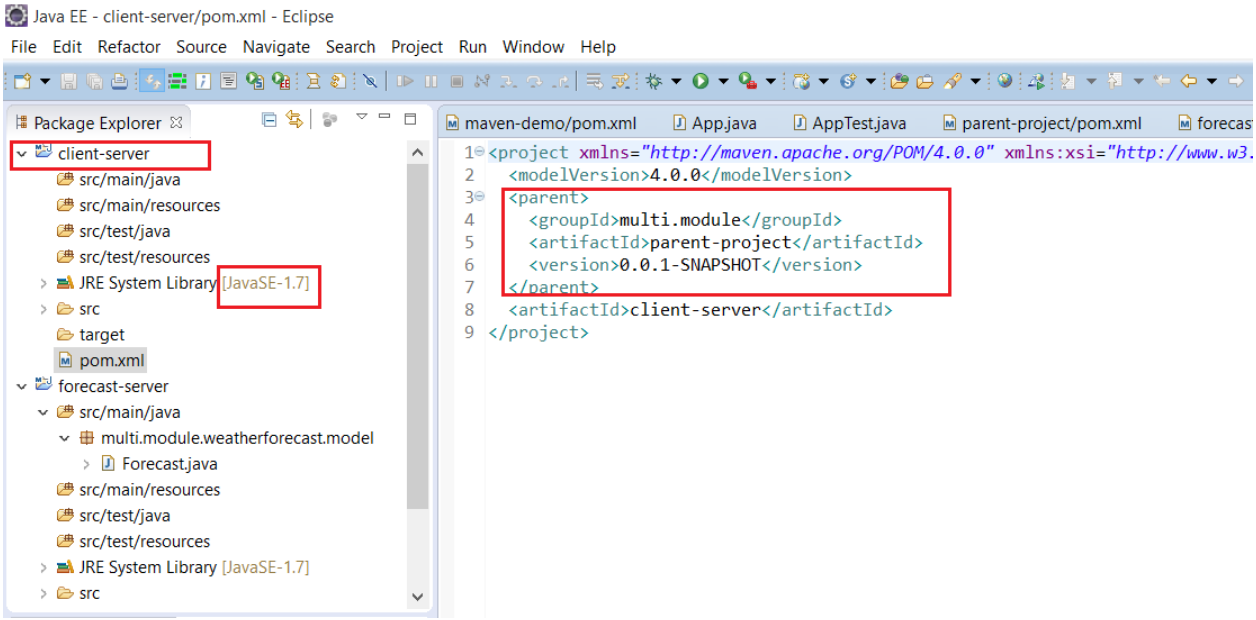




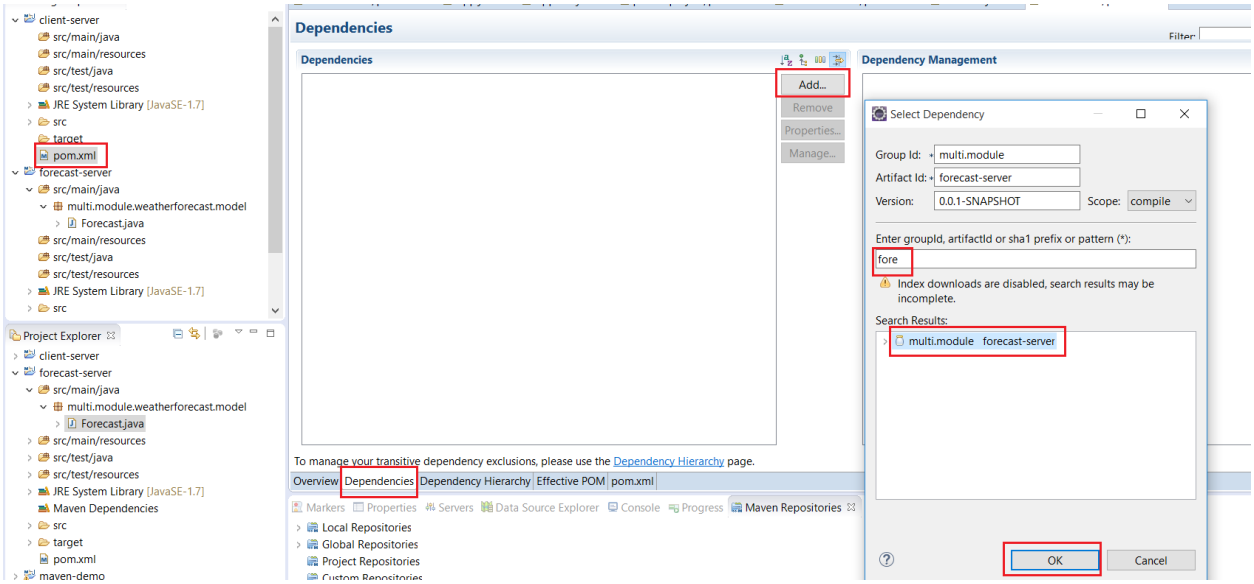
6.2 CREATION DU MODULE CLIENT

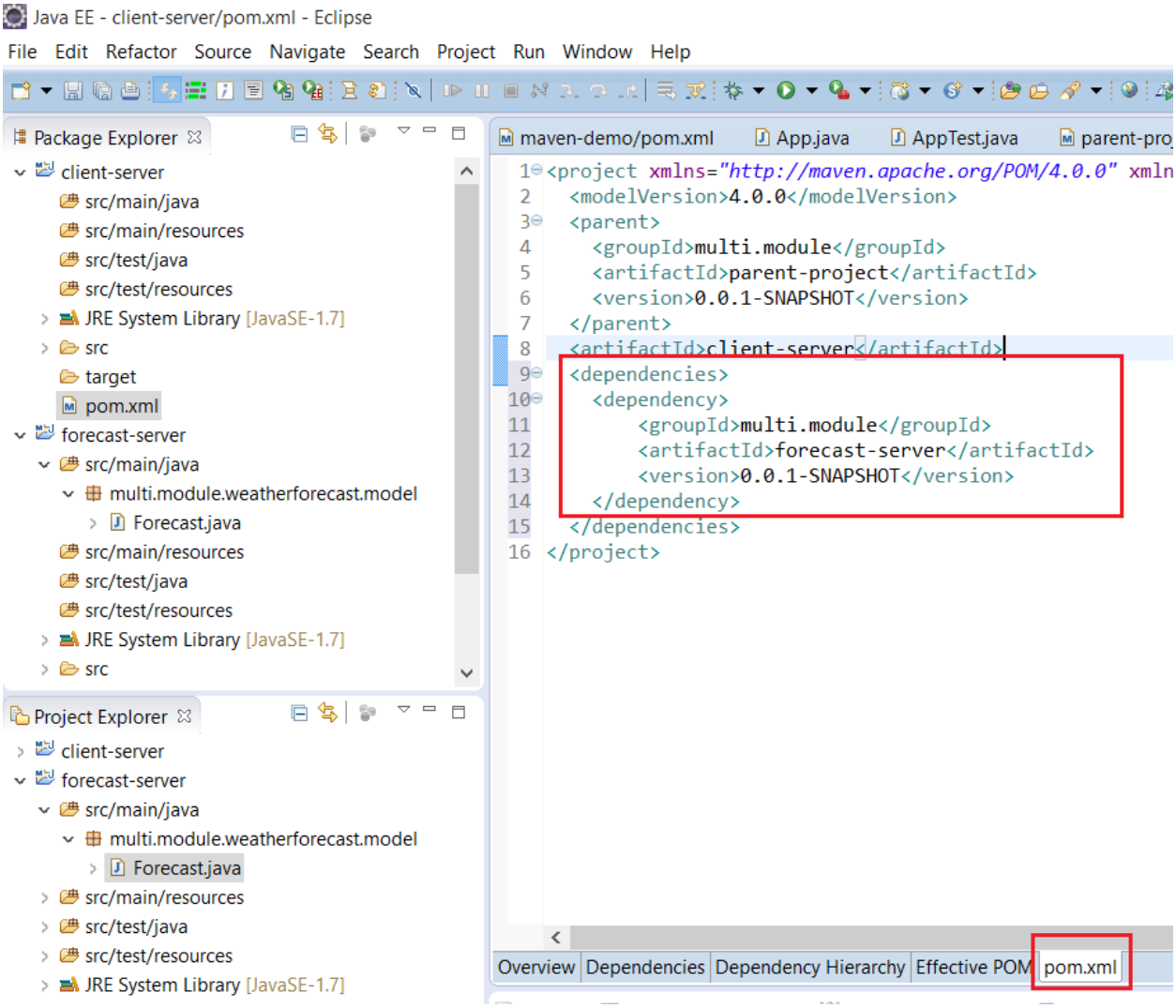
Module name: client-server
Parent Package : parent-package



