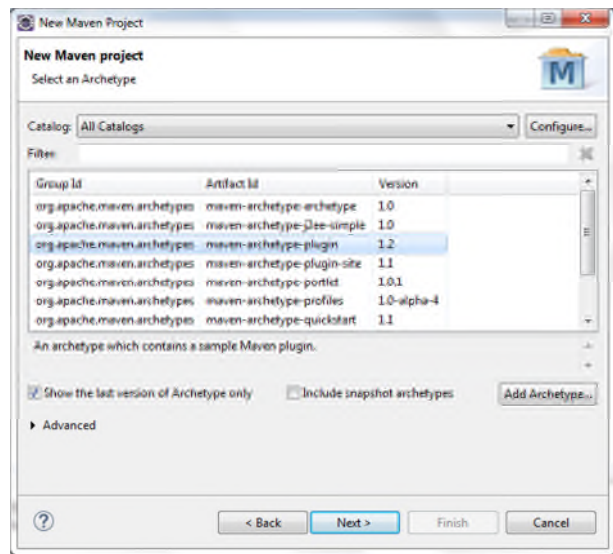
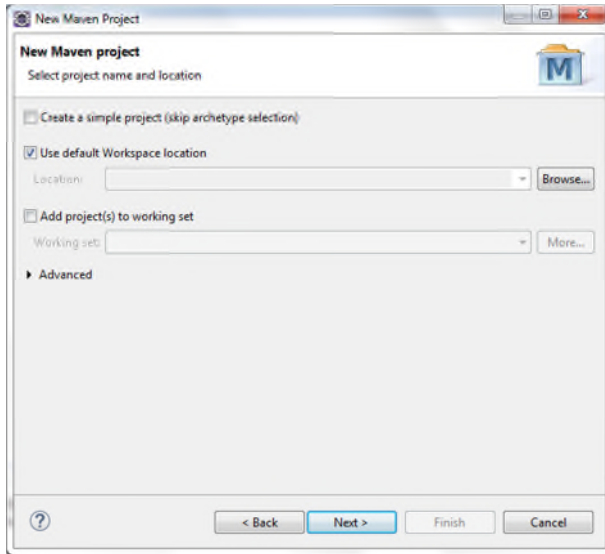
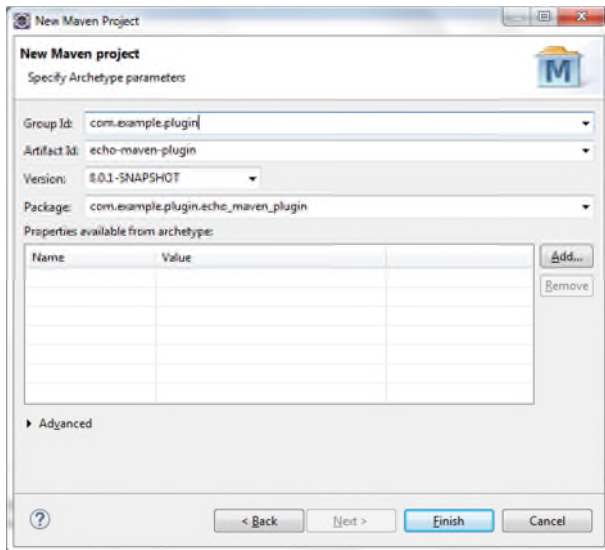


Writing Plugins Walkthrough

1. Create a new Maven Project - use maven-archetype-plugin.

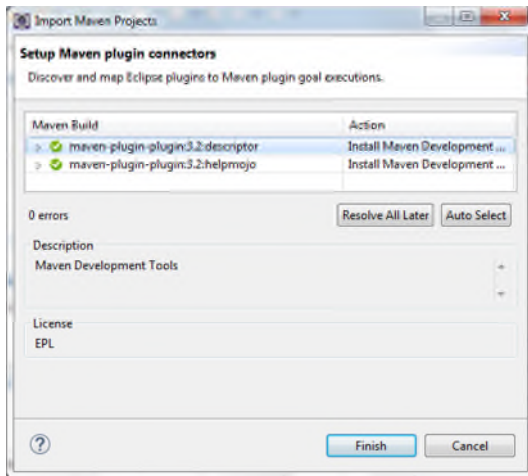


Set **Group Id** to **com.example.plugin** and **Artifact Id** to **echo-maven-plugin**.

