

Instructions for trying out the sample programs / sample solutions of the "Java Challenges" book

Requirements

You need at least an installed JDK 11 (or even better JDK 17 for special things from the newer Java versions) and the build tool Gradle 7.3.1 or Maven 3.8.4.

- <https://www.oracle.com/java/technologies/javase-downloads.html>
- <https://gradle.org/install/>
- <https://maven.apache.org/download.cgi>

To solve the exercises you need a current Eclipse 2021-09 with Java 17 plugin or a current IntelliJ 2021.3:

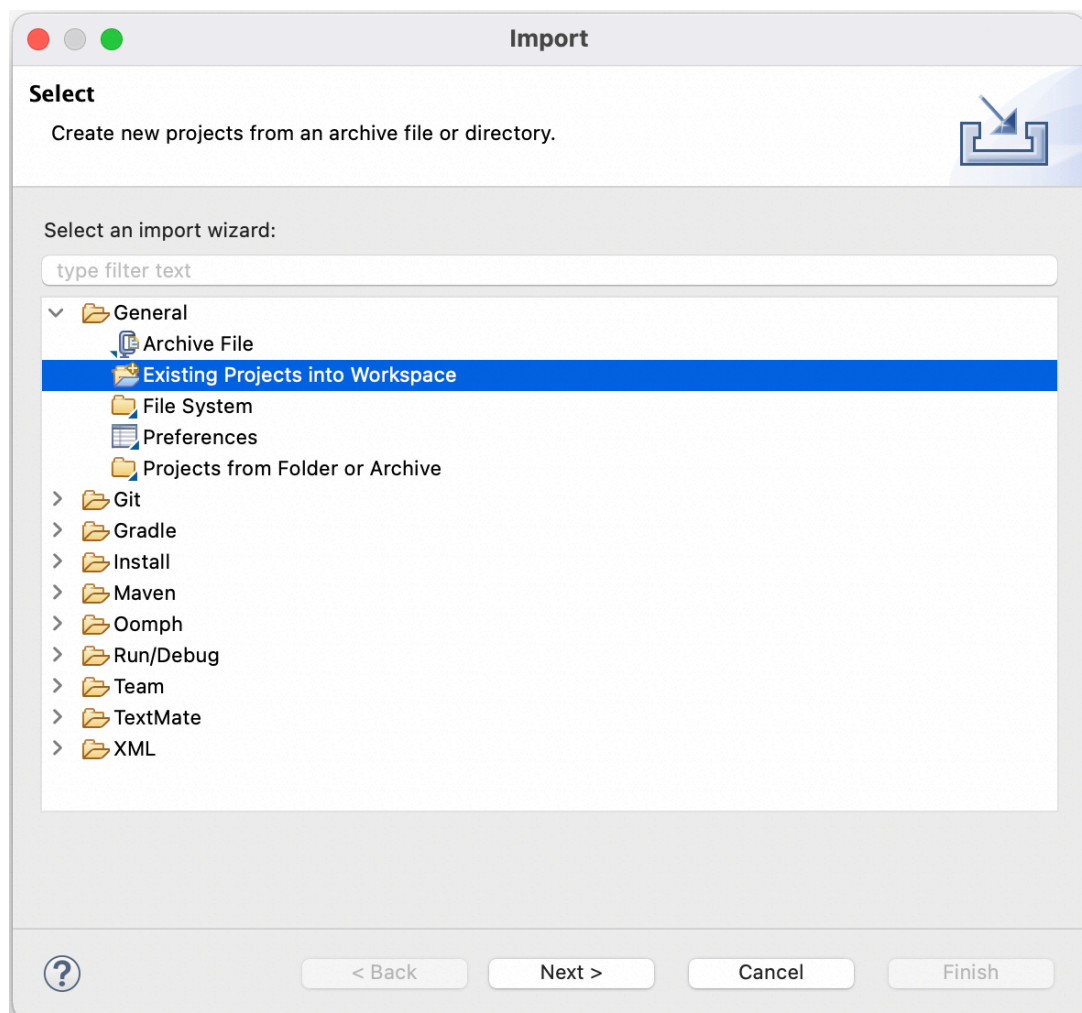
- <https://eclipse.org/downloads/>
- <https://www.jetbrains.com/de-de/idea/download/>