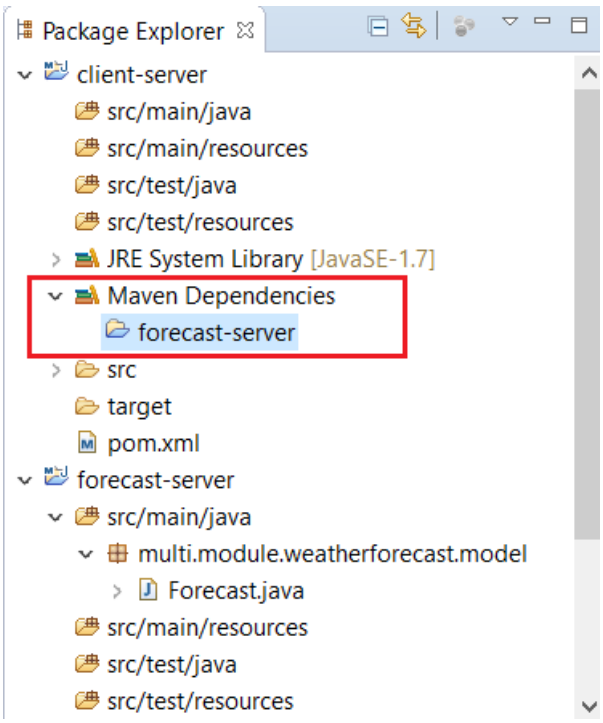


Déclaration d'une dépendance entre serveur et client (client dépend du serveur) :
Double cliquer sur le pom.xml du client-server → choisir la TAB 'Dependencies' →Add… →choisir 'forecast-server' →OK


client-server
src/main/java
src/main/resources
src/test/java
src/test/resources
JRE System Library [JavaSE-1.7]
src
target
pom.xml
forecast-server
src/main/java
multi.module.weatherforecast.model
Forecast.java
src/main/resources
src/test/java
src/test/resources
JRE System Library [JavaSE-1.7]
src
Project Explorer
client-server
forecast-server
src/main/java
multi.module.weatherforecast.model
Forecast.java
src/main/resources
src/test/java
src/test/resources
JRE System Library [JavaSE-1.7]
Maven Dependencies
src
target
pom.xml
maven-demo
Dependencies
Dependencies
Add...
Remove
Properties...
Manage...
Dependency Management
Select Dependency
Group Id: multi.module
Artifact Id: forecast-server
Version: 0.0.1-SNAPSHOT
Scope: compile
Enter groupId, artifactId or sha1 prefix or pattern (*):
fore
Index downloads are disabled, search results may be incomplete.
Search Results:
multi.module forecast-server
OK
Cancel
To manage your transitive dependency exclusions, please use the Dependency Hierarchy page.
Overview
Dependencies
Dependency Hierarchy
Effective POM
pom.xml
Markers
Properties
Servers
Data Source Explorer
Console
Progress
Maven Repositories
Local Repositories
Global Repositories
Project Repositories