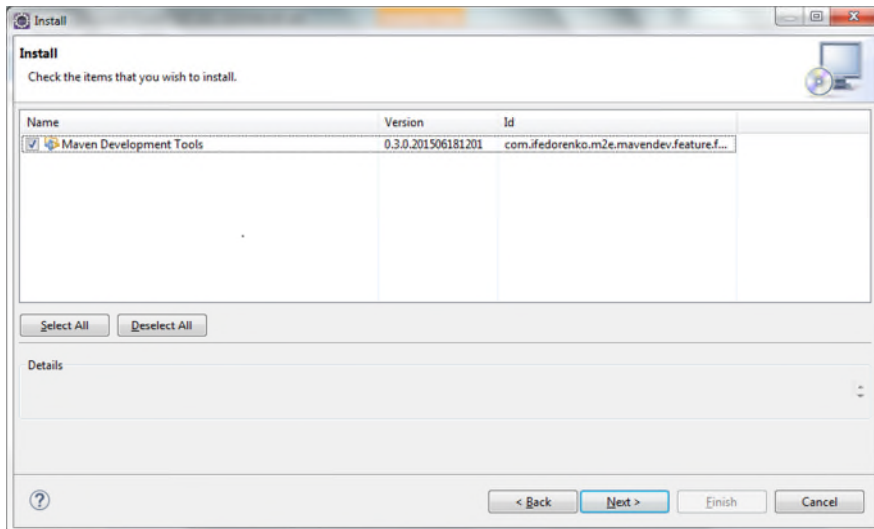


Writing Plugins Walkthrough

If you are prompted to **Setup Maven plugin connectors** click Finish.

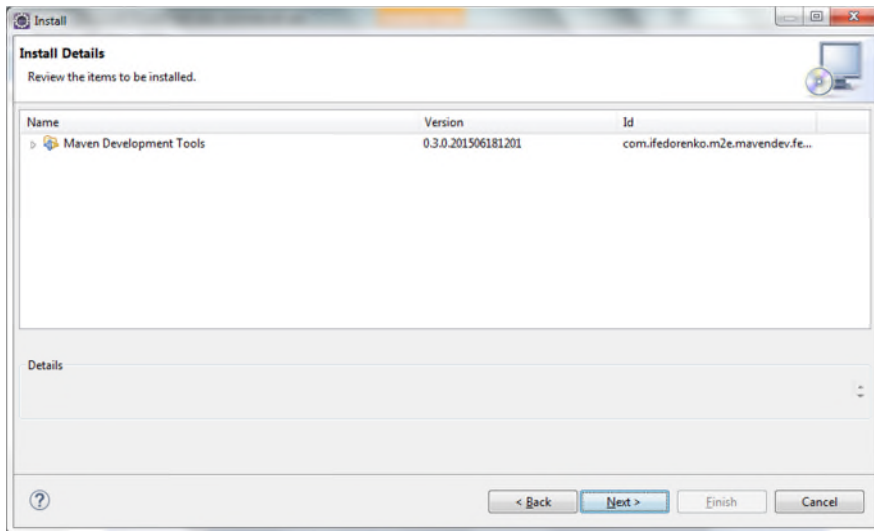


Check all and click **Next**.

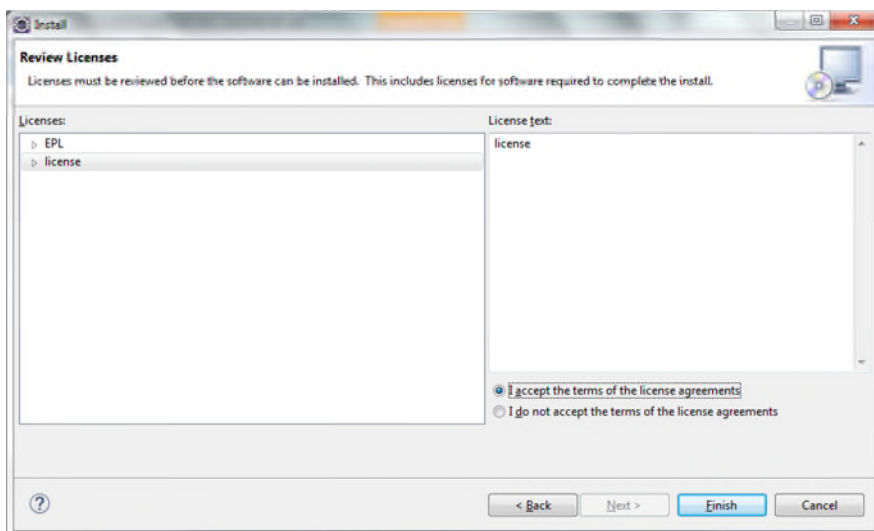


Writing Plugins Walkthrough

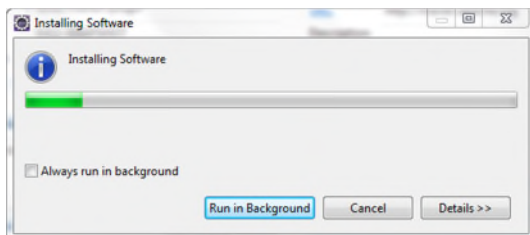
And **Next** again.