Installation of exercises / sample programs

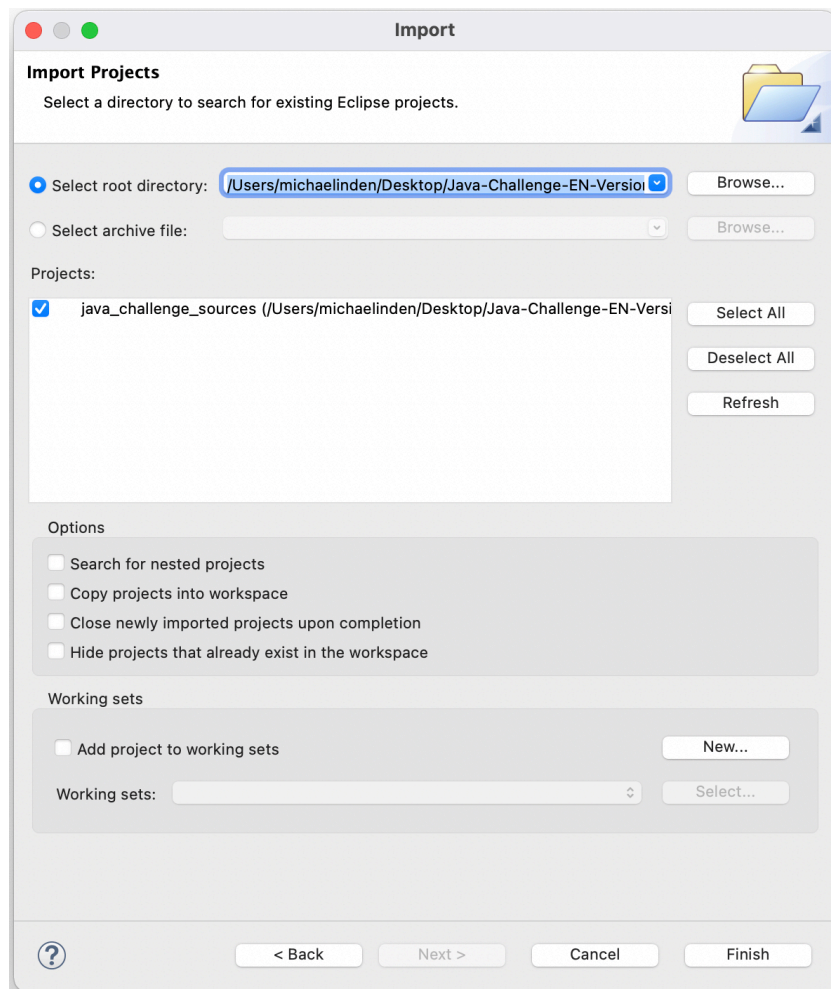
Download the project with the exercises and examples as a ZIP archive and unpack it into a directory of your choice. After that, an import into the IDE can be done easily (like described in detail for eclipse below). For IntelliJ, you should either import as an Eclipse project or preferably do a Maven import.

Import into Eclipse and Projekt Configuration (with Gradle / Maven)

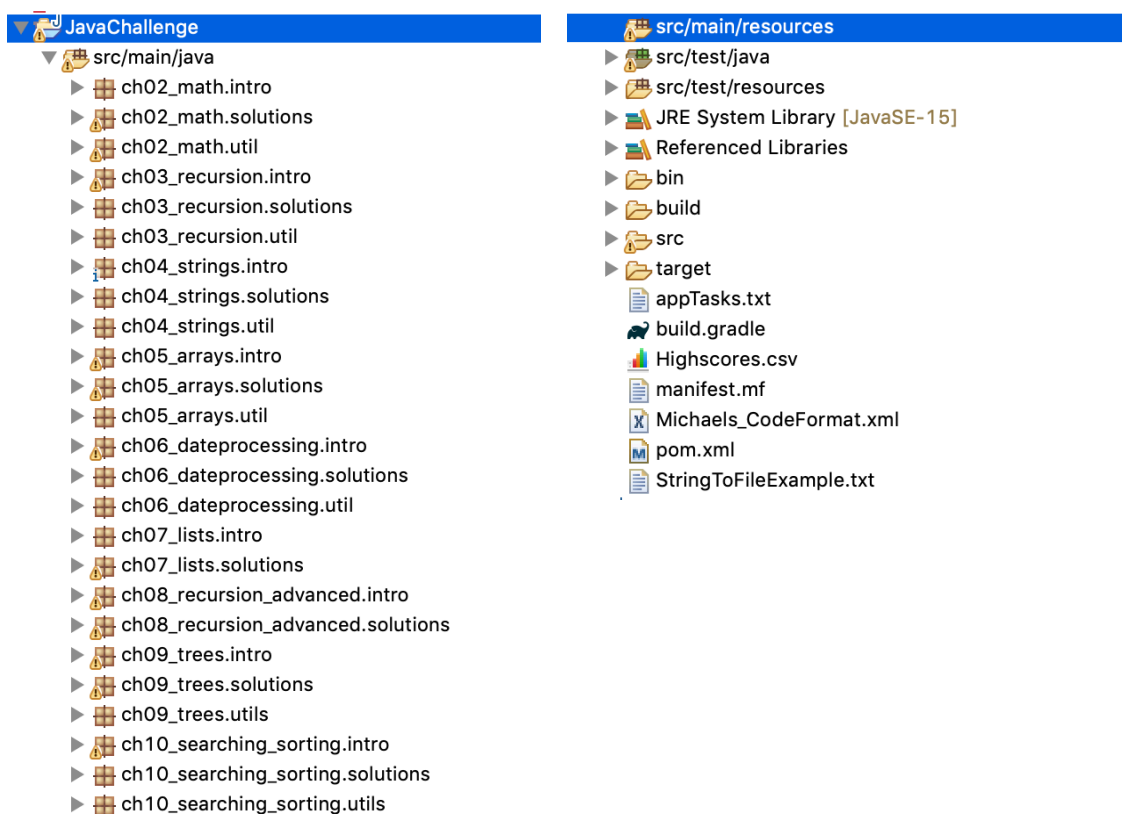
Import the project into Eclipse (or your preferred IDE).



