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02. Setting up Scala IDE & using Maven plugins for Java developers

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Posted on July 25, 2016

This extends Setting up Java, Maven & Eclipse and Setting up Scala & practicing the concepts via REPL the Scala way for Java developers.

Step 1: Scala IDE is an eclipse plugin. Following is the Scala IDE update site URL for Eclipse 4.4 (Luna) and Eclipse 4.5 (Mars).

```

http://download.scala-ide.org/sdk/lithium/e44/scal
```

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Open eclipse., and then go to Help –>> Install New Software –> Add –>

Name: Scala IDE
Location: http://download.scala-ide.org/sdk/lithium/e44/scala211/stable/site

Select "**Scala IDE for Eclipse**", and install it and restart eclipse.

Step 3: This tutorial assumes that you have already installed Java, Scala, and maven as per the links at the top of this tutorial. So, let's create a simple Scala maven project called **"simple-scala**". "-B" is used for Maven non-interactive mode.

```

C:\Users\java-_000\projects>mvn archetype:generate

```

Step 4: Import the project "simple-scala" into eclipse.

File –> **Import** –> "**Existing Maven Projects**" –> select "C:\Users\java-_000\projects\simple-scala". It actually looks at the pom.xml in that folder.

Step 5: Right mouse click on "simple-scala", and then select "**Configure** –> **Add Scala Nature**", now you will see an "M" for Maven, and "S" for Scala. If you are interested, you can check the hidden file ".project".

Open "MySpecTest.scala" and press "**ctrl+shift+o**" to organize imports and fix the compile error.

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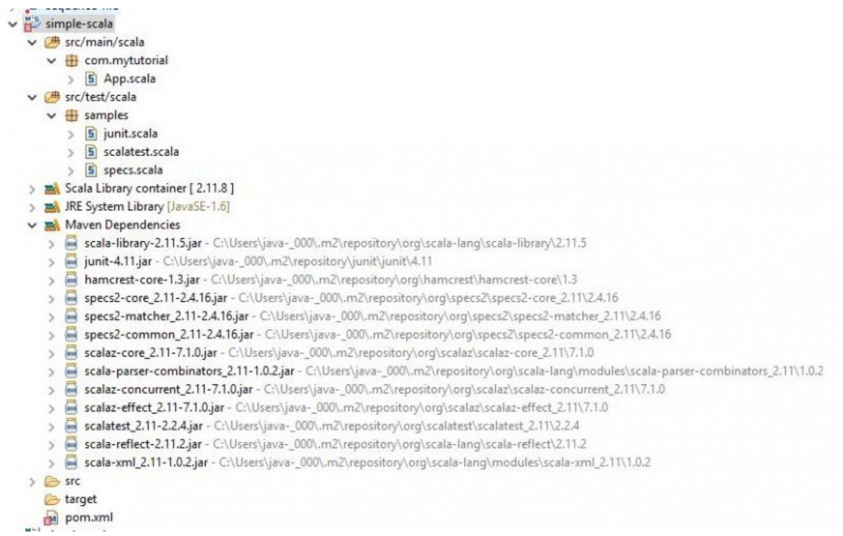

```
simple-scala
  src/main/scala
    com.mytutorial
      App.scala
  src/test/scala
    samples
      junit.scala
      scalatest.scala
      specs.scala
  Scala Library container [ 2.11.8 ]
  JRE System Library [JavaSE-1.6]
  Maven Dependencies
    scala-library-2.11.5.jar - C:\Users\java-_000\.m2\repository\org\scala-lang\scala-library\2.11.5
    junit-4.11.jar - C:\Users\java-_000\.m2\repository\junit\junit\4.11
    hamcrest-core-1.3.jar - C:\Users\java-_000\.m2\repository\org\hamcrest\hamcrest-core\1.3
    specs2-core_2.11-2.4.16.jar - C:\Users\java-_000\.m2\repository\org\specs2\specs2-core_2.11\2.4.16
    specs2-matcher_2.11-2.4.16.jar - C:\Users\java-_000\.m2\repository\org\specs2\specs2-matcher_2.11\2.4.16
    specs2-common_2.11-2.4.16.jar - C:\Users\java-_000\.m2\repository\org\specs2\specs2-common_2.11\2.4.16
    scalaz-core_2.11-7.1.0.jar - C:\Users\java-_000\.m2\repository\org\scalaz\scalaz-core_2.11\7.1.0
    scala-parser-combinators_2.11-1.0.2.jar - C:\Users\java-_000\.m2\repository\org\scala-lang\modules\scala-parser-combinators_2.11\1.0.2
    scalaz-concurrent_2.11-7.1.0.jar - C:\Users\java-_000\.m2\repository\org\scalaz\scalaz-concurrent_2.11\7.1.0
    scalaz-effect_2.11-7.1.0.jar - C:\Users\java-_000\.m2\repository\org\scalaz\scalaz-effect_2.11\7.1.0
    scalatest_2.11-2.2.4.jar - C:\Users\java-_000\.m2\repository\org\scalatest\scalatest_2.11\2.2.4
    scala-reflect-2.11.2.jar - C:\Users\java-_000\.m2\repository\org\scala-lang\scala-reflect\2.11.2
    scala-xml_2.11-1.0.2.jar - C:\Users\java-_000\.m2\repository\org\scala-lang\modules\scala-xml_2.11\1.0.2
  src
  target
  pom.xml
```

