



Τάκης Παναγόπουλος  
Νικόλας Μπομπέτσης

Ανάπτυξη Λογισμικού Τηλεπικοινωνιών και δικτύων 2015 - 2016

# Περιεχόμενα

- Τι είναι το Maven
- Maven Repositories
- Log4j Example with Maven

# Τι είναι το Maven

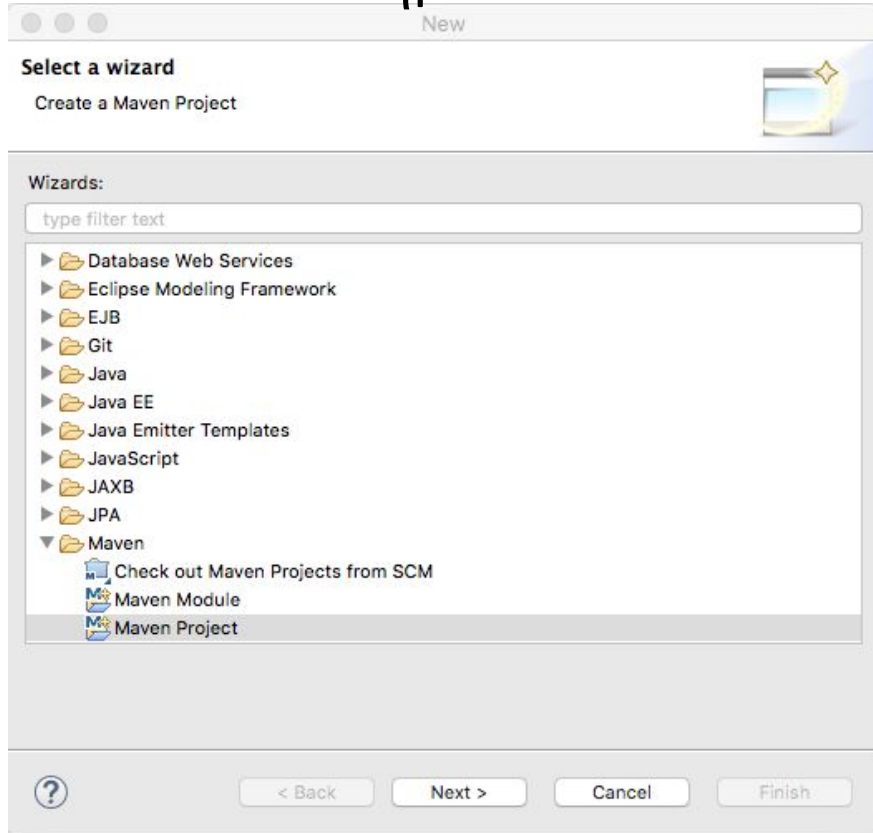
- Το maven είναι ένα build εργαλείο που χρησιμοποιείται σε Java Projects

# Maven Repositories

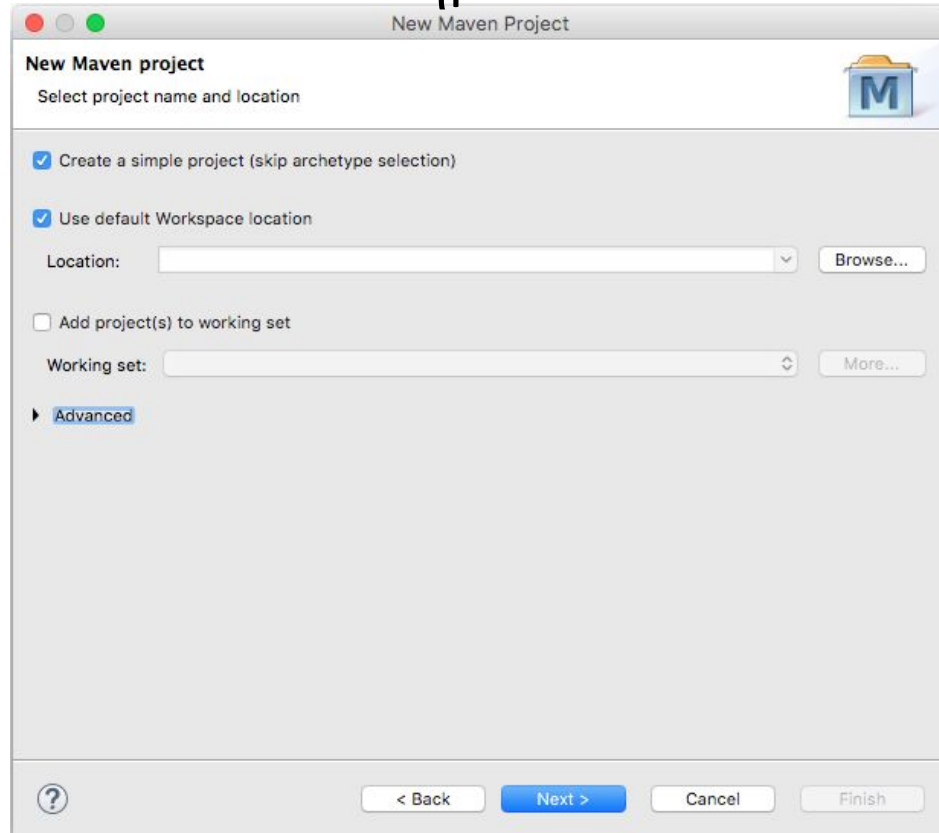
- **Maven local repository**
  - Maven local repository is used to store the project dependency libraries, and the default folder is “.m2”
- **Maven central repository**
  - Maven central repository is the default location for Maven to download all the project dependency libraries.
- **Maven remote repository**
  - Not all libraries are store in Maven central repository, often times, you need to add some remote repositories to download the libraries from another location instead of the default central repository.

