

## Subject :

- Instalasi Maven
- Build Tools

## Objective :

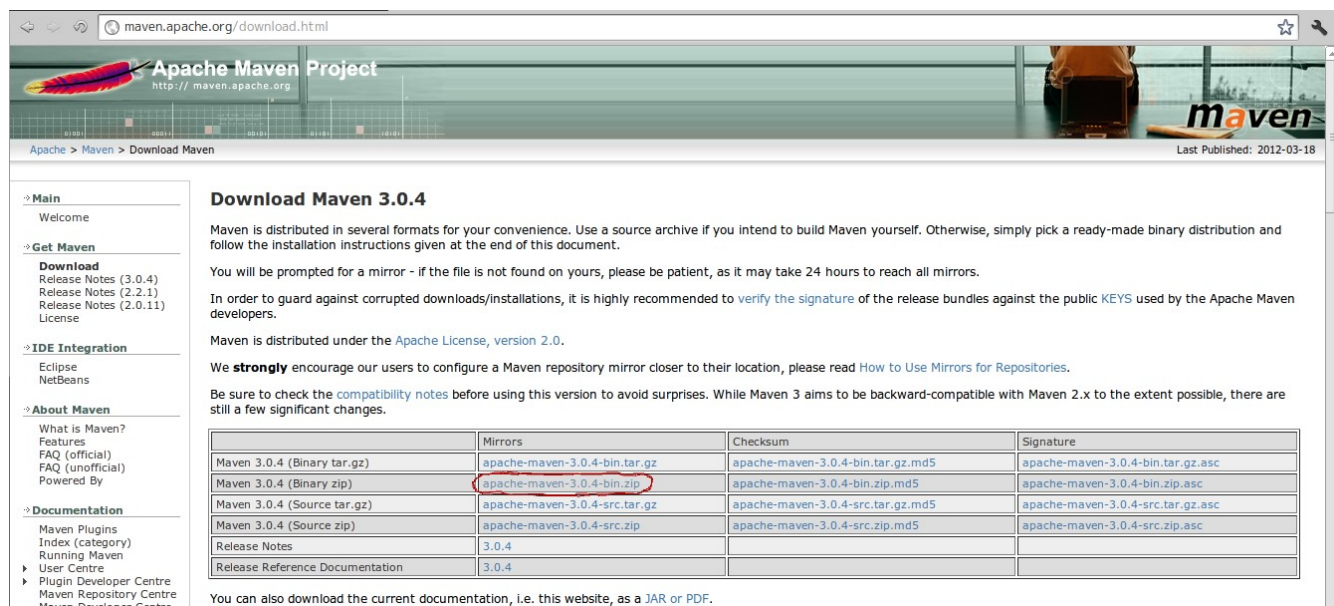
- Memahami Maven
- Memahami Build Tools

## Tugas Praktikum Sesi 1

### Latihan 1 : Instalasi Maven

Langkah – Langkah Instalasi Maven :

1. Langkah pertama adalah download maven terlebih dahulu disini : <http://maven.apache.org/download.html>, download file Maven 3.0.4 (Binary zip) yang ada di kolom mirror => klik.



**Download Maven 3.0.4**

Maven is distributed in several formats for your convenience. Use a source archive if you intend to build Maven yourself. Otherwise, simply pick a ready-made binary distribution and follow the installation instructions given at the end of this document.

You will be prompted for a mirror - if the file is not found on yours, please be patient, as it may take 24 hours to reach all mirrors.

In order to guard against corrupted downloads/installations, it is highly recommended to [verify the signature](#) of the release bundles against the public [KEYS](#) used by the Apache Maven developers.

Maven is distributed under the [Apache License, version 2.0](#).