Select **I accept the terms of the license agreements** and click **Finish**.

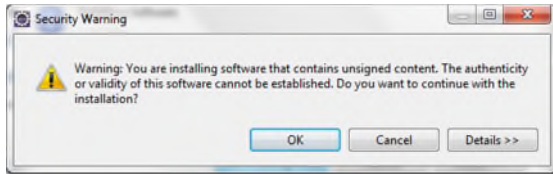


Eclipse will start installing software.

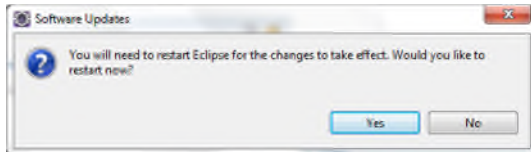


Writing Plugins Walkthrough

You might get a warning about unsigned software - click ok.

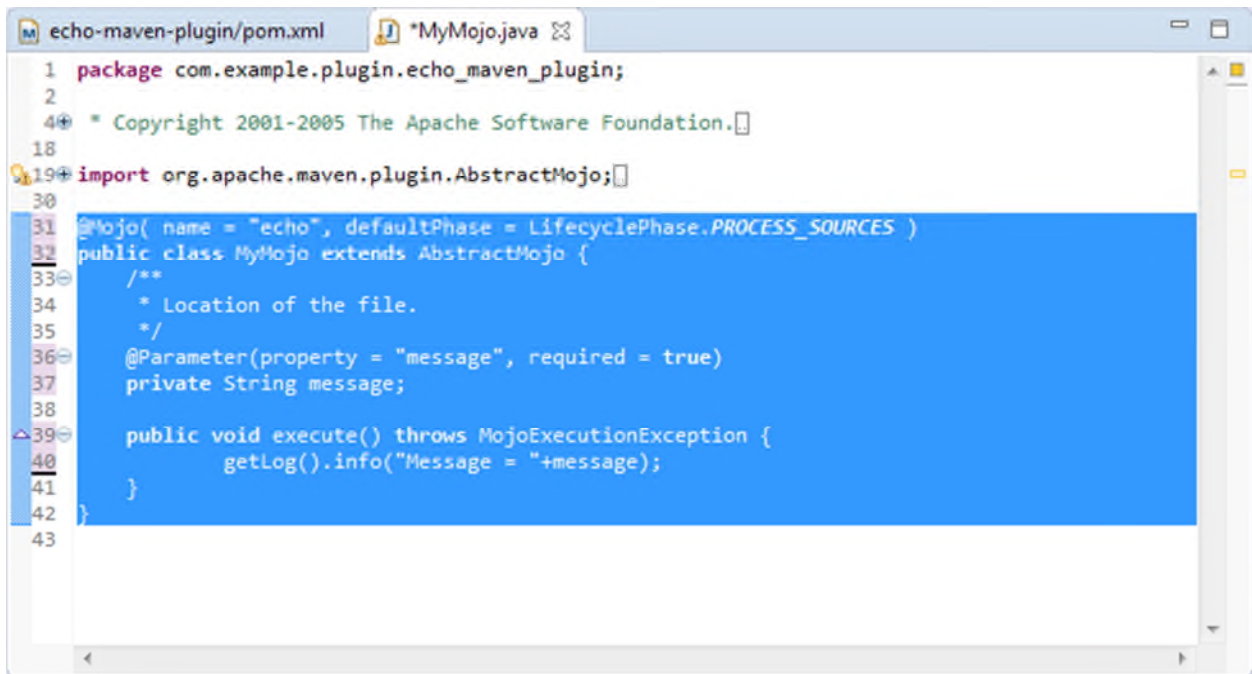


Eclipse will need to restart - click **Yes**.



