

TP 1 – INSTALLER MAVEN

Télécharger Maven pour Windows : <http://maven.apache.org/download.cgi>

	Link
Binary tar.gz archive	apache-maven-3.6.0-bin.tar.gz
Binary zip archive	apache-maven-3.6.0-bin.zip
Source tar.gz archive	apache-maven-3.6.0-src.tar.gz
Source zip archive	apache-maven-3.6.0-src.zip

Dézipper le répertoire dans votre (C:\Programmes)
Vous obtiendrez :

Nom	Taille
bin	
boot	
conf	
lib	
LICENSE	18 Ko
NOTICE	1 Ko
README.txt	3 Ko

Lancez la commande : « **mvn --version** »

```
Administrator: cmd
C:\>mvn -version
C:\
Apache Maven 3.5.2 (138ed61fd100ec658bfa2d307c43b76940a5d7d; 2017-10-18T09:58:13+02:00)
Maven home: C:\Program Files\apache-maven-3.5.2\bin\..
Java version: 1.8.0_161, vendor: Oracle Corporation
Java home: C:\Program Files\Java\jre1.8.0_161
Default locale: fr_FR, platform encoding: Cp1252
OS name: "windows 10", version: "10.0", arch: "amd64", family: "windows"
C:\>
```

Maven est bien installé et configuré dans votre ordinateur.

Phases Maven

➤ Run : mvn

```

C:\Users\BABACAR MBAYE>mvn
[INFO] Scanning for projects...
[INFO] -----
[INFO] BUILD FAILURE
[INFO] -----
[INFO] Total time: 0.094 s
[INFO] Finished at: 2018-11-16T12:41:02+01:00
[INFO] -----
[ERROR] No goals have been specified for this build. You must specify a valid lifecycle phase or a goal in the format <plugin-prefix>:<goal> or <plugin-group-id>:<plugin-artifact-id>[:<plugin-version>]:<goal>. Available lifecycle phases are : validate, initialize, generate-sources, process-sources, generate-resources, process-resources, compile, process-classes, generate-test-sources, process-test-sources, generate-test-resources, process-test-resources, test-compile, process-test-classes, test, prepare-package, package, pre-integration-test, integration-test, post-integration-test, verify, install, deploy, pre-clean, clean, post-clean, pre-site, site, post-site, site-deploy. -> [Help 1]
[ERROR]
[ERROR] To see the full stack trace of the errors, re-run Maven with the -e switch.
[ERROR] Re-run Maven using the -X switch to enable full debug logging.
[ERROR]
[ERROR] For more information about the errors and possible solutions, please read the following articles:
[ERROR] [Help 1] http://cwiki.apache.org/confluence/display/MAVEN/NoGoalSpecifiedException
C:\Users\BABACAR MBAYE>

```

On voit toutes les phases maven depuis Maven 3

CREATION DE PROJET

- Créer un répertoire TP1 dans un dossier « maven_workspace » et **pointez-y**
- Run : **mvn archetype...**

```

C:\Users\Babacar\Desktop\2_Maven\workspace_maven\TP1>mvn archetype:generate -DgroupId=com.formation -DartifactId=java-project -DarchetypeArtifactId=maven-archetype-quickstart -DinteractiveMode=false
[INFO] Scanning for projects...
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-deploy-plugin/2.7/maven-deploy-plugin-2.7.pom

```

```

[INFO] -----
[INFO] Parameter: basedir, Value: C:\Users\Babacar\Desktop\2_Maven\workspace_maven\TP1
[INFO] Parameter: package, Value: com.formation
[INFO] Parameter: groupId, Value: com.formation
[INFO] Parameter: artifactId, Value: java-project
[INFO] Parameter: packageName, Value: com.formation
[INFO] Parameter: version, Value: 1.0-SNAPSHOT
[INFO] project created from Old (1.x) Archetype in dir: C:\Users\Babacar\Desktop\2_Maven\workspace_maven\TP1\java-project
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 03:26 min
[INFO] Finished at: 2021-02-02T12:25:45+01:00
[INFO] -----
C:\Users\Babacar\Desktop\2_Maven\workspace_maven\TP1>

```

NB : Génération version web app → `-DarchetypeArtifactId=maven-archetype-webapp`

NB : Si vous avez pris le même **url** de création. Nous avons juste un nom de projet différent. Mais la logique reste la même.