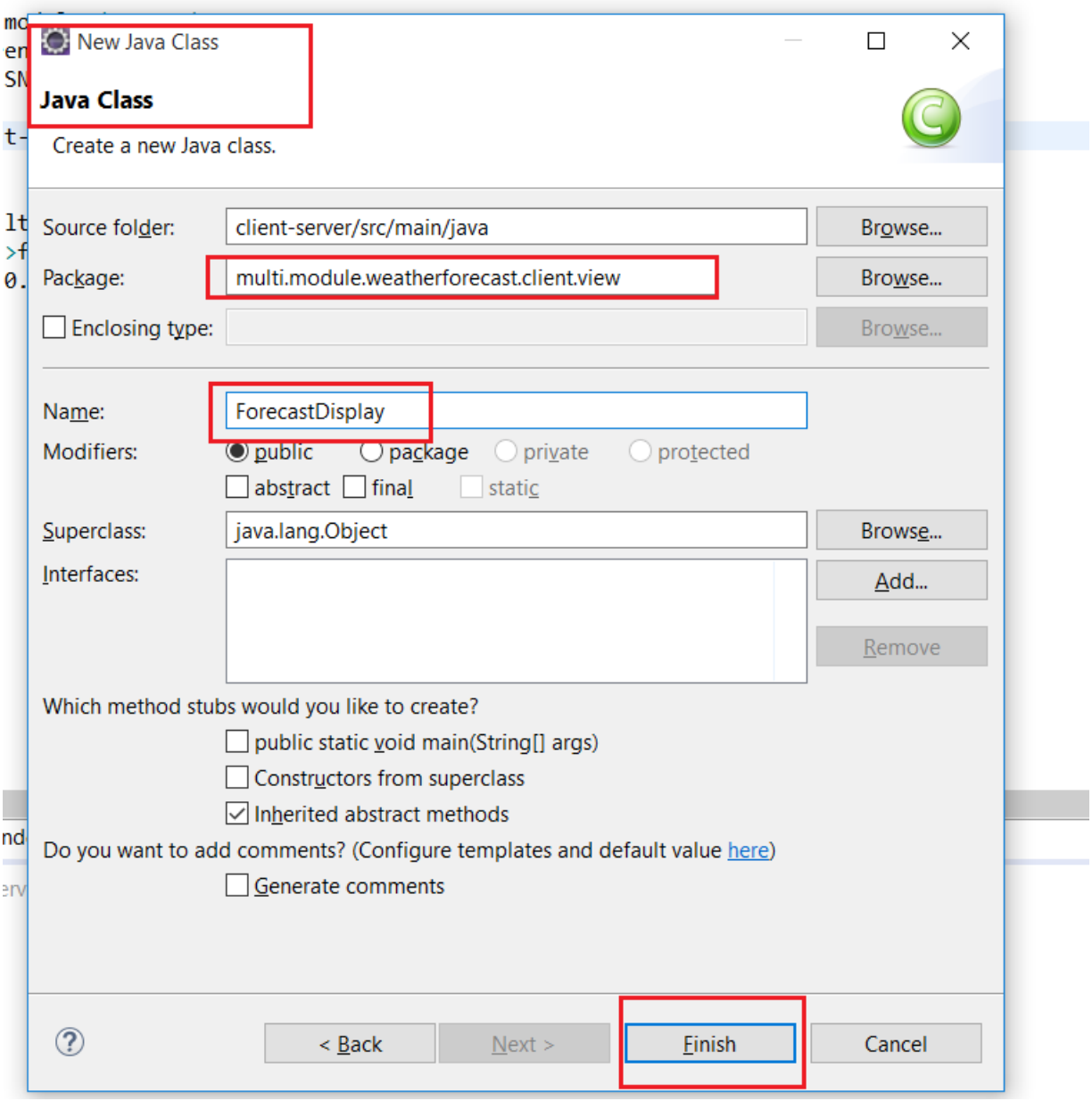

Java EE - client-server/pom.xml - Eclipse
File Edit Refactor Source Navigate Search Project Run Window Help
Package Explorer
client-server
src/main/java
src/main/resources
src/test/java
src/test/resources
JRE System Library [JavaSE-1.7]
src
target
pom.xml
forecast-server
src/main/java
multi.module.weatherforecast.model
Forecast.java
src/main/resources
src/test/java
src/test/resources
JRE System Library [JavaSE-1.7]
src
Project Explorer
client-server
forecast-server
src/main/java
multi.module.weatherforecast.model
Forecast.java
src/main/resources
src/test/java
src/test/resources
JRE System Library [JavaSE-1.7]
maven-demo/pom.xml
App.java
AppTest.java
parent-pro
<project xmlns="http://maven.apache.org/POM/4.0.0" xmln
<modelVersion>4.0.0</modelVersion>
<parent>
<groupId>multi.module</groupId>
<artifactId>parent-project</artifactId>
<version>0.0.1-SNAPSHOT</version>
</parent>
<artifactId>client-server</artifactId>
<dependencies>
<dependency>
<groupId>multi.module</groupId>
<artifactId>forecast-server</artifactId>
<version>0.0.1-SNAPSHOT</version>
</dependency>
</dependencies>
</project>
Overview
Dependencies
Dependency Hierarchy
Effective POM
pom.xml

Lorsqu'on sauvegarde, on remarque l'apparition de 'Maven Dependencies' et une référence au projet forecast-server :

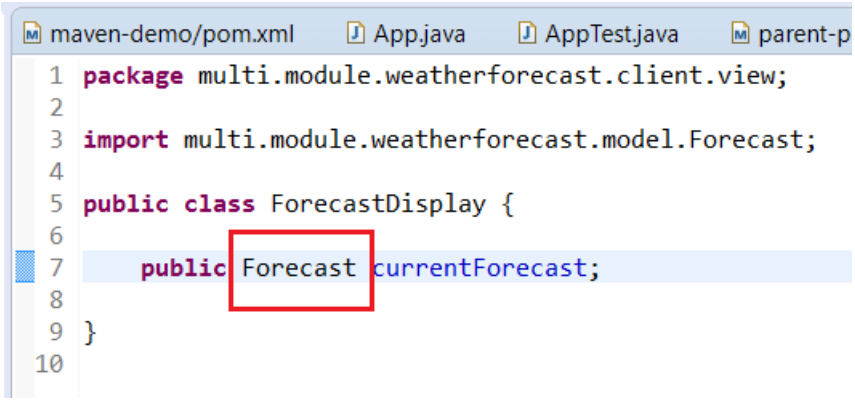


6.3 DEPENDANCES ENTRE PROJETS ET MODULES

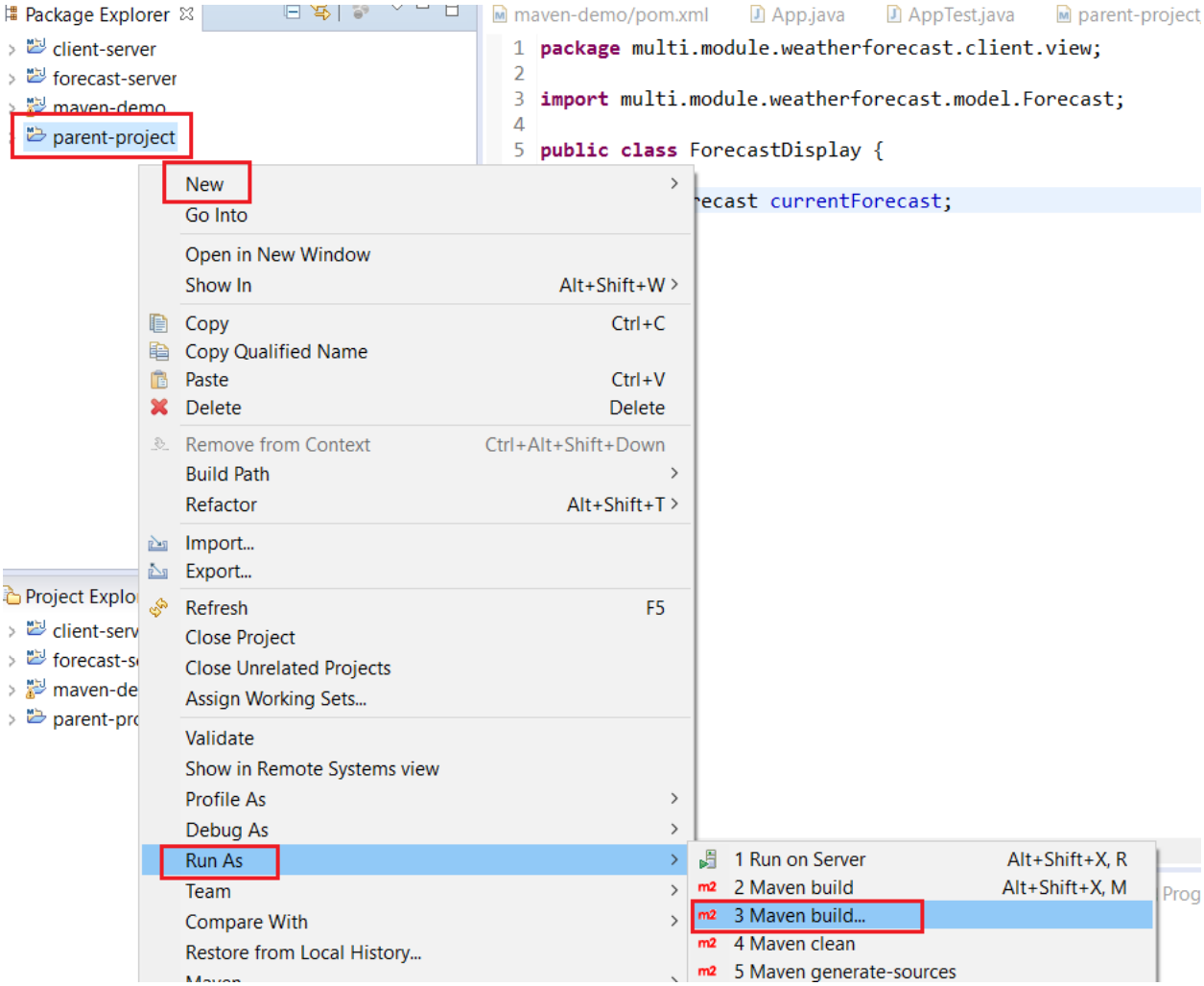
Ajoutons une classe java à notre serveur :
Package :multi.module.weatherforecast.client.view
Classe: ForecastDisplay