2. Open **MyMojo.java** file under **src/main/java** in package **com.example.plugin.echo_maven_plugin**.

Edit the file as shown below:

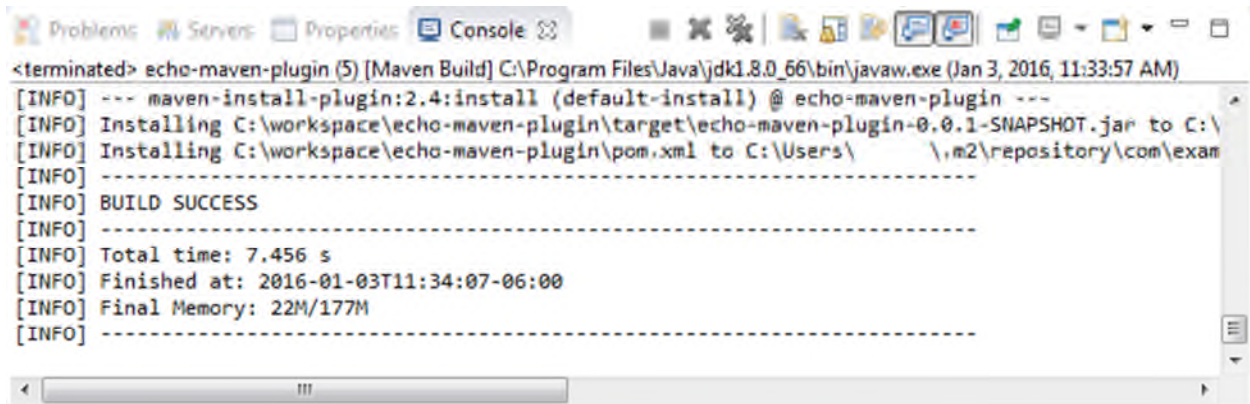


3. Open **pom.xml** in **src\it\simple-it**. After the line `<version>@project.version@</version>` add these 4 lines:

```
<configuration>
    <debug>true</debug>
    <message>Some message</message>
</configuration>
```

Writing Plugins Walkthrough

4. **Run as Maven install.** It should look like this:

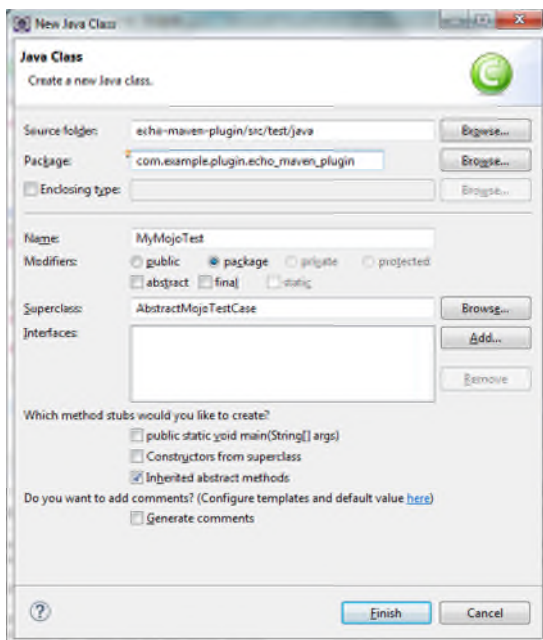


```
<terminated> echo-maven-plugin (5) [Maven Build] C:\Program Files\Java\jdk1.8.0_66\bin\javaw.exe (Jan 3, 2016, 11:33:57 AM)
[INFO] --- maven-install-plugin:2.4:install (default-install) @ echo-maven-plugin ---
[INFO] Installing C:\workspace\echo-maven-plugin\target\echo-maven-plugin-0.0.1-SNAPSHOT.jar to C:\
[INFO] Installing C:\workspace\echo-maven-plugin\pom.xml to C:\Users\...\m2\repository\com\exam
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 7.456 s
[INFO] Finished at: 2016-01-03T11:34:07-06:00
[INFO] Final Memory: 22M/177M
[INFO] -----
```