Racine du projet

_DevOps > IntegrationContinue > maven_workspace > TP1 > my-app

Nom	Modifié le	Type	Taille
src	16/11/2018 13:09	Dossier de fichiers	
pom	16/11/2018 13:09	Document XML	1 Ko

Nomenclature (voir les 2 fichiers .java créés)

1.	my-app
2.	-- pom.xml
3.	-- src
4.	-- main
5.	-- java
6.	-- com
7.	-- mycompany
8.	-- app
9.	-- App.java
10.	-- test
11.	-- java
12.	-- com
13.	-- mycompany
14.	-- app
15.	-- AppTest.java

Repository local

Utilisateurs > BABACAR MBAYE > .m2 > repository

Nom	Mod
antlr	16/1
aopalliance	09/1
asm	16/1
backport-util-concurrent	09/1
classworlds	09/1
com	11/1
commons-beanutils	09/1
commons-cli	09/1
commons-codec	09/1
commons-collections	09/1
commons-configuration	09/1
commons-digester	09/1
commons-httpclient	09/1
commons-io	09/1
commons-lang	09/1

Analyser :

```
<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/maven-v4_0_0.xsd">
  <modelVersion>4.0.0</modelVersion>

  <groupId>com.mycompany.app</groupId>
  <artifactId>my-app</artifactId>
  <packaging>jar</packaging>
  <version>1.0-SNAPSHOT</version>

  <name>my-app</name>
  <url>http://maven.apache.org</url>

  <dependencies>
    <dependency>
      <groupId>junit</groupId>
      <artifactId>junit</artifactId>
      <version>3.8.1</version>
      <scope>test</scope>
    </dependency>
  </dependencies>

</project>
```

VALIDATE

- Revenir sur le dossier parent de notre projet ou se situe le pom.xml
- Ouvrez l'invite des commandes
- Run : **mvn validate**

```
C:\Users\BABACAR MBAYE\Desktop\Cours\_DevOps\IntegrationContinue\maven_workspace\TP1\my-app>mvn validate
[INFO] Scanning for projects...
[INFO]
[INFO] -----< com.mycompany.app:my-app >-----
[INFO] Building my-app 1.0-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO]
[INFO] BUILD SUCCESS
[INFO]
[INFO] Total time:  0.107 s
[INFO] Finished at: 2018-11-16T13:30:23+01:00
[INFO]
C:\Users\BABACAR MBAYE\Desktop\Cours\_DevOps\IntegrationContinue\maven_workspace\TP1\my-app>
```

COMPILATION

- Revenir sur le dossier parent de notre projet ou se situe le pom.xml
- Ouvrez l'invite des commandes
- Run : **mvn compile**




Si erreur : ajout dans le fichier pom

```
<build>
  <plugins>
    <plugin>
      <groupId>org.apache.maven.plugins</groupId>
      <artifactId>maven-compiler-plugin</artifactId>
      <version>3.8.0</version>
      <configuration>
        <release>11</release>
      </configuration>
    </plugin>
```

```
</plugins>
</build>
```

```
C:\Users\BABACAR MBAYE\Desktop\Cours\_DevOps\IntegrationContinue\maven_workspace\TP1\my-app>mvn compile
[INFO] Scanning for projects...
[INFO]
[INFO] -----< com.mycompany.app:my-app >-----
[INFO] Building my-app 1.0-SNAPSHOT
[INFO]
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ my-app ---
[WARNING] Using platform encoding (Cp1252 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] skip non existing resourceDirectory C:\Users\BABACAR MBAYE\Desktop\Cours\_DevOps\IntegrationContinue\maven_workspace\TP1\my-app\src\main\resources
[INFO]
[INFO] --- maven-compiler-plugin:3.1:compile (default-compile) @ my-app ---
[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 C:\Users\BABACAR MBAYE\Desktop\Cours\_DevOps\IntegrationContinue\maven_workspace\TP1\my-app\target\classes
[INFO]
[INFO] BUILD SUCCESS
[INFO]
[INFO] Total time: 3.110 s
[INFO] Finished at: 2018-11-16T13:26:05+01:00
[INFO]
C:\Users\BABACAR MBAYE\Desktop\Cours\_DevOps\IntegrationContinue\maven_workspace\TP1\my-app>
```

On voit l'existence d'un dossier « target » contenant les fichiers compilés.