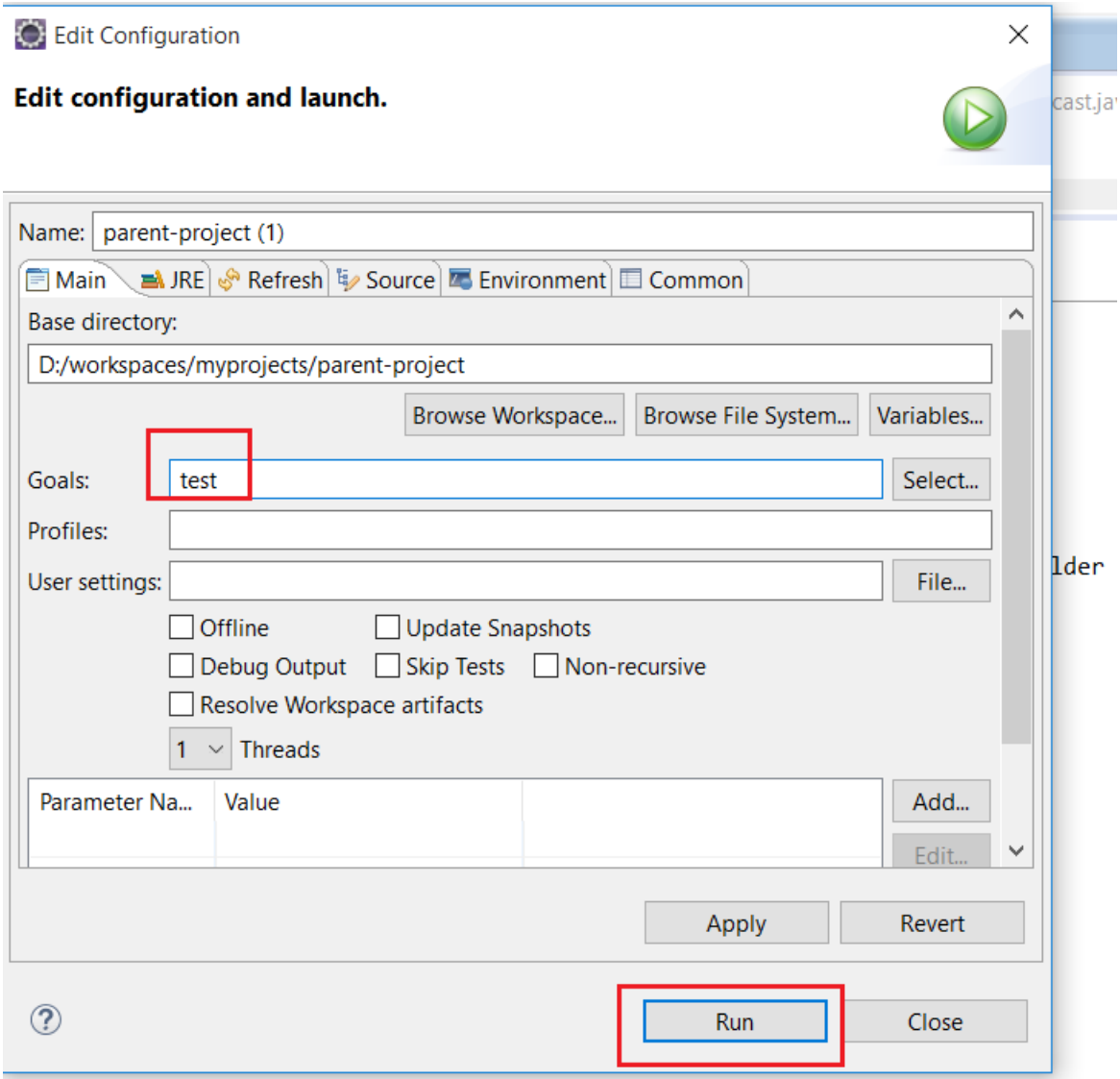


On Remarque qu'on a pu utiliser la classe Forecast du projet du module forecast-server et cela grace à la dependence ajoutée.



Lorsqu'on fait build du projet parent, le build des modules fils sera déclenché automatiquement ; On peut remarquer cela dans la 'console'.



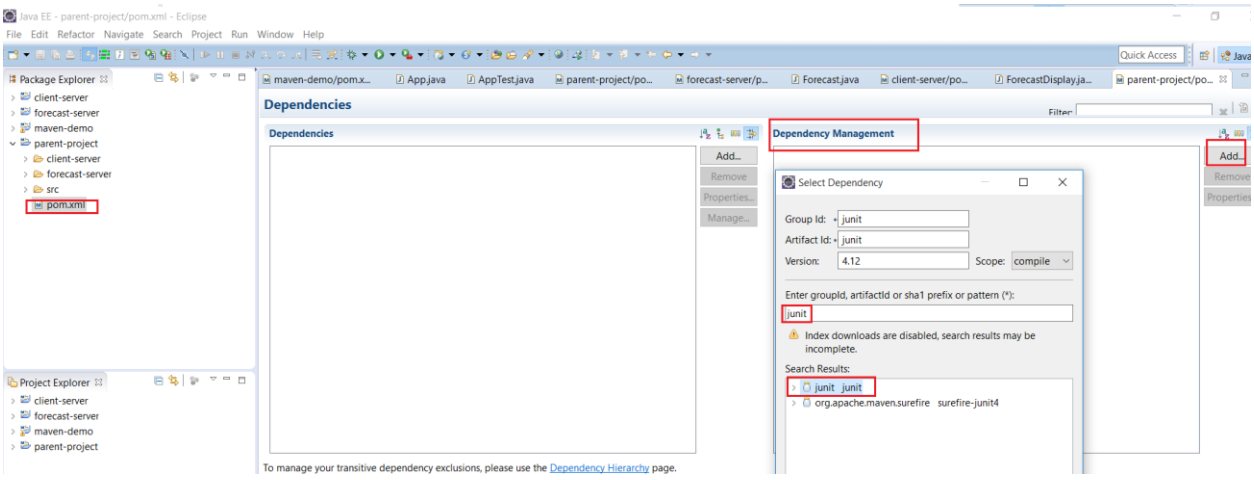


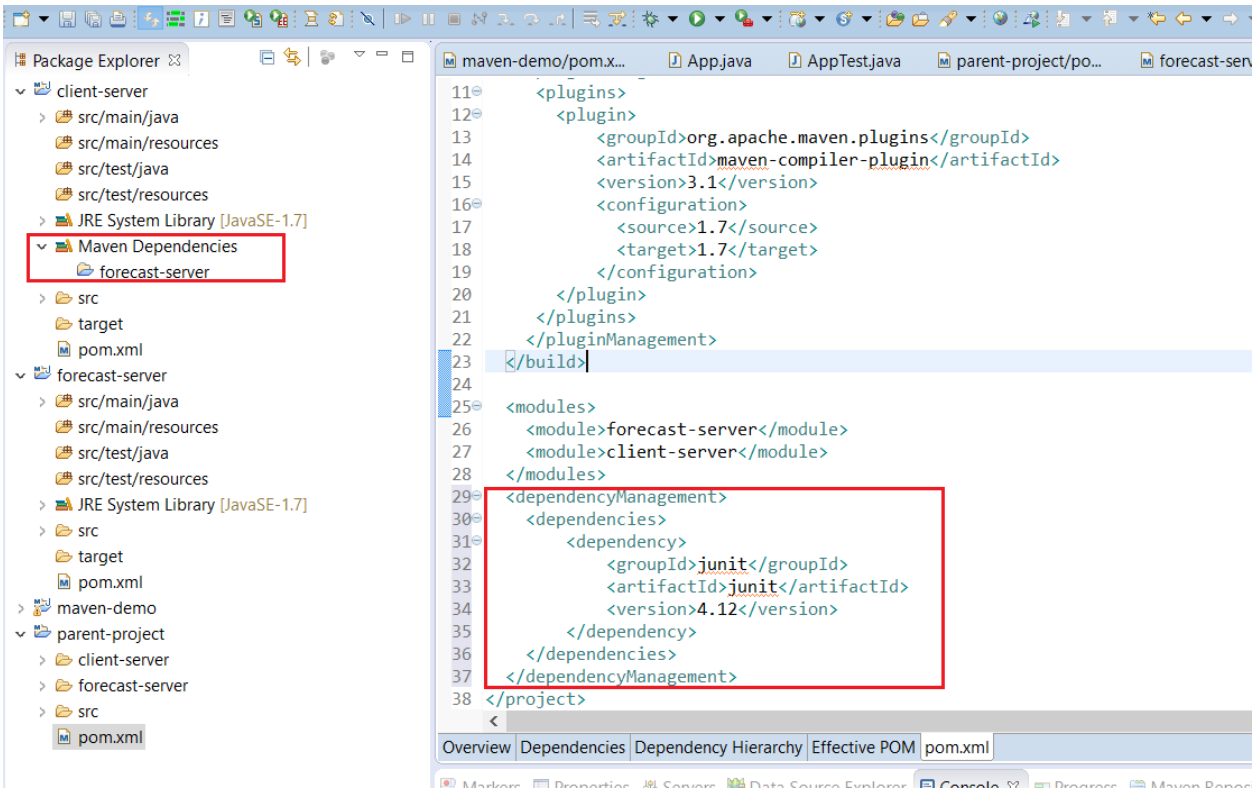

```
------------------------------------------------------------
phase "build". You must specify a valid lifecycle phase or a goal in the format
```