5. Create a new folder **/src/test/java**.

6. Create a new Class named **MyMojoTest** in the **/src/test/java** folder.

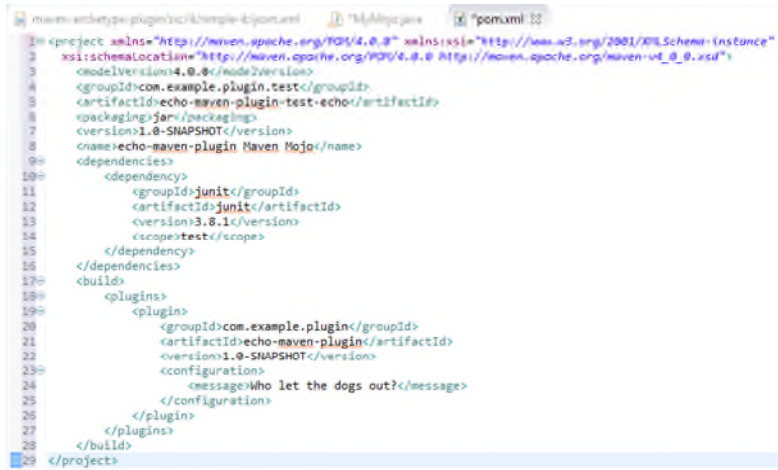
Enter: Package **com.example.plugin.echo_maven_plugin**
and Superclass **AbstractMojoTestCase**



7. Copy the contents of the solution file into this class.

Writing Plugins Walkthrough

8. Create a folder named `/src/test/resources/unit/echo-mojo`.
9. Create a **pom.xml** file and enter the contents (or copy from solutions file) so it looks like this:



```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
3   xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/maven-v4_0_0.xsd">
4   <modelVersion>4.0.0</modelVersion>
5   <groupId>com.example.plugin.test</groupId>
6   <artifactId>echo-maven-plugin-test-echo</artifactId>
7   <packaging>jar</packaging>
8   <version>1.0-SNAPSHOT</version>
9   <name>echo-maven-plugin Maven Mojo</name>
10  <dependencies>
11    <dependency>
12      <groupId>junit</groupId>
13      <artifactId>junit</artifactId>
14      <version>3.8.1</version>
15      <scope>test</scope>
16    </dependency>
17  </dependencies>
18  <build>
19    <plugins>
20      <plugin>
21        <groupId>com.example.plugin</groupId>
22        <artifactId>echo-maven-plugin</artifactId>
23        <version>1.0-SNAPSHOT</version>
24        <configuration>
25          <message>Who let the dogs out?</message>
26        </configuration>
27      </plugin>
28    </plugins>
29  </build>
30 </project>
```

10. Open the main pom.xml file and add these 2 dependencies to the other dependencies.

```
<dependency>
  <groupId>org.apache.maven</groupId>
  <artifactId>maven-compat</artifactId>
  <version>3.3.9</version>
</dependency>
<dependency>
  <groupId>org.apache.maven.plugin-testing</groupId>
  <artifactId>maven-plugin-testing-harness</artifactId>
  <version>3.1.0</version>
  <scope>test</scope>
</dependency>
```

11. Change the version of the **maven-plugin-api** dependency to **3.3.9** (or the Current version of Maven on your system).

Writing Plugins Walkthrough

12. Open **pom.xml** in the **src/it/simple-it** folder.

If there is a property setting for **<basedir>** remove that whole line.

Then, change:

```
<execution>
  <id>touch</id>
  <phase>validate</phase>
  <goals>
    <goal>touch</goal>
  </goals>
</execution>
```

To:

```
<execution>
  <id>echo</id>
  <phase>validate</phase>
  <goals>
    <goal>echo</goal>
  </goals>
</execution>
```

Save and close **pom.xml**.