Nom	Modifié le	Type	Taille
 src	16/11/2018 13:09	Dossier de fichiers	
 target	16/11/2018 13:26	Dossier de fichiers	
 pom	16/11/2018 13:09	Document XML	1 Ko

TEST

➤ Run : **mvn test**

```
-----
T E S T S
-----
Running com.mycompany.app.AppTest
Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.016 sec

Results :

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

[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 3.909 s
[INFO] Finished at: 2018-11-16T13:34:07+01:00
[INFO] -----

C:\Users\BABACAR MBAYE\Desktop\Cours\_DevOps\IntegrationContinue\maven_workspace\TP1\my-app>
```

On voit que les phases ascendantes sont exécutées.

On voit la création de nouveaux dossiers.

Nom	Modifié le	Type	Taille
classes	16/11/2018 13:26	Dossier de fichiers	
maven-status	16/11/2018 13:26	Dossier de fichiers	
surefire-reports	16/11/2018 13:34	Dossier de fichiers	
test-classes	16/11/2018 13:34	Dossier de fichiers	

Nom	Modifié le	Type	Taille
classes	16/11/2018 13:26	Dossier de fichiers	
maven-status	16/11/2018 13:26	Dossier de fichiers	
surefire-reports	16/11/2018 13:34	Dossier de fichiers	
test-classes	16/11/2018 13:34	Dossier de fichiers	

Contenant aussi la classe de Test.java compilé en un fichier .class

PACKAGE

- Run : mvn package

```

C:\Users\BABACAR MBAYE\Desktop\Cours\_DevOps\IntegrationContinue\maven_workspace\TP1\my-app>mvn package
[INFO] Scanning for projects...
[INFO] -----< com.mycompany.app:my-app >-----
[INFO] Building my-app 1.0-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ my-app ---
[WARNING] Using platform encoding (Cp1252 actually) to copy filtered resources, i.e. build is platform dependent
[INFO] skip non existing resourceDirectory C:\Users\BABACAR MBAYE\Desktop\Cours\_DevOps\IntegrationContinue\maven_workspace\TP1\my-app\src\main\resources
[INFO] --- maven-compiler-plugin:3.1:compile (default-compile) @ my-app ---
[INFO] Nothing to compile - all classes are up to date
[INFO] --- maven-resources-plugin:2.6:testResources (default-testResources) @ my-app ---
[WARNING] Using platform encoding (Cp1252 actually) to copy filtered resources, i.e. build is platform dependent
[INFO] skip non existing resourceDirectory C:\Users\BABACAR MBAYE\Desktop\Cours\_DevOps\IntegrationContinue\maven_workspace\TP1\my-app\src\test\resources
[INFO] --- maven-compiler-plugin:3.1:testCompile (default-testCompile) @ my-app ---
[INFO] Nothing to compile - all classes are up to date
[INFO] --- maven-surefire-plugin:2.12.4:test (default-test) @ my-app ---
[INFO] Surefire report directory: C:\Users\BABACAR MBAYE\Desktop\Cours\_DevOps\IntegrationContinue\maven_workspace\TP1\my-app\target\surefire-reports

-----
T E S T S
-----
Running com.mycompany.app.AppTest
Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0 sec







Results :

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

[INFO] --- maven-jar-plugin:2.4:jar (default-jar) @ my-app ---
[INFO] Building jar: C:\Users\BABACAR MBAYE\Desktop\Cours\_DevOps\IntegrationContinue\maven_workspace\TP1\my-app\target\my-app-1.0-SNAPSHOT.jar
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 1.863 s
[INFO] Finished at: 2018-11-16T13:39:10+01:00
[INFO] -----
C:\Users\BABACAR MBAYE\Desktop\Cours\_DevOps\IntegrationContinue\maven_workspace\TP1\my-app>

```

Toutes les étapes de validation, compilation, test et de packaging sont exécutés.