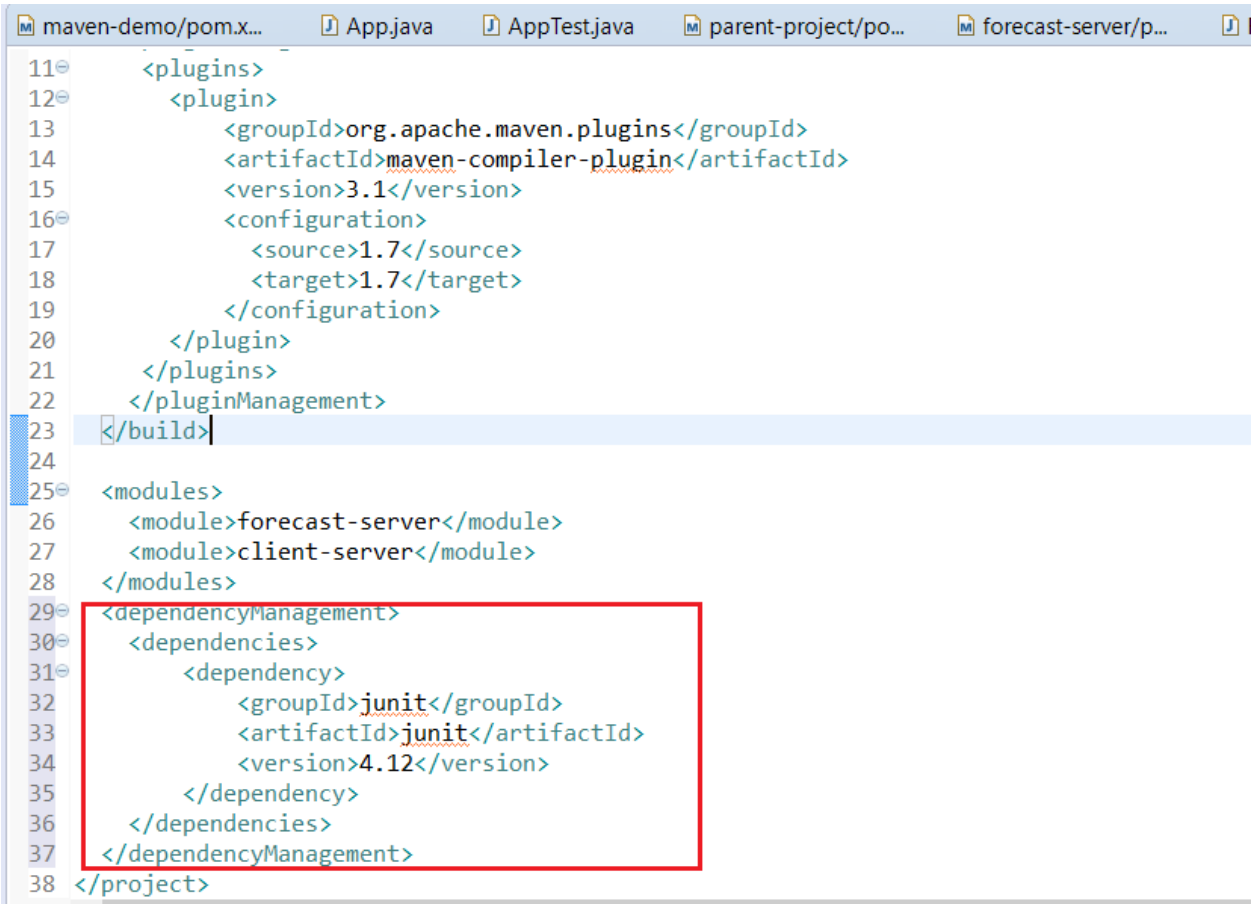
```
Markers  Properties  Servers  Data Source Explorer  Console  Progress  Maven Repositories
<terminated> parent-project (1) [Maven Build] C:\Program Files\Java\jdk1.8.0_112\bin\javaw.exe (Feb 12, 2017, 8:04:15 PM)
[INFO] Reactor Build Order:
[INFO]
[INFO] parent-project
[INFO] forecast-server
[INFO] client-server
[INFO]
[INFO] Using the builder org.apache.maven.lifecycle.internal.builder.singlethreaded.SingleThreadedBuilder with a thread count of 1
[INFO]
[INFO] ------------------------------------------------------------------------
[INFO] Building parent-project 0.0.1-SNAPSHOT
[INFO] ------------------------------------------------------------------------
[INFO]
[INFO] ------------------------------------------------------------------------
[INFO] Building forecast-server 0.0.1-SNAPSHOT
[INFO] ------------------------------------------------------------------------
[INFO]
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ forecast-server ---
[WARNING] Using platform encoding (Cp1252 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] Copying 0 resource
[INFO]
[INFO] --- maven-compiler-plugin:3.1:compile (default-compile) @ forecast-server ---
[INFO] Changes detected - recompiling the module!
[WARNING] File encoding has not been set, using platform encoding Cp1252, i.e. build is platform dependent!
[INFO] Compiling 1 source file to D:\workspaces\myprojects\parent-project\forecast-server\target\classes
[INFO]
[INFO] --- maven-resources-plugin:2.6:testResources (default-testResources) @ forecast-server ---
[WARNING] Using platform encoding (Cp1252 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] Copying 0 resource
[INFO]
[INFO] --- maven-compiler-plugin:3.1:testCompile (default-testCompile) @ forecast-server ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- maven-surefire-plugin:2.12.4:test (default-test) @ forecast-server ---
[INFO]
[INFO] ------------------------------------------------------------------------
[INFO] Building client-server 0.0.1-SNAPSHOT
```

Dependency Management:
On l'ajoute dans le pom.xml du projet parent et tous les modules fils héritent la dépendance inclue dans la 'dependency management'.

Pour ajouter la dependency management on clique sur le pom.xml du parent → on choisit le TAB 'dependencies' → Add dans 'Dependency Management' → on tape junit → on choisit 'junit- junit' →OK
→sauvegarder