Simple Scala project in eclipse

Step 6: The **pom.xml** file need some changes, and should look like

```

<project xmlns="http://maven.apache.org/POM/4.0.(
  <modelVersion>4.0.0</modelVersion>
  <groupId>com.mytutorial</groupId>
  <artifactId>simple-scala</artifactId>
  <version>1.0-SNAPSHOT</version>
  <name>${project.artifactId}</name>
  <description>My wonderfull scala app</descript
  <inceptionYear>2015</inceptionYear>
  <licenses>
    <license>
      <name>My License</name>
      <url>http://....</url>
      <distribution>repo</distribution>
    </license>
  </licenses>

  <properties>
    <maven.compiler.source>1.6</maven.compiler.s
    <maven.compiler.target>1.6</maven.compiler.t
    <encoding>UTF-8</encoding>
    <scala.version>2.11.5</scala.version>
    <scala.compat.version>2.11</scala.compat.ver
  </properties>

  <dependencies>
    <dependency>
      <groupId>org.scala-lang</groupId>
      <artifactId>scala-library</artifactId>
      <version>${scala.version}</version>
    </dependency>

    <!-- Test -->
    <dependency>
      <groupId>junit</groupId>
      <artifactId>junit</artifactId>
      <version>4.11</version>
      <scope>test</scope>
    </dependency>
    <dependency>
      <groupId>org.specs2</groupId>
      <artifactId>specs2-core_${scala.compat.ver
      <version>2.4.16</version>
      <scope>test</scope>
    </dependency>
    <dependency>
        <groupId>org.specs2</groupId>
        <artifactId>specs2-junit_${scala.compat.
        <version>2.4.16</version>
        <scope>test</scope>
    </dependency>
    <dependency>
      <groupId>org.scalatest</groupId>
      <artifactId>scalatest_${scala.compat.versi
      <version>2.2.4</version>
      <scope>test</scope>
    </dependency>
  </dependencies>

  <build>
    <sourceDirectory>src/main/scala</sourceDirec
    <testSourceDirectory>src/test/scala</testSou
    <plugins>
      <plugin>
        <!-- see http://davidb.github.com/scala-
        <groupId>net.alchim31.maven</groupId>
        <artifactId>scala-maven-plugin</artifact
        <version>3.2.0</version>
        <executions>
          <execution>
            <goals>
              <goal>compile</goal>
              <goal>testCompile</goal>
            </goals>
            <configuration>
              <args>
             <!--    <arg>-make:transitive</arg>
                <arg>-dependencyfile</arg>
                <arg>${project.build.directory}/
              </args>
            </configuration>
          </execution>
        </executions>
      </plugin>
      <plugin>
        <groupId>org.apache.maven.plugins</group
```

```
          <artifactId>maven-surefire-plugin</artif
          <version>2.18.1</version>
          <configuration>
            <useFile>false</useFile>
            <disableXmlReport>true</disableXmlRepo
            <!-- If you have classpath issue like
            <!-- useManifestOnlyJar>false</useMani
            <includes>
              <include>**/*Test.*</include>
              <include>**/*Suite.*</include>
            </includes>
          </configuration>
        </plugin>
      </plugins>
    </build>
</project>
```

The changes are:

1. The commenting of "<arg>-make:transitive</arg>" inside the plugin "scala-maven-plugin".

```

<!--      <arg>-make:transitive</arg> -->

```

2. Add the following dependency:

```

   <dependency>
        <groupId>org.specs2</groupId>
        <artifactId>specs2-junit_${scala.compat.ve
        <version>2.4.16</version>
        <scope>test</scope>
     </dependency>

```

Step 7: Install the "**m2e-scala**" plugin from the following update site. The steps are very similar to "installing the Scala IDE" shown in Step 1.

```

http://alchim31.free.fr/m2e-scala/update-site/

```

Step 8: Now, right click on the package "**com.mytutorial**" within the project "simple-scala", and then select

New –> **Other** –> **Scala Wizards** –> "Scala Object" and name the Object "**com.mytutorial.Hello**".

```

package com.mytutorial

object Hello extends App {
  println("Hello from Scala")
}

```

You can run as

Select "**Hello.scala**" and right mouse button click and then "**Run As**" –> "**Scala Application**".

Output:

```

Hello from Scala
```

Packaging it using Maven

Go to a DOS command prompt:

```

C:\Users\java-_000\projects\simple-scala>mvn clean

```

This is one of many ways to getting started with Scala. There is a build tool for scala known as “**sbt**“.

‹ 01. Setting up Scala & practicing the concepts via REPL the Scala way for Java developers

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