# Δημιουργία του project

## Βήμα 1



## Βήμα 2



# Configure project

New Maven Project

New Maven project

Configure project

Artifact

Group Id:

Artifact Id:

Version:

Packaging:

Name:

Description:

Parent Project

Group Id:

Artifact Id:

Version:

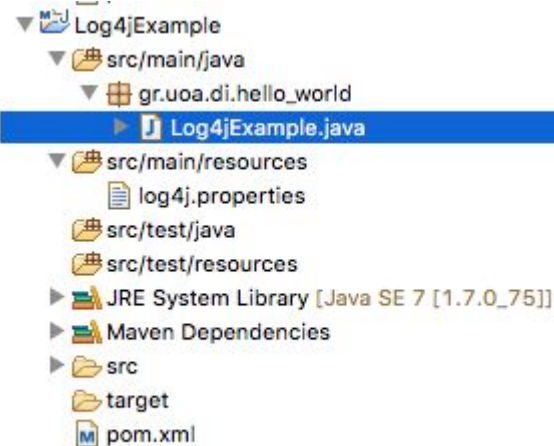
Advanced

# Log4j property file

- Log4jExample
  - src/main/java
  - src/main/resources
    - log4j.properties
  - src/test/java
  - src/test/resources
  - JRE System Library [Java SE 7 [1.7.0\_75]]
  - Maven Dependencies
  - src
  - target
  - pom.xml

```
Log4jExample/pom.xml  log4j.properties  ⌵
1 # Root logger option
2 log4j.rootLogger=DEBUG, stdout, file
3
4 # Redirect log messages to console
5 log4j.appender.stdout=org.apache.log4j.ConsoleAppender
6 log4j.appender.stdout.Target=System.out
7 log4j.appender.stdout.layout=org.apache.log4j.PatternLayout
8 log4j.appender.stdout.layout.ConversionPattern=%d{yyyy-MM-dd HH:mm:ss} %-5p %c{1}:%L - %m%n
9
10 # Redirect log messages to a log file, support file rolling.
11 log4j.appender.file=org.apache.log4j.RollingFileAppender
12 log4j.appender.file.File=C:\\log4j-application.log
13 log4j.appender.file.MaxFileSize=5MB
14 log4j.appender.file.MaxBackupIndex=10
15 log4j.appender.file.layout=org.apache.log4j.PatternLayout
16 log4j.appender.file.layout.ConversionPattern=%d{yyyy-MM-dd HH:mm:ss} %-5p %c{1}:%L - %m%n
```