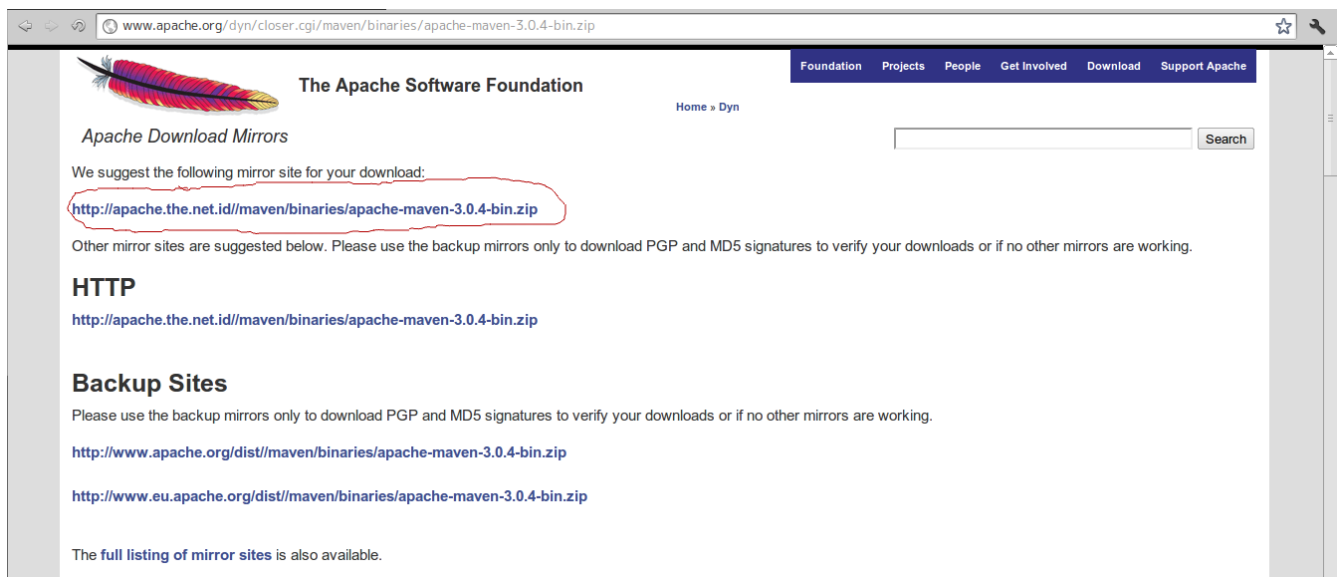
We **strongly** encourage our users to configure a Maven repository mirror closer to their location, please read [How to Use Mirrors for Repositories](#).

Be sure to check the [compatibility notes](#) before using this version to avoid surprises. While Maven 3 aims to be backward-compatible with Maven 2.x to the extent possible, there are still a few significant changes.

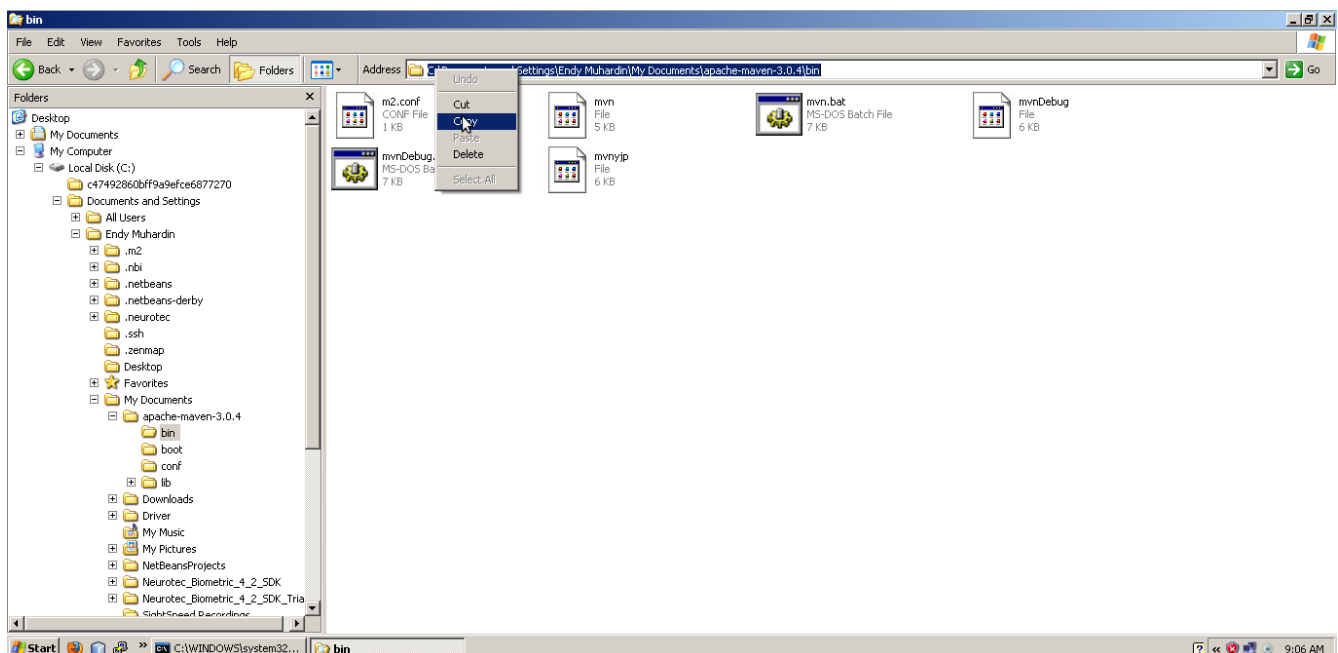
	Mirrors	Checksum	Signature
Maven 3.0.4 (Binary tar.gz)	<a href="#">apache-maven-3.0.4-bin.tar.gz</a>	<a href="#">apache-maven-3.0.4-bin.tar.gz.md5</a>	<a href="#">apache-maven-3.0.4-bin.tar.gz.asc</a>
Maven 3.0.4 (Binary zip)	<a href="#">apache-maven-3.0.4-bin.zip</a>	<a href="#">apache-maven-3.0.4-bin.zip.md5</a>	<a href="#">apache-maven-3.0.4-bin.zip.asc</a>
Maven 3.0.4 (Source tar.gz)	<a href="#">apache-maven-3.0.4-src.tar.gz</a>	<a href="#">apache-maven-3.0.4-src.tar.gz.md5</a>	<a href="#">apache-maven-3.0.4-src.tar.gz.asc</a>
Maven 3.0.4 (Source zip)	<a href="#">apache-maven-3.0.4-src.zip</a>	<a href="#">apache-maven-3.0.4-src.zip.md5</a>	<a href="#">apache-maven-3.0.4-src.zip.asc</a>
Release Notes	<a href="#">3.0.4</a>		
Release Reference Documentation	<a href="#">3.0.4</a>		