Nom	Modifié le	Type	Taille
 classes	16/11/2018 13:26	Dossier de fichiers	
 maven-archiver	16/11/2018 13:39	Dossier de fichiers	
 maven-status	16/11/2018 13:26	Dossier de fichiers	
 surefire-reports	16/11/2018 13:34	Dossier de fichiers	
 test-classes	16/11/2018 13:34	Dossier de fichiers	
 my-app-1.0-SNAPSHOT	16/11/2018 13:39	Executable Jar File	3 Ko

Executer le projet en ligne de commande pour afficher le « Hello World »





INSTALL

➤ Run : **mvn install**

```
[INFO]
[INFO] --- maven-jar-plugin:2.4:jar (default-jar) @ my-app ---
[INFO]
[INFO] --- maven-install-plugin:2.4:install (default-install) @ my-app ---
[INFO] Installing C:\Users\BABACAR MBAYE\Desktop\Cours\_DevOps\IntegrationContinue\maven_workspace\TP1\my-app\target\my-app-1.0-SNAPSHOT.jar to C:\Users\BABACAR MBAYE\.m2\repository\com\mycompany\app\my-app\1.0-SNAPSHOT\my-app-1.0-SNAPSHOT.jar
[INFO] Installing C:\Users\BABACAR MBAYE\Desktop\Cours\_DevOps\IntegrationContinue\maven_workspace\TP1\my-app\pom.xml to C:\Users\BABACAR MBAYE\.m2\repository\com\mycompany\app\my-app\1.0-SNAPSHOT\my-app-1.0-SNAPSHOT.pom
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 1.787 s
[INFO] Finished at: 2018-11-16T13:54:33+01:00
[INFO] -----

C:\Users\BABACAR MBAYE\Desktop\Cours\_DevOps\IntegrationContinue\maven_workspace\TP1\my-app>
```

On voit que certaines phases sont sautées du fait qu'il n'y a pas eu de changement.
Installation du jar dans le repository local

Ce PC > Disque local (C:) > Utilisateurs > Babacar > .m2 > repository > com > formation > java-project > 1.0-SNAPSHOT		
Nom	Modifié le	Type
 _remote.repositories	02/02/2021 12:53	Fichier REPOSITOR...
 java-project-1.0-SNAPSHOT	02/02/2021 12:49	Executable Jar File
 java-project-1.0-SNAPSHOT.pom	02/02/2021 12:43	Fichier POM
 maven-metadata-local	02/02/2021 12:53	Fichier XML

DEPLOY

Nous le verrons plus tard lors de l'installation du serveur d'application Tomcat

CLEAN

➤ Run : **mvn clean**

```
C:\Users\BABACAR MBAYE\Desktop\Cours\_DevOps\IntegrationContinue\maven_workspace\TP1\my-app>mvn clean
[INFO] Scanning for projects...
[INFO] -----< com.mycompany.app:my-app >-----
[INFO] Building my-app 1.0-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ my-app ---
[INFO] Deleting C:\Users\BABACAR MBAYE\Desktop\Cours\_DevOps\IntegrationContinue\maven_workspace\TP1\my-app\target
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 0.265 s
[INFO] Finished at: 2018-11-16T14:11:59+01:00
[INFO] -----
C:\Users\BABACAR MBAYE\Desktop\Cours\_DevOps\IntegrationContinue\maven_workspace\TP1\my-app>
```

Suppression du dossier « target »

_DevOps > IntegrationContinue > maven_workspace > TP1 > my-app				
Nom	Modifié le	Type	Taille	
src	16/11/2018 13:09	Dossier de fichiers		
pom	16/11/2018 13:09	Document XML	1 Ko	

SITE

Modifiez le pom.xml en y ajoutant les informations nécessaires à la génération du site de notre projet :

```
<!-- Plugin de génération du site de notre projet -->
<build>
  <plugins>
    <plugin>
```

```

        <groupId>org.apache.maven.plugins</groupId>
        <artifactId>maven-site-plugin</artifactId>
        <version>3.3</version>
    </plugin>
    <plugin>
        <groupId>org.apache.maven.plugins</groupId>
        <artifactId>maven-project-info-reports-plugin</artifactId>
        <version>2.7</version>
    </plugin>
</plugins>
</build>