# Log4j Class file

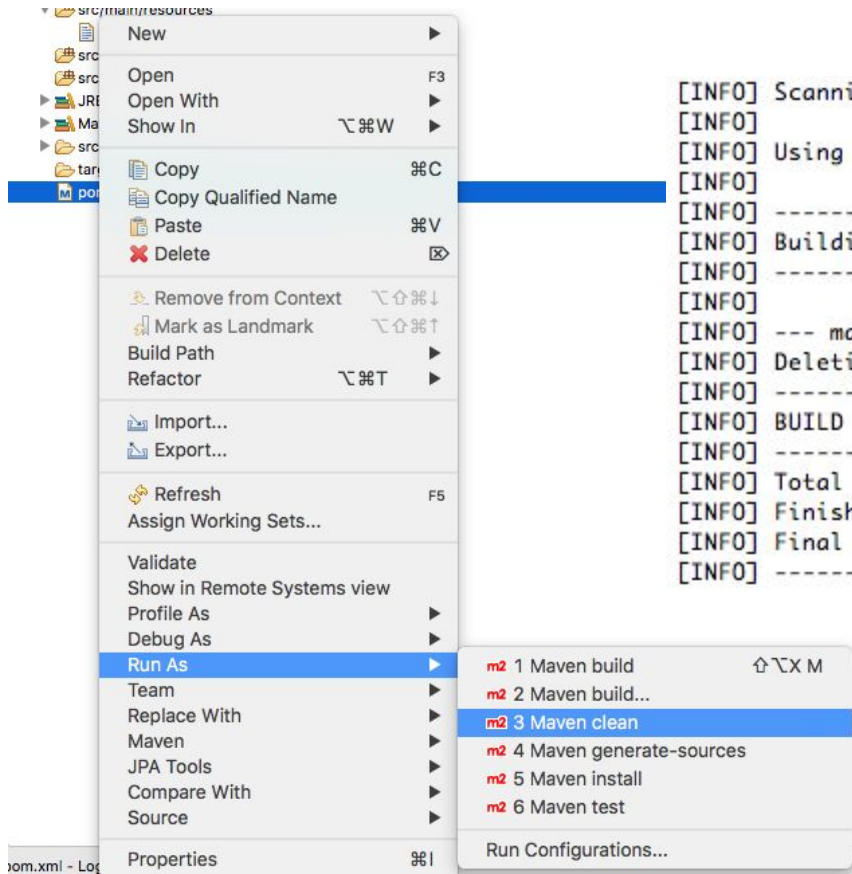


```
Log4jExample/pom.xml  log4j.properties  Log4jExample.java  ⌕
1 package gr.uoa.di.hello_world;
2
3 import org.apache.log4j.Logger;
4
5 public class Log4jExample {
6
7
8     final static Logger logger = Logger.getLogger(Log4jExample.class);
9
10    public static void main (String[] arg){
11
12        logger.info("Hello World");
13
14        Log4jExample obj = new Log4jExample();
15
16        try{
17            logger.debug("Result : " + obj.divide());
18        }catch(ArithmeticException ex){
19            logger.error("Sorry, something wrong!", ex);
20        }
21
22
23    }
24
25    private int divide(){
26
27        return 10 /0;
28    }
29
30
31 }
32
```



# POM Maven clean

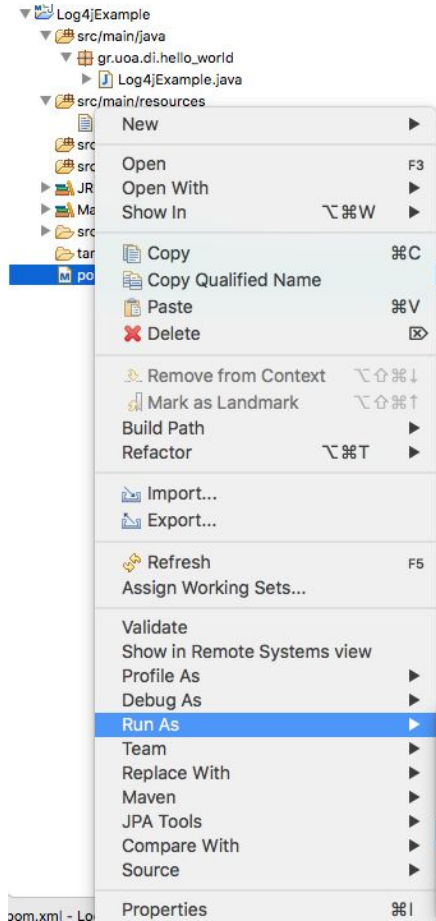
Cleans up artifacts created by prior builds



```
[INFO] Scanning for projects...
[INFO]
[INFO] Using the builder org.apache.maven.lifecycle.internal.builder.singlethreaded.S
[INFO]
[INFO] -----
[INFO] Building Log4jExample 0.0.1-SNAPSHOT
[INFO] -----
[INFO]
[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ Log4jExample ---
[INFO] Deleting /Users/nikolas/Documents/workspace/Log4jExample/target
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 0.418 s
[INFO] Finished at: 2015-11-03T23:46:03+02:00
[INFO] Final Memory: 6M/245M
[INFO] -----
```