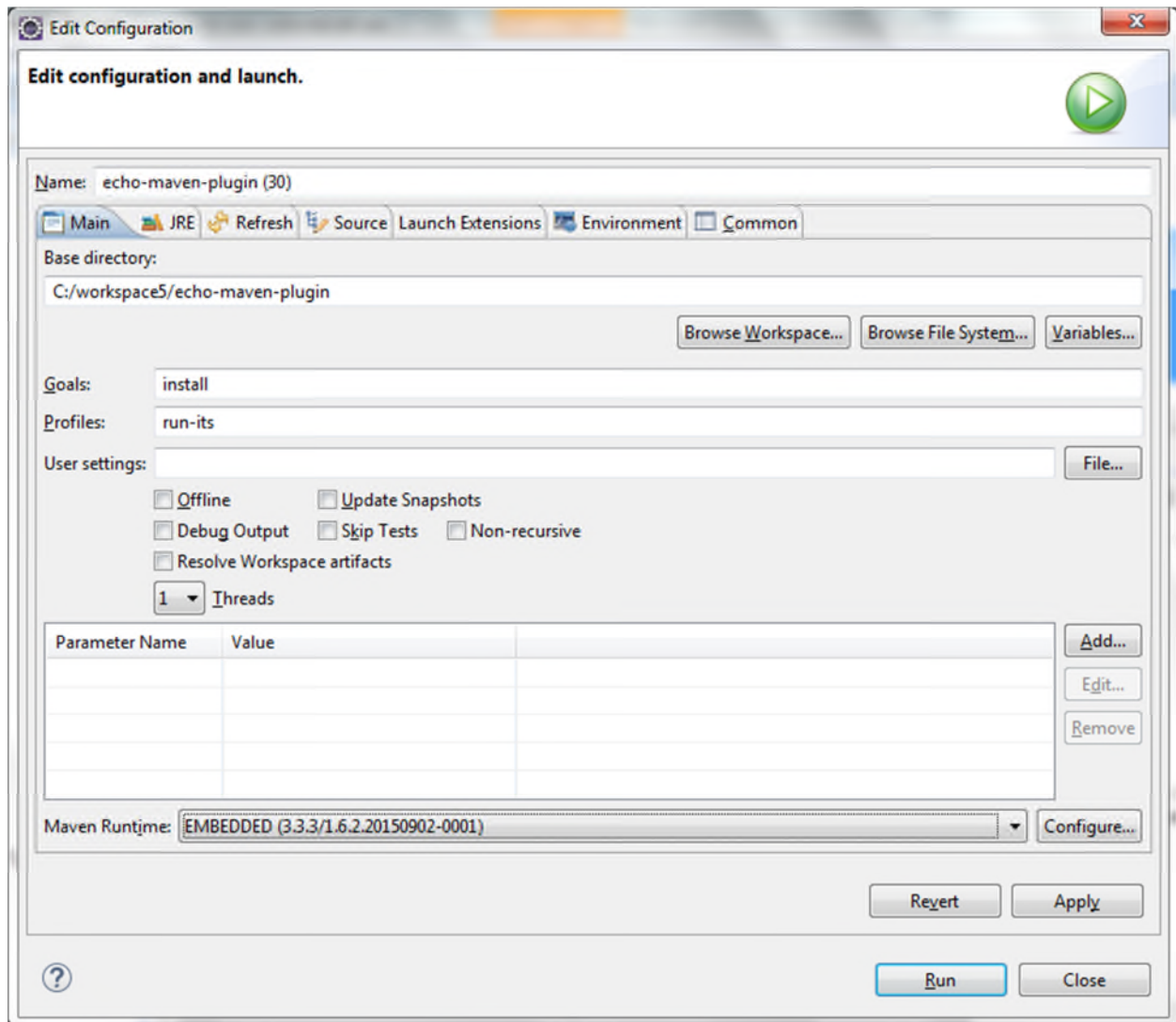
13. Open **verify.groovy** in the **src/it/simple-it** folder.

Delete the entire content of the file and replace it with **assert true**.