You can also download the current documentation, i.e. this website, as a [JAR](#) or [PDF](#).

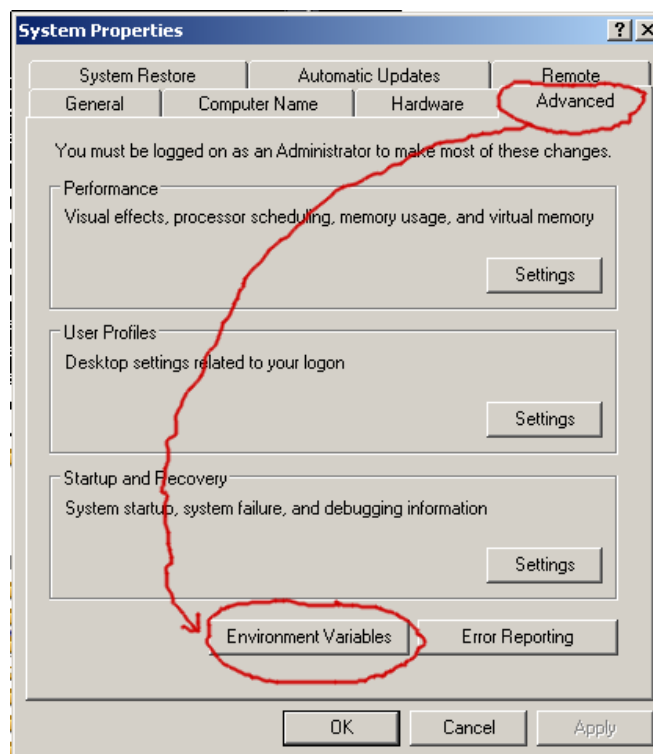
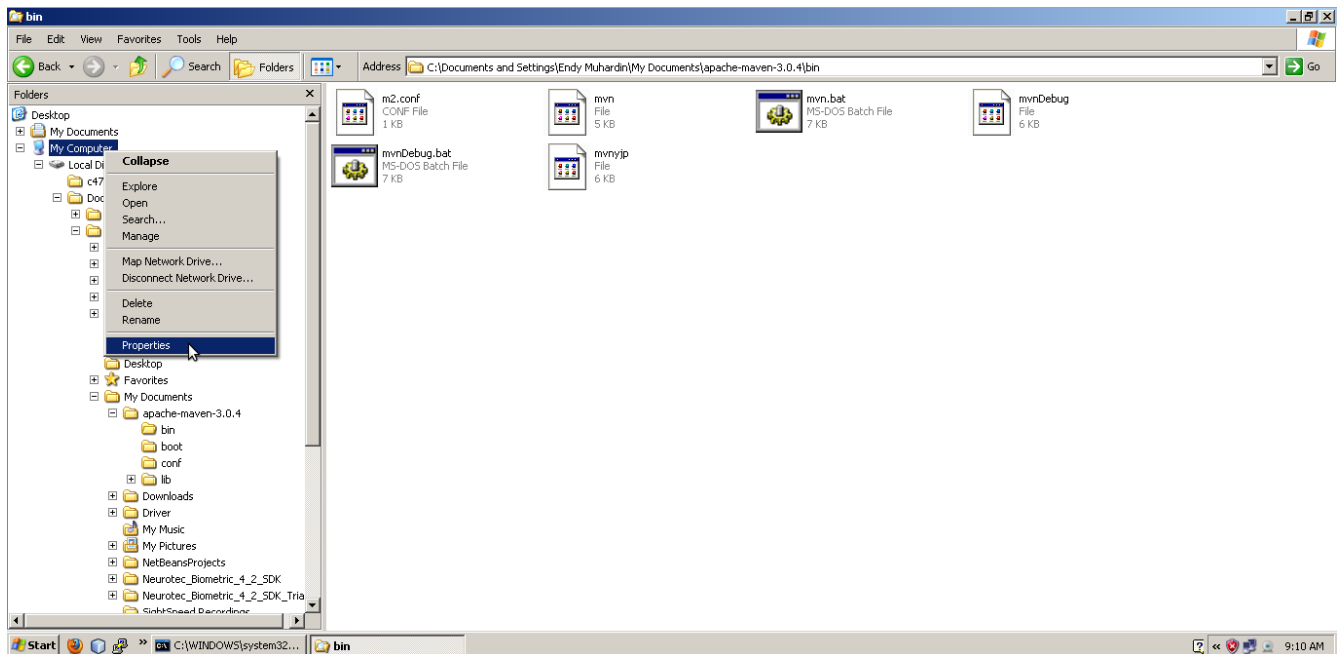
2. Setelah file Maven 3.0.4 (Binary zip) di klik, maka keluar browse untuk mendownload file Maven 3.0.4 (Binary zip).
3. Setelah keluar browse untuk mendownload file Maven 3.0.4 (Binary zip), lalu klik link : <http://apache.the.net.id//maven/binaries/apache-maven-3.0.4-bin.zip> . Maka file Maven 3.0.4 (Binary zip) terdownload.

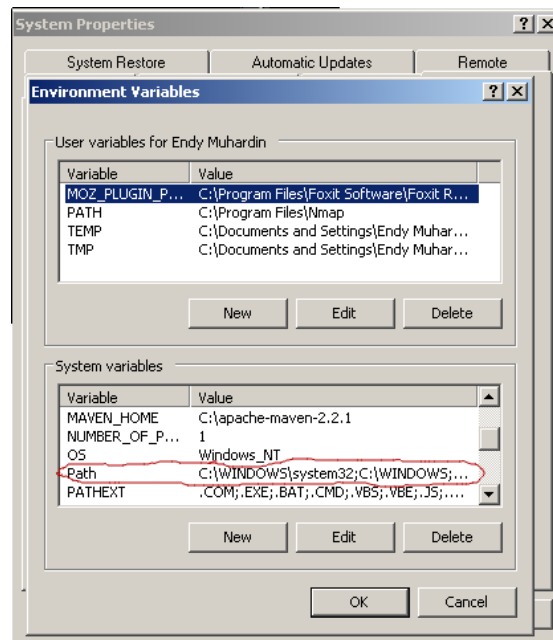


- Setelah proses download selesai, selanjutnya extract file yang sudah anda download.
- Setelah file Maven di extract, lalu masuk ke folder maven hasil extract dan masuk ke folder bin : \apache-maven-3.0.4\bin.
- Setelah anda masuk folder bin, copy address bar ke dalam path dengan cara :
  - copy address bar, misalnya : C:\Documents and Settings\Endy Muhardin\My Documents\apache-maven-3.0.4\bin.

