**Maven setup**

mvn archetype:generate

choose number 1317 default

Version 8 (1.4)

groupID: (nl.han.ica.oose.dea)

artifactId: exercise-maven-threading

Version: 1.0-SNAPSHOT (laatste (ook unstable) versies van repos)

In POM:

Toevoegen na URL

<packaging>jar</packaging>

<properties>  
 <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>  
 <maven.compiler.source>11</maven.compiler.source>  
 <maven.compiler.target>11</maven.compiler.target>  
</properties>  
  
<dependencies>  
 <dependency>  
 <groupId>org.junit.jupiter</groupId>  
 <artifactId>junit-jupiter-params</artifactId>  
 <version>5.4.0</version>  
 </dependency>  
 <dependency>  
 <groupId>org.apache.commons</groupId>  
 <artifactId>commons-math3</artifactId>  
 <version>3.6.1</version>  
 </dependency>  
</dependencies>  
  
<build>  
 <pluginManagement><!-- lock down plugins versions to avoid using Maven defaults (may be moved to parent pom) -->  
  
 <plugins>  
 <plugin>  
 <groupId>org.codehaus.mojo</groupId>  
 <artifactId>exec-maven-plugin</artifactId>  
 <version>1.5.0</version>  
 <executions>  
 <execution>  
 <goals>  
 <goal>  
 java  
 </goal>  
 </goals>  
 </execution>  
 </executions>  
 <configuration>  
 <mainClass>nl.han.ica.oose.dea.App</mainClass>  
 </configuration>  
 </plugin>  
 <plugin>  
 <groupId>org.apache.maven.plugins</groupId>  
  
 <artifactId>maven-surefire-plugin</artifactId>  
 <version>3.0.0-M3</version>  
 <configuration>  
 <argLine>  
 --illegal-access=permit  
 </argLine>  
 </configuration>  
 </plugin>

Enable auto import!

**Maven run**mvn exec:java

#### Maven Commands

|  |  |
| --- | --- |
| Build Phase | Description |
| validate | Validates that the project is correct and all necessary information is available. This also makes sure the dependencies are downloaded. |
| compile | Compiles the source code of the project. |
| test | Runs the tests against the compiled source code using a suitable unit testing framework. These tests should not require the code be packaged or deployed. |
| package | Packs the compiled code in its distributable format, such as a JAR. |
| install | Install the package into the local repository, for use as a dependency in other projects locally. |
| deploy | Copies the final package to the remote repository for sharing with other developers and projects. |

Meer info over commando’s <http://tutorials.jenkov.com/maven/maven-commands.html>

# Refactoring

* **1. Dubbele code**
* **2. Lange methode of grote klasse**
  + If the body of a method is over a page (choose your page size)
  + If a class has either too many variables or too many methods
* **3. Long Parameter List**
  + In geval van veel parameters geef een object mee aan de klasse wanneer mogelijk
* **Feature envy(door elkaar halen van functionaliteiten)**
  + Soms op te lossen door een extract naar een andere method te doen of te verplaatsen naar een andere klasse.
* **Dataklompen**
  + It is frequent that the same set of variables are spotted together in various places of the code. Group together those variables in their own class.
* **Speculative Generality**
  + Ondersteuning voor functionaliteit inbouwen die waarschijnlijk niet gebruikt gaat worden.
* **Tijdelijke velden**
  + ?
* **Message chains**
  + Wanneer de volgende code voorkomt kan het handig zijn om het object direct aan te roepen:
* **9. Inappropriate Intimacy**
  + Some classes know too much about other classes and should therefore be broken up.
* **10. Comments**
  + Comments are sometimes used as deodorant to cover bad code. Often you can remove the comments after doing some refactorings, because they are not needed anymore. The code is now self-explaining.
* **11. Magic Number**
  + A value is used ‘all over the place’ and seems to have a special meaning. Introduce a constant and replace all occurrences of this value with the constant.