```

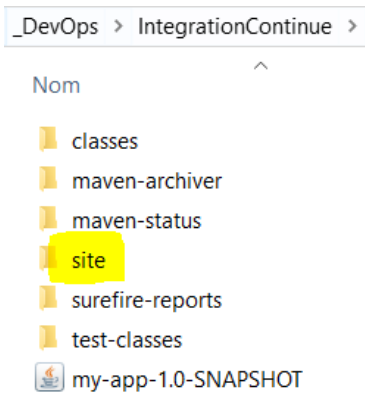
➤ Run : **mvn site**

```

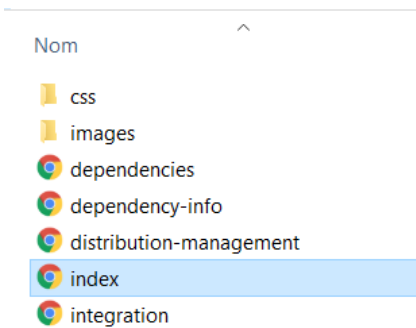
[INFO] Relativizing decoration links with respect to project URL: http://maven.apache.org
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/skins/maven-default-skin/1.0/maven-default-skin-1.0.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/skins/maven-default-skin/1.0/maven-default-skin-1.0.jar
[INFO] Rendering site with org.apache.maven.skins:maven-default-skin:jar:1.0 skin.
[INFO] Generating "About" report --- maven-project-info-reports-plugin:2.7
[INFO] Generating "Plugin Management" report --- maven-project-info-reports-plugin:2.7
[INFO] Generating "Distribution Management" report --- maven-project-info-reports-plugin:2.7
[INFO] Generating "Dependency Information" report --- maven-project-info-reports-plugin:2.7
[INFO] Generating "Source Repository" report --- maven-project-info-reports-plugin:2.7
[INFO] Generating "Mailing Lists" report --- maven-project-info-reports-plugin:2.7
[INFO] Generating "Issue Tracking" report --- maven-project-info-reports-plugin:2.7
[INFO] Generating "Continuous Integration" report --- maven-project-info-reports-plugin:2.7
[INFO] Generating "Project Plugins" report --- maven-project-info-reports-plugin:2.7
[INFO] Generating "Project License" report --- maven-project-info-reports-plugin:2.7
[INFO] Generating "Project Team" report --- maven-project-info-reports-plugin:2.7
[INFO] Generating "Project Summary" report --- maven-project-info-reports-plugin:2.7
[INFO] Generating "Dependencies" report --- maven-project-info-reports-plugin:2.7
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 01:10 min
[INFO] Finished at: 2018-11-16T14:34:28+01:00
[INFO] -----
C:\Users\BABACAR MBAYE\Desktop\Cours\_DevOps\IntegrationContinue\maven_workspace\TP1\my-app>

```

Nouveau répertoire « site » disponible dans le dossier « target »



Dedans, ouvrir le fichier index.html avec votre navigateur



Résultat :

my-app

Last Published: 2018-11-16 | Version: 1.0-SNAPSHOT

Project Documentation

▼ Project Information

About

- Plugin Management
- Distribution Management
- Dependency Information
- Source Repository
- Mailing Lists
- Issue Tracking
- Continuous Integration
- Project Plugins
- Project License
- Project Team
- Project Summary
- Dependencies



About my-app

There is currently no description associated with this project.

Dependency Information

Apache Maven


```
<dependency>
  <groupId>com.mycompany.app</groupId>
  <artifactId>my-app</artifactId>
  <version>1.0-SNAPSHOT</version>
</dependency>
```

Apache Buildr

```
'com.mycompany.app:my-app:jar:1.0-SNAPSHOT'
```

Project Summary

Project Information

Field	Value
Name	my-app
Description	-
Homepage	http://maven.apache.org 

Project Organization

This project does not belong to an organization.

Build Information

Field	Value
GroupId	com.mycompany.app
ArtifactId	my-app
Version	1.0-SNAPSHOT
Type	jar
JDK Rev	-

Project Dependencies

test

The following is a list of test dependencies for this project. These dependencies are only required to compile and run unit tests for the application:

GroupId	ArtifactId	Version	Type	License
junit	junit 	3.8.1	jar	Common Public License Version 1.0 