# POM Maven install

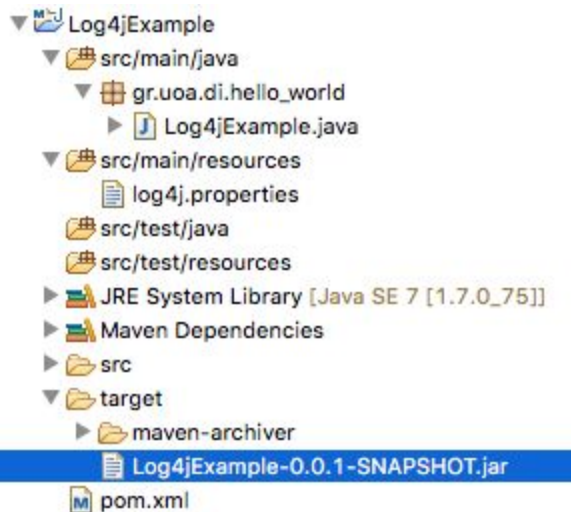
Install the package into the local repository, for use as a dependency in other projects locally



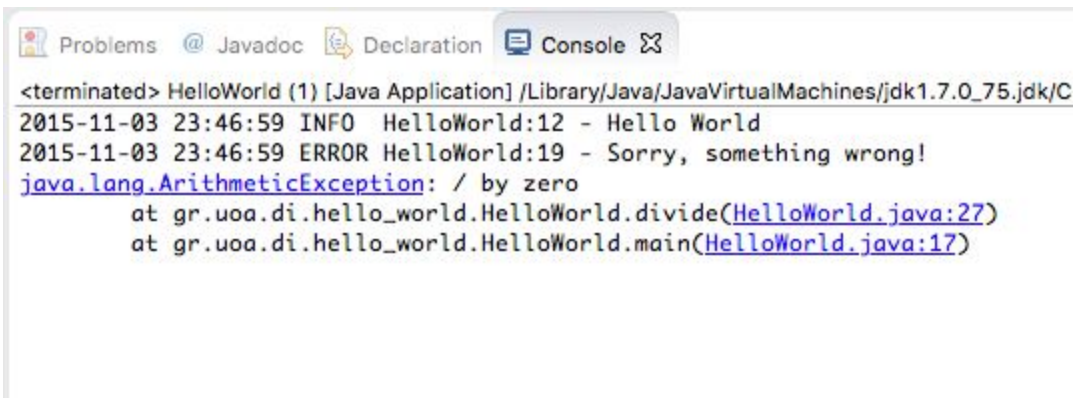
```
[INFO] Copying 0 resource
[INFO]
[INFO] --- maven-compiler-plugin:2.5.1:testCompile (default-testCompile) @ Log4jExample ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- maven-surefire-plugin:2.12.4:test (default-test) @ Log4jExample ---
[INFO]
[INFO] --- maven-jar-plugin:2.4:jar (default-jar) @ Log4jExample ---
[INFO] Building jar: /Users/nikolas/Documents/workspace/Log4jExample/target/Log4jExample-0.0.1-SNAPSHOT.jar
[INFO]
[INFO] --- maven-install-plugin:2.4:install (default-install) @ Log4jExample ---
[INFO] Installing /Users/nikolas/Documents/workspace/Log4jExample/target/Log4jExample-0.0.1-SNAPSHOT.jar to /U:
[INFO] Installing /Users/nikolas/Documents/workspace/Log4jExample/pom.xml to /Users/nikolas/.m2/repository/gr/i
[INFO]
[INFO] -----
[INFO] BUILD SUCCESS
[INFO]
[INFO] -----
[INFO] Total time: 2.317 s
[INFO] Finished at: 2015-11-03T23:46:35+02:00
[INFO] Final Memory: 12M/245M
[INFO] -----
```

```
m2 1 Maven build          ⌘\X M
m2 2 Maven build...
m2 3 Maven clean
m2 4 Maven generate-sources
m2 5 Maven install
m2 6 Maven test
Run Configurations...
```


# Jar File



# Example Output



The screenshot shows an IDE console window with the following content:

```
Problems @ Javadoc Declaration Console   
<terminated> HelloWorld (1) [Java Application] /Library/Java/JavaVirtualMachines/jdk1.7.0_75.jdk/C  
2015-11-03 23:46:59 INFO HelloWorld:12 - Hello World  
2015-11-03 23:46:59 ERROR HelloWorld:19 - Sorry, something wrong!  
java.lang.ArithmeticException: / by zero  
    at gr.uoa.di.hello_world.HelloWorld.divide(HelloWorld.java:27)  
    at gr.uoa.di.hello_world.HelloWorld.main(HelloWorld.java:17)
```