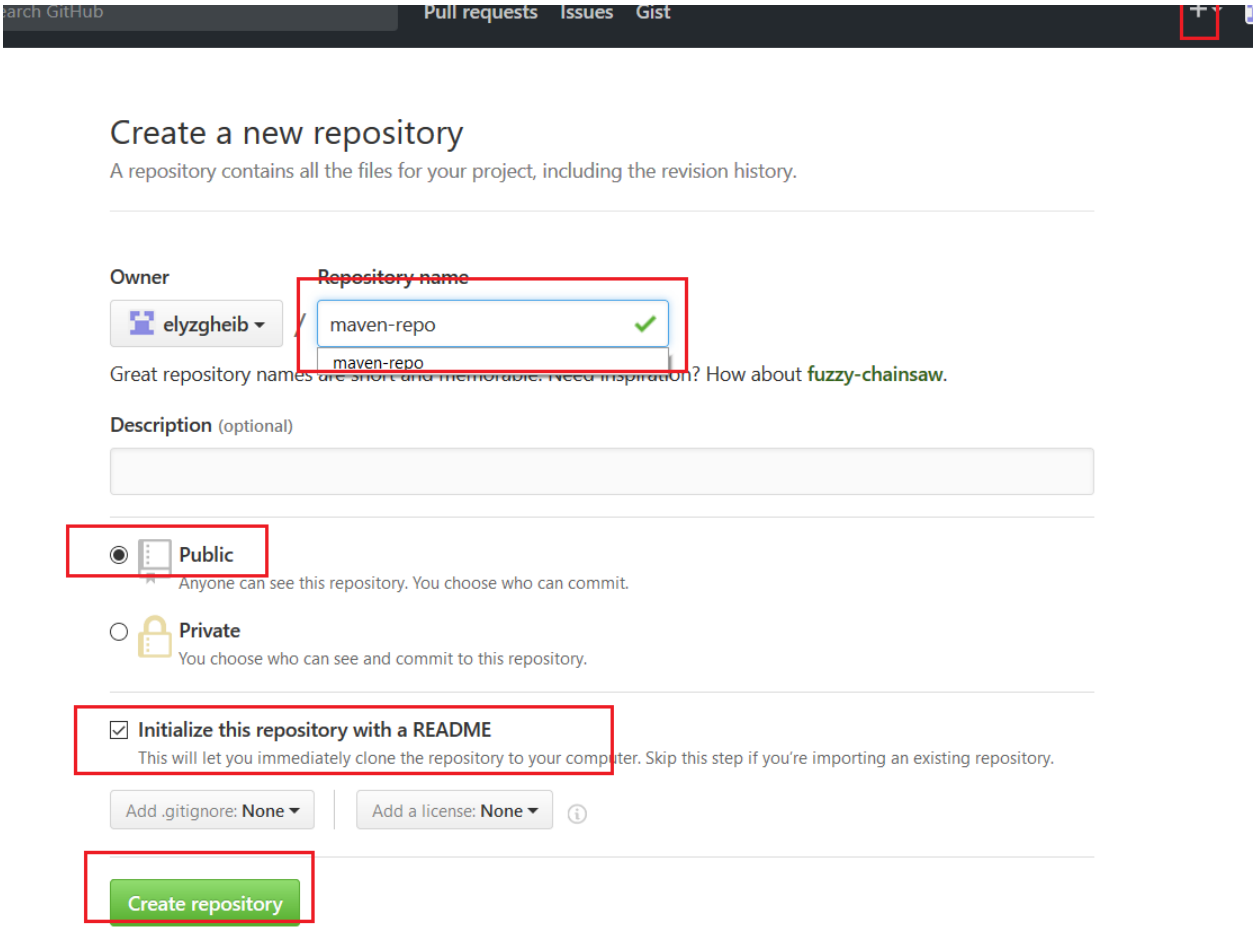

Package Explorer
client-server
src/main/java
src/main/resources
src/test/java
src/test/resources
JRE System Library [JavaSE-1.7]
Maven Dependencies
forecast-server
src
target
pom.xml
forecast-server
src/main/java
src/main/resources
src/test/java
src/test/resources
JRE System Library [JavaSE-1.7]
src
target
pom.xml
maven-demo
parent-project
client-server
forecast-server
src
pom.xml
maven-demo/pom.x...
App.java
AppTest.java
parent-project/po...
forecast-serv
<plugins>
<plugin>
<groupId>org.apache.maven.plugins</groupId>
<artifactId>maven-compiler-plugin</artifactId>
<version>3.1</version>
<configuration>
<source>1.7</source>
<target>1.7</target>
</configuration>
</plugin>
</plugins>
</pluginManagement>
</build>
<modules>
<module>forecast-server</module>
<module>client-server</module>
</modules>
<dependencyManagement>
<dependencies>
<dependency>
<groupId>junit</groupId>
<artifactId>junit</artifactId>
<version>4.12</version>
</dependency>
</dependencies>
</dependencyManagement>
</project>
Overview
Dependencies
Dependency Hierarchy
Effective POM
pom.xml


maven-demo/pom.x...
App.java
AppTest.java
parent-project/po...
forecast-server/p...
<plugins>
<plugin>
<groupId>org.apache.maven.plugins</groupId>
<artifactId>maven-compiler-plugin</artifactId>
<version>3.1</version>
<configuration>
<source>1.7</source>
<target>1.7</target>
</configuration>
</plugin>
</plugins>
</pluginManagement>
</build>
<modules>
<module>forecast-server</module>
<module>client-server</module>
</modules>
<dependencyManagement>
<dependencies>
<dependency>
<groupId>junit</groupId>
<artifactId>junit</artifactId>
<version>4.12</version>
</dependency>
</dependencies>
</dependencyManagement>
</project>

8. DEPLOIEMENT

8.0 CREATION D'UN REPERTOIRE GITHUB

Au début il faut créer un répertoire dans GitHub avec le nom ‘maven-repo’ :



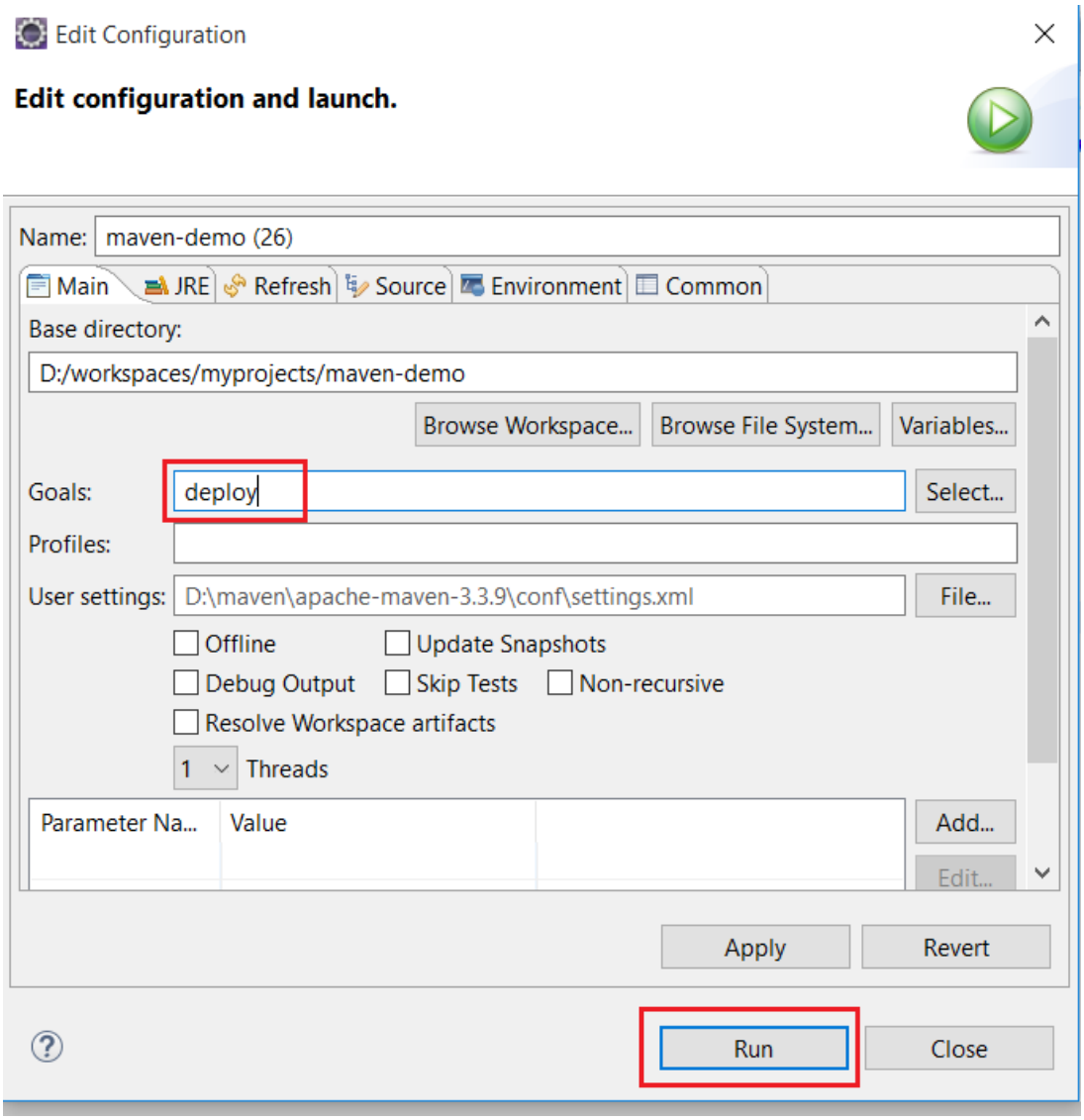
8.1 CONFIGURATION DU POM ET COMMANDE DEPLOY