Writing Plugins Walkthrough

14. Select Run As → Maven build...

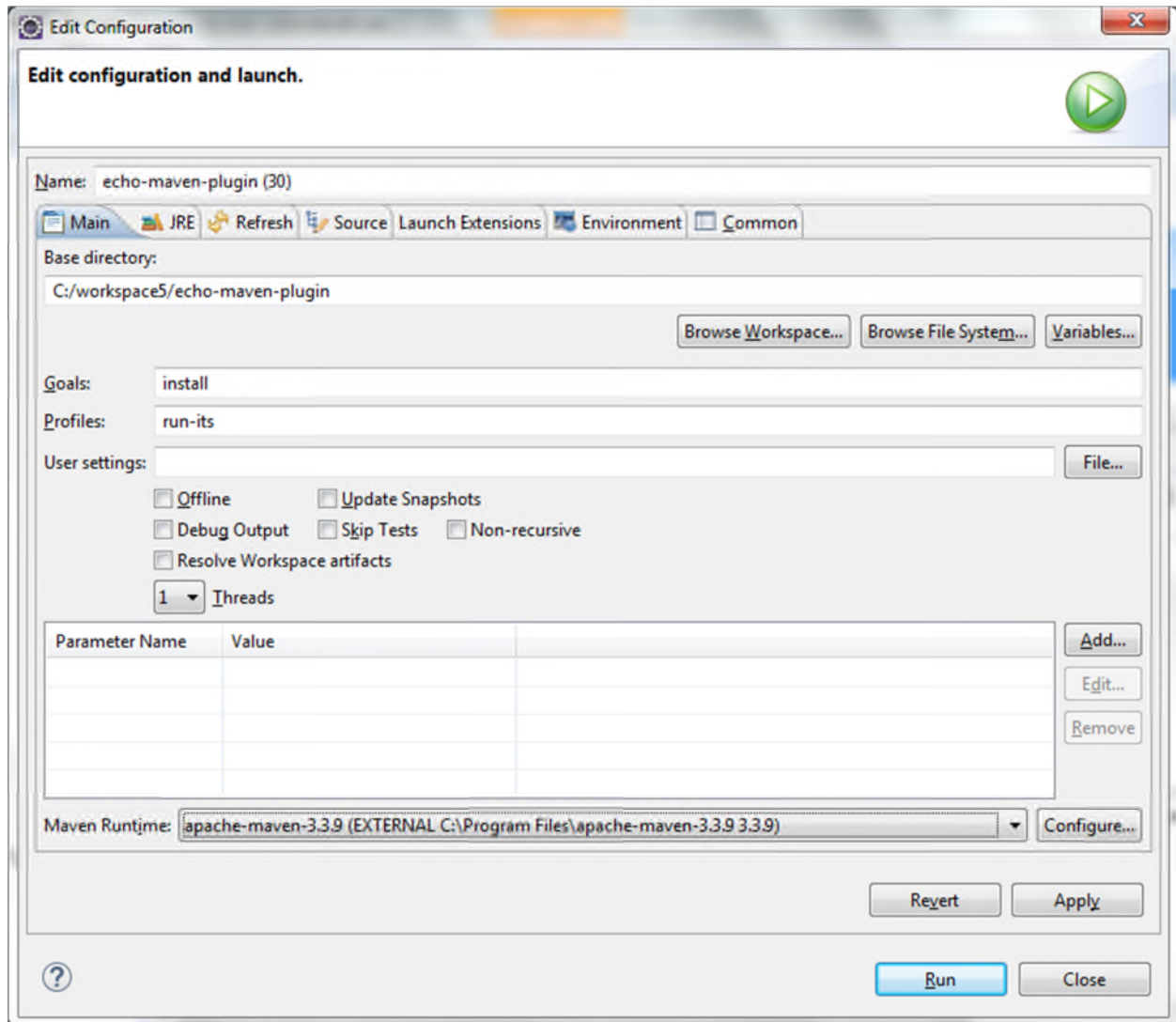
Set **Goals** to **install**, **Profiles** to **run-its**, **Maven Runtime** to **EMBEDDED** and hit **Run**.



The build will fail.

Writing Plugins Walkthrough

15. Set **Goals** to **install**, **Profiles** to **run-its**, **Maven Runtime** to **apache-maven-3.3.9** and hit **Run**.



Note: If you don't see the option to change **Maven Runtime** to **apache-maven-3.3.9** refer to the walkthrough on how to install Maven properly.