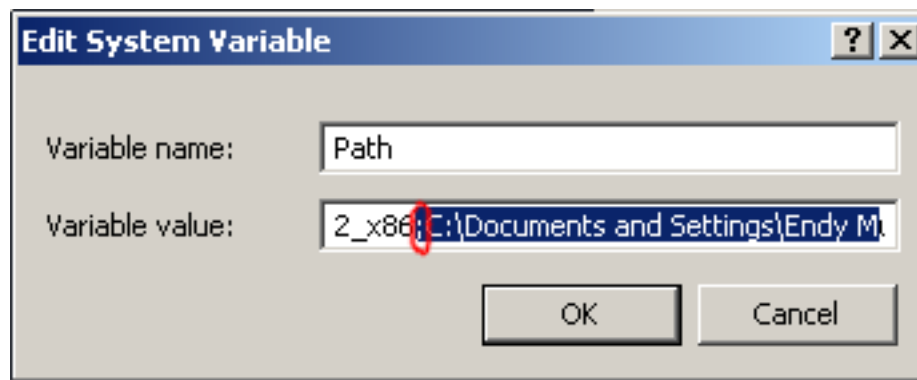


- Setelah address bar di copy, Klik kanan my computer => Properties => pilih tab Advanced => Klik Environment Variables (keluar lookup Environment Variables) => Klik 2x "Path" yang ada pada kolom System Variables (keluar lookup edit system variable).





- Edit variable value dengan cara tidak menghapus variable value yang ada, lalu tambahkan tanda penghubung (;) titik koma pada baris paling belakang, lalu paste address bar yang anda copy tadi di belakang (;).



- Setelah address bar sudah di copy pada "Path", Lalu Klik OK (edit system variable) => Klik OK (environment variables) => Klik OK (System Properties) => Restart komputer anda.
7. Setelah komputer sudah hidup kembali, buka comand prompt, lalu ketik :  
mvn clean install, jika berhasil akan keluar seperti dibawah ini :

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\Endy Muhardin>mvn clean install
[INFO] Scanning for projects...
[INFO] BUILD FAILURE
[INFO] Total time: 0.364s
[INFO] Finished at: Fri Mar 16 10:59:02 ICT 2012
[INFO] Final Memory: 1M/7M
[ERROR] The goal you specified requires a project to execute but there is no POM
in this directory (C:\Documents and Settings\Endy Muhardin). Please verify you
invoked Maven from the correct directory. -> [Help 1]
[ERROR] To see the full stack trace of the errors, re-run Maven with the -e swit
ch.
[ERROR] Re-run Maven using the -X switch to enable full debug logging.
[ERROR] For more information about the errors and possible solutions, please rea
d the following articles:
[ERROR] [Help 1] http://cwiki.apache.org/confluence/display/MAVEN/MissingProject
Exception
C:\Documents and Settings\Endy Muhardin>
```

8. Jika hasil seperti gambar di atas keluar, maka Instalasi Maven selesai.

## **Latihan 2 : Build Tools (pembuatan project sederhana)**

1. Ketikkan perintah dibawah ini untuk membuat sebuah project dari archetype :

```
mvn archetype:create -DgroupId=com.artivisi.project
-DArtifactId=my-app
```

2. Jika berhasil akan muncul seperti di bawah ini :

```
C:\Documents and Settings\Endy Muhardin>mvn archetype:create
-DgroupId=com.artivisi.project -DartifactId=my-app
[INFO] Scanning for projects...
[INFO] BUILD SUCCESS
[INFO] Building Maven Stub Project (No POM) 1
[INFO]
[INFO] --- maven-archetype-plugin:2.1:create (default-cli) @ standalone-pom ---
[WARNING] This goal is deprecated. Please use mvn archetype:generate instead
[INFO] Defaulting package to group ID: com.artivisi.project
Downloading:
http://repo.maven.apache.org/maven2/org/apache/maven/archetypes/mav
en-archetype-quickstart/maven-metadata.xml
Downloaded: http://repo.maven.apache.org/maven2/org/apache/maven/archetypes/maven-
archetype-quickstart/maven-metadata.xml (531 B at 0.2 KB/sec)
[INFO]
[INFO] Using following parameters for creating project from Old (1.x)
Archetype:maven-archetype quickstart:RELEASE
[INFO]
[INFO] Parameter: groupId, Value: com.artivisi.project
[INFO] Parameter: packageName, Value: com.artivisi.project
[INFO] Parameter: package, Value: com.artivisi.project
[INFO] Parameter: artifactId, Value: my-app
[INFO] Parameter: basedir, Value: C:\Documents and Settings\Endy Muhardin
[INFO] Parameter: version, Value: 1.0-SNAPSHOT
```