Puis il faut faire un 'deploy' dans un répertoire temporaire :
On Configure notre pom.xml en utilisant la balise <distributionManagement> :

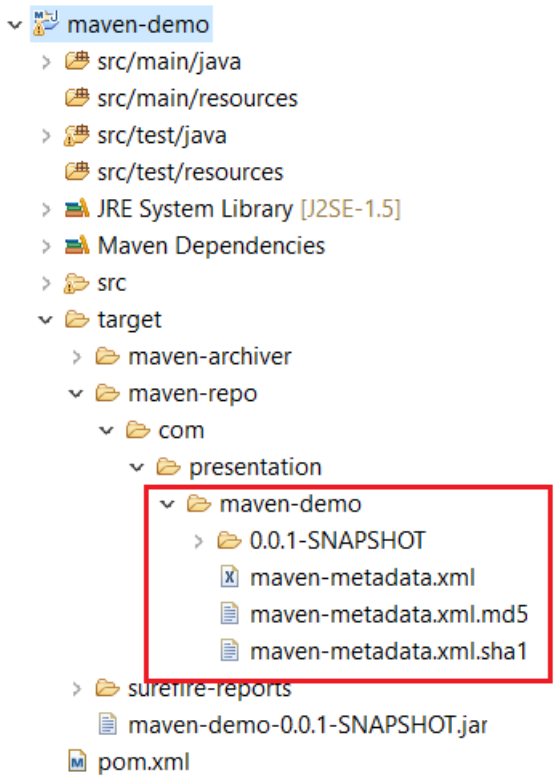
```
 <distributionManagement>
       <snapshotRepository>
           <id>rep-staging</id>
           <url>file://${project.build.directory}/maven-repo</url>
       </snapshotRepository>
       <repository>
           <id>rep-staging-release</id>
           <url>file://${project.build.directory}/maven-repo</url>
       </repository>
</distributionManagement>
```

```
<distributionManagement>
             <snapshotRepository>
                   <id>rep-staging</id>
                   <url>file://${project.build.directory}/maven-repo</url>
             </snapshotRepository>
             <repository>
                   <id>rep-staging-release</id>
                   <url>file://${project.build.directory}/maven-repo</url>
             </repository>
 </distributionManagement>
 <build>
 <plugins>
    <plugin>
        <groupId>org.apache.maven.plugins</groupId>
    <artifactId>maven-deploy-plugin</artifactId>
    <version>2.8.2</version>
        <configuration>
               <altDeploymentRepository>rep-
staging::default::file://${project.build.directory}/maven-repo</altDeploymentRepository>
        </configuration>
    </plugin>
 </plugins>
</build>
```

Puis on exécute la commande deploy. :
Clic droit sur le projet maven-demo → Run As →Maven build… →on tape 'deploy' dans goals →Run :



On selecte le projet, et on clique ‘F5’ pour rafraichir ; on Remarque l’apparition de le répertoire temporaire dans le répertoire ‘target’:



Maintenant on va faire un 'upload' de l'artefact créé à github :
On ajoute les infos d'authentification au fichier settings.xml :

```
<server>
        <id>github</id>
        <username>***nom profil github***</username>
        <password>***mot de passe github***</password>
</server>
```

Puis on va donner les détails de notre serveur ajouté dessus au projet en référant à son ID en ajoutant le code suivant dans le pom.xml:

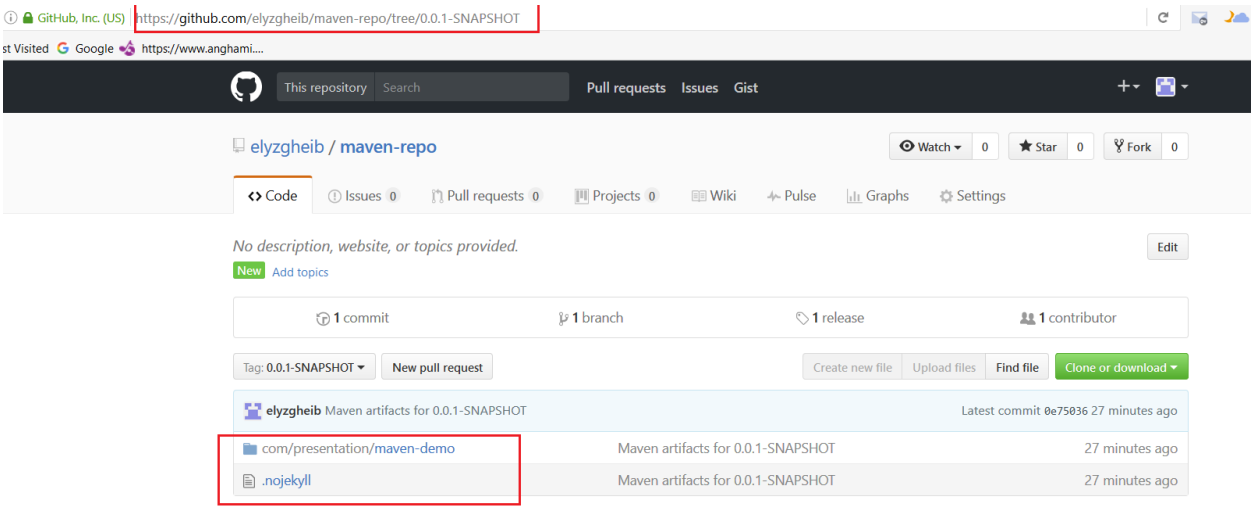
```
<properties>
    <github.global.server>github</github.global.server>
</properties>
```

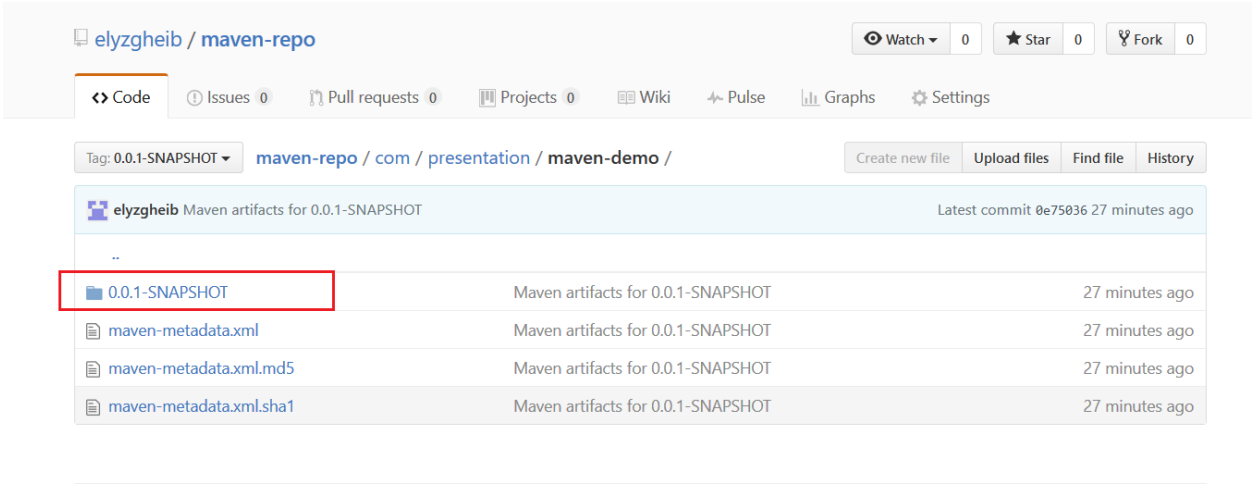
Et le code suivant :