Writing Plugins Walkthrough

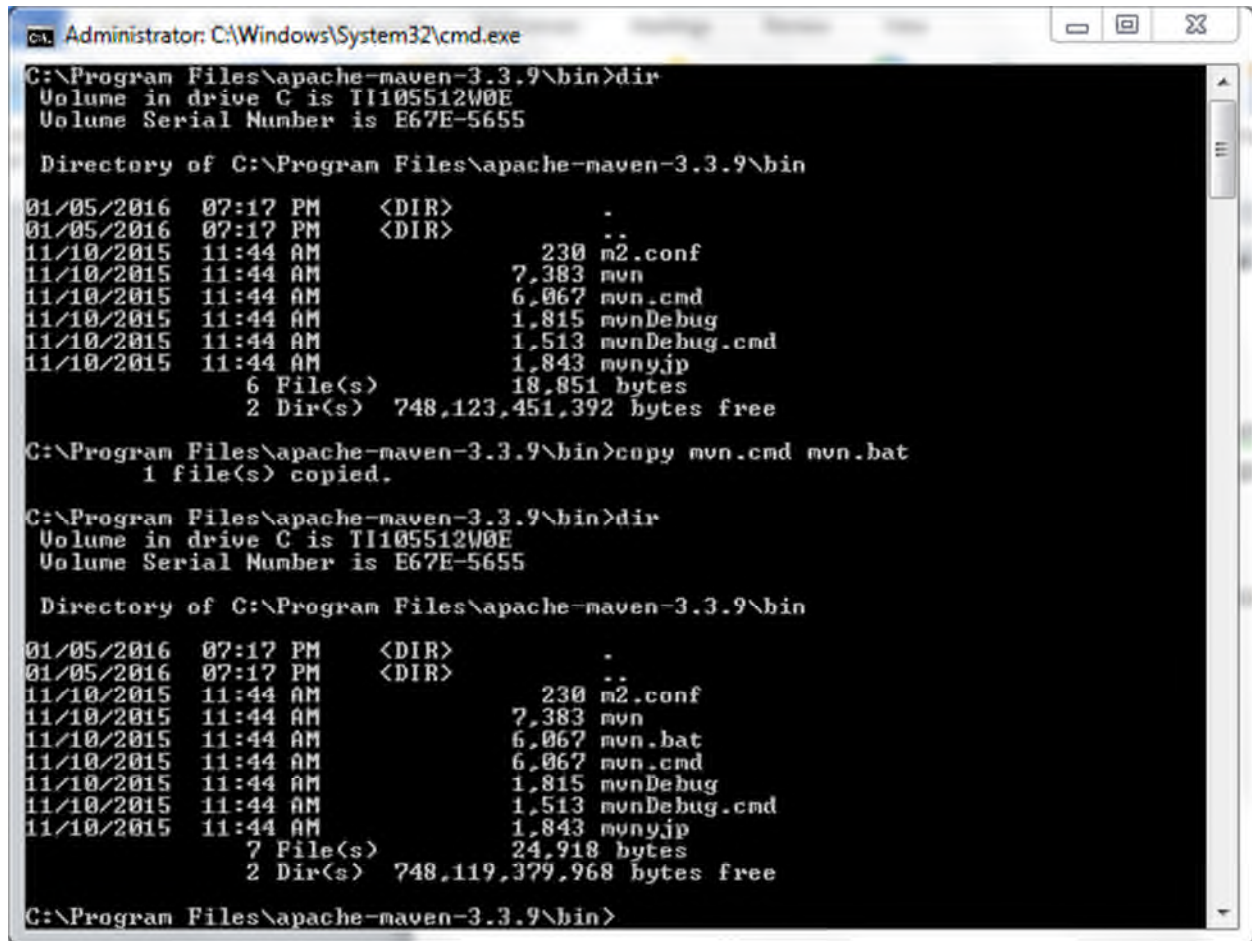
If you get the error message (or similar):

```
[INFO] Maven invocation failed. Error configuring command-line. Reason: Maven
executable not found at: C:\Program Files\apache-maven-3.3.9\bin\mvn.bat
```

Open **cmd.exe** and navigate to where the **apache-maven-3.3.9** is installed.

Move to the **bin** folder.

And type: **copy mvn.cmd mvn.bat**



```
Administrator: C:\Windows\System32\cmd.exe
C:\Program Files\apache-maven-3.3.9\bin>dir
Volume in drive C is TI105512W0E
Volume Serial Number is E67E-5655

Directory of C:\Program Files\apache-maven-3.3.9\bin

01/05/2016  07:17 PM    <DIR>          .
01/05/2016  07:17 PM    <DIR>          ..
11/10/2015  11:44 AM             230 m2.conf
11/10/2015  11:44 AM            7,383 mvn
11/10/2015  11:44 AM           6,067 mvn.cmd
11/10/2015  11:44 AM            1,815 mvnDebug
11/10/2015  11:44 AM            1,513 mvnDebug.cmd
11/10/2015  11:44 AM            1,843 mvnyjp
               6 File(s)          18,851 bytes
               2 Dir(s)  748,123,451,392 bytes free

C:\Program Files\apache-maven-3.3.9\bin>copy mvn.cmd mvn.bat
1 file(s) copied.

C:\Program Files\apache-maven-3.3.9\bin>dir
Volume in drive C is TI105512W0E
Volume Serial Number is E67E-5655

Directory of C:\Program Files\apache-maven-3.3.9\bin

01/05/2016  07:17 PM    <DIR>          .
01/05/2016  07:17 PM    <DIR>          ..
11/10/2015  11:44 AM             230 m2.conf
11/10/2015  11:44 AM            7,383 mvn
11/10/2015  11:44 AM           6,067 mvn.bat
11/10/2015  11:44 AM           6,067 mvn.cmd
11/10/2015  11:44 AM            1,815 mvnDebug
11/10/2015  11:44 AM            1,513 mvnDebug.cmd
11/10/2015  11:44 AM            1,843 mvnyjp
               7 File(s)          24,918 bytes
               2 Dir(s)  748,119,379,968 bytes free

C:\Program Files\apache-maven-3.3.9\bin>
```

If you get an error that the **JAVA_HOME** is not set, you can add a line in the beginning of the **mvn.bat** file:

SET JAVA_HOME="your jdk install location"

Example:

SET JAVA_HOME="C:\Program Files\Java\jdk1.8.0_66"