```

[INFO] project created from Old (1.x) Archetype in dir: C:\Documents and
Settings\Endy Muhardin\my-app
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 5.055s
[INFO] Finished at: Mon Mar 19 09:29:57 ICT 2012
[INFO] Final Memory: 7M/17M
[INFO] -----
C:\Documents and Settings\Endy Muhardin>_

```

3. Jika tidak ada kesalahan, maka pada komputer akan terbuat sebuah direktori dengan struktur seperti gambar dibawah ini :

```

my-app/
| pom.xml
| src
|   | main
|   |   | java
|   |   |   | com
|   |   |   |   | artivisi
|   |   |   |   |   | project
|   |   |   |   |   |   | App.java
|   |   | test
|   |   |   | java
|   |   |   |   | com
|   |   |   |   |   | artivisi
|   |   |   |   |   |   | project
|   |   |   |   |   |   |   | AppTest.java

```

4. Untuk menjalankannya, masuk ke direktori my-app dulu, dengan cara seperti di bawah ini :

```
cd my-app
```

5. lalu jalankan perintah seperti dibawah ini, untuk melakukan clean install :

```
mvn clean install
```

6. Jika berhasil akan muncul seperti di bawah ini :

```

C:\Documents and Settings\Endy Muhardin\my-app>mvn clean install
[INFO] Scanning for projects...
[INFO]
[INFO] -----
[INFO] Building my-app 1.0-SNAPSHOT
[INFO] -----
Downloading: http://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-
surefire-plugin/2.10/maven-surefire-plugin-2.10.pom
Downloaded: http://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-
surefire-plugin/2.10/maven-surefire-plugin-2.10.pom (11 KB at 7.0 KB/sec)
Downloading: http://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-
surefire-plugin/2.10/maven-surefire-plugin-2.10.jar
Downloaded: http://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-
surefire-plugin/2.10/maven-surefire-plugin-2.10.jar (30 KB at 18.2 KB/sec)
Downloading: http://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-
jar-plugin/2.3.2/maven-jar-plugin-2.3.2.pom
Downloaded: http://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-
jar-plugin/2.3.2/maven-jar-plugin-2.3.2.pom (6 KB at 3.8 KB/sec)
Downloading: http://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-
jar-plugin/2.3.2/maven-jar-plugin-2.3.2.jar
Downloaded: http://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-
jar-plugin/2.3.2/maven-jar-plugin-2.3.2.jar (32 KB at 25.4 KB/sec)
[INFO]
[INFO] --- maven-clean-plugin:2.4.1:clean (default-clean) @ my-app ---
[INFO]
[INFO] --- maven-resources-plugin:2.5:resources (default-resources) @ my-app ---

```

7. Setelah proses clean install berhasil, selanjutnya ketik perintah di bawah ini :

```

mvn compile; mvn exec:java -
Dexec.mainClass="com.artivisi.project.App"

```

8. Jika berhasil, maka akan muncul seperti dibawah ini :

```

C:\Documents and Settings\Endy Muhardin\my-app>mvn exec:java -Dexec.mainClass="c
om.artivisi.project.App"
[INFO] Scanning for projects...
[INFO]
[INFO] -----
[INFO] Building my-app 1.0-SNAPSHOT
[INFO] -----
[INFO] >>> exec-maven-plugin:1.2.1:java (default-cli) @ my-app >>>
[INFO]
[INFO] <<< exec-maven-plugin:1.2.1:java (default-cli) @ my-app <<<
[INFO]
[INFO] --- exec-maven-plugin:1.2.1:java (default-cli) @ my-app ---
Hello World!
[INFO]
[INFO] BUILD SUCCESS
[INFO]
[INFO] Total time: 1.493s
[INFO] Finished at: Mon Mar 19 09:58:42 ICT 2012
[INFO] Final Memory: 4M/11M
[INFO]
C:\Documents and Settings\Endy Muhardin\my-app>

```