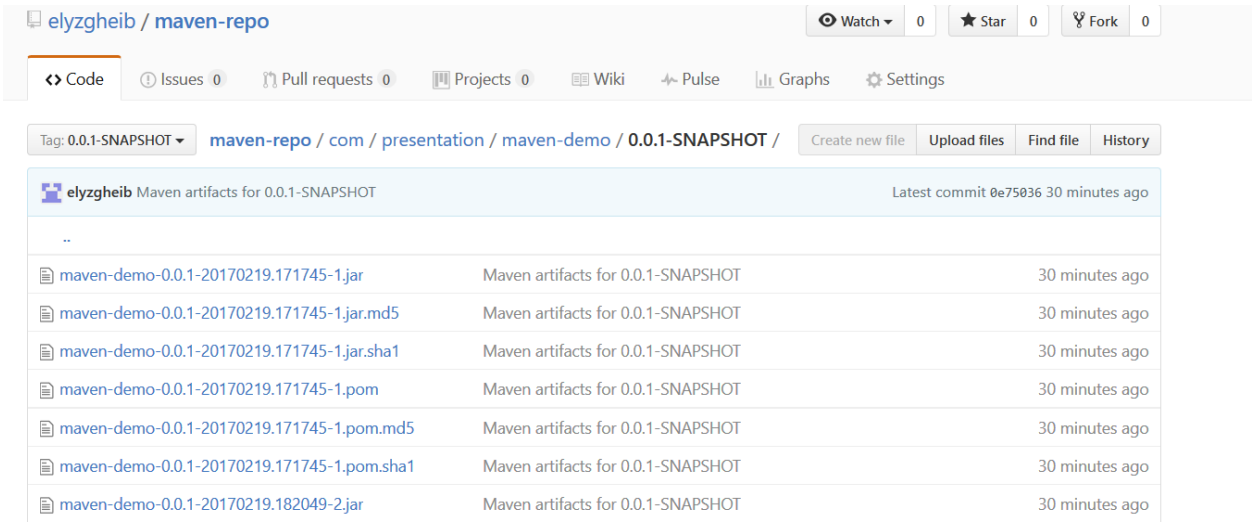
```
<plugin>
          <groupId>com.github.github</groupId>
          <artifactId>site-maven-plugin</artifactId>
          <version>0.12</version>
         <configuration>
              <!-- git commit message -->
              <message>Maven artifacts for ${project.version}</message>
              <!-- disable webpage processing -->
              <noJekyll>true</noJekyll>
              <!-- matches distribution management repository url above -->
              <outputDirectory>${project.build.directory}/maven-repo</outputDirectory>
              <!-- remote branch name -->
              <branch>refs/tags/${project.version}</branch>
              <!-- If you remove this then the old artifact will be removed and new
               one will replace. But with the merge tag you can just release by changing
                                                  the version -->
              <merge>true</merge>
              <includes>
                <include>**/*</include>
                </includes>
                <!-- github repo name -->
                <repositoryName>maven-repo</repositoryName>
                <!-- github username -->
                <repositoryOwner>elyzgheib</repositoryOwner>
           </configuration>
           <executions>
              <execution>
                    <goals>
                         <goal>site</goal>
                    </goals>
                    <phase>deploy</phase>
              </execution>
           </executions>
</plugin>
```

Enfin, on exécute la commande 'deploy' de nouveau et voilà ce qu'on voit dans Github :

```
[INFO] Creating commit with SHA-1: 0e75036d15ede66847a5b95f8ee1589ceae4310c
[INFO] Creating reference refs/tags/0.0.1-SNAPSHOT starting at commit 0e75036d15ede66847a5b95f8ee1589ceae4310c
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time: 02:21 min
[INFO] Finished at: 2017-02-19T22:24:06+02:00
[INFO] Final Memory: 12M/107M
[INFO] ------------------------------------------------------------------------
```


GitHub, Inc. (US) https://github.com/elyzgheib/maven-repo/tree/0.0.1-SNAPSHOT
This repository Search Pull requests Issues Gist
elyzgheib / maven-repo
Watch 0 Star 0 Fork 0
Code Issues 0 Pull requests 0 Projects 0 Wiki Pulse Graphs Settings
No description, website, or topics provided.
Edit
New Add topics
1 commit 1 branch 1 release 1 contributor
Tag: 0.0.1-SNAPSHOT New pull request
Create new file Upload files Find file Clone or download
elyzgheib Maven artifacts for 0.0.1-SNAPSHOT
Latest commit 0e75036 27 minutes ago
com/presentation/maven-demo Maven artifacts for 0.0.1-SNAPSHOT 27 minutes ago
.nojekyll Maven artifacts for 0.0.1-SNAPSHOT 27 minutes ago


elyzgheib / maven-repo
Watch 0 Star 0 Fork 0
Code Issues 0 Pull requests 0 Projects 0 Wiki Pulse Graphs Settings
Tag: 0.0.1-SNAPSHOT maven-repo / com / presentation / maven-demo /
Create new file Upload files Find file History
elyzgheib Maven artifacts for 0.0.1-SNAPSHOT
Latest commit 0e75036 27 minutes ago
..
0.0.1-SNAPSHOT Maven artifacts for 0.0.1-SNAPSHOT 27 minutes ago
maven-metadata.xml Maven artifacts for 0.0.1-SNAPSHOT 27 minutes ago
maven-metadata.xml.md5 Maven artifacts for 0.0.1-SNAPSHOT 27 minutes ago
maven-metadata.xml.sha1 Maven artifacts for 0.0.1-SNAPSHOT 27 minutes ago


elyzgheib / maven-repo
Watch 0 Star 0 Fork 0
Code Issues 0 Pull requests 0 Projects 0 Wiki Pulse Graphs Settings
Tag: 0.0.1-SNAPSHOT maven-repo / com / presentation / maven-demo / 0.0.1-SNAPSHOT /
Create new file Upload files Find file History
elyzgheib Maven artifacts for 0.0.1-SNAPSHOT
Latest commit 0e75036 30 minutes ago
..
maven-demo-0.0.1-20170219.171745-1.jar Maven artifacts for 0.0.1-SNAPSHOT 30 minutes ago
maven-demo-0.0.1-20170219.171745-1.jar.md5 Maven artifacts for 0.0.1-SNAPSHOT 30 minutes ago
maven-demo-0.0.1-20170219.171745-1.jar.sha1 Maven artifacts for 0.0.1-SNAPSHOT 30 minutes ago
maven-demo-0.0.1-20170219.171745-1.pom Maven artifacts for 0.0.1-SNAPSHOT 30 minutes ago
maven-demo-0.0.1-20170219.171745-1.pom.md5 Maven artifacts for 0.0.1-SNAPSHOT 30 minutes ago
maven-demo-0.0.1-20170219.171745-1.pom.sha1 Maven artifacts for 0.0.1-SNAPSHOT 30 minutes ago
maven-demo-0.0.1-20170219.182049-2.jar Maven artifacts for 0.0.1-SNAPSHOT 30 minutes ago