Select the directory where the sources are placed like as follows:



After clicking „finish" the project should look like this (project name may differ (java_challenge_sources)):

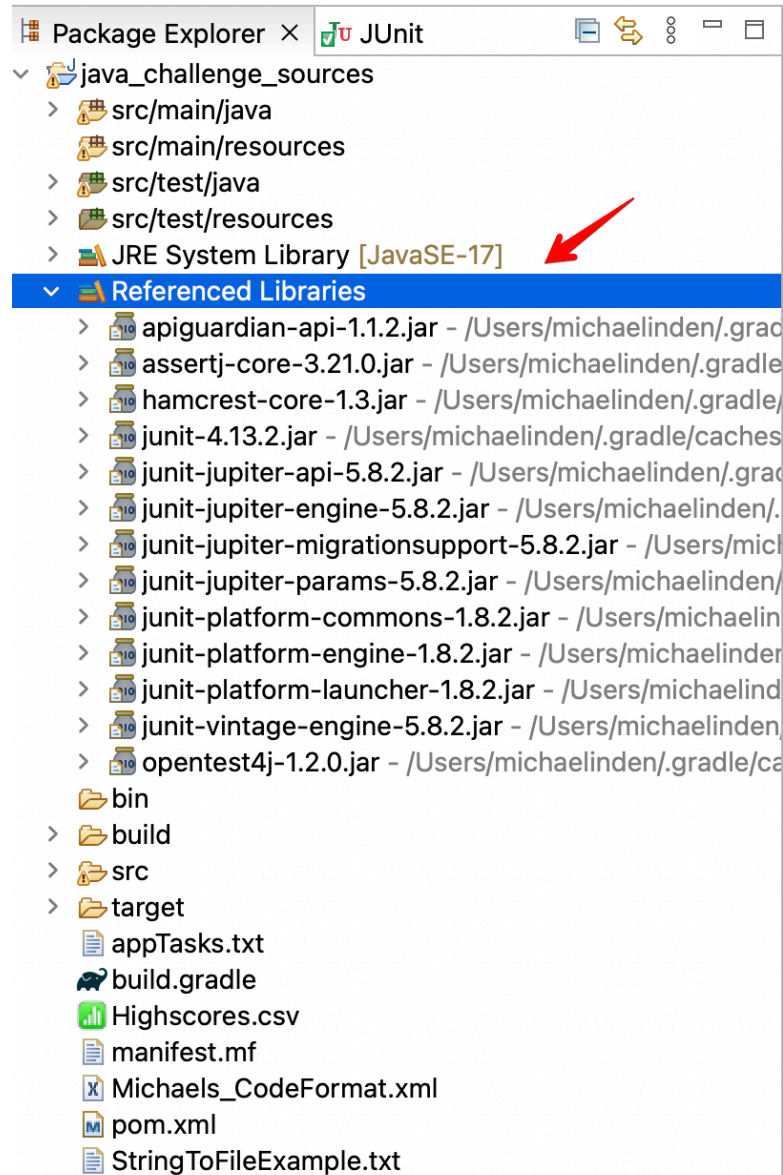


Gradle

After the initial import, the dependencies on the external libraries in the Eclipse project must be cleaned with the following command (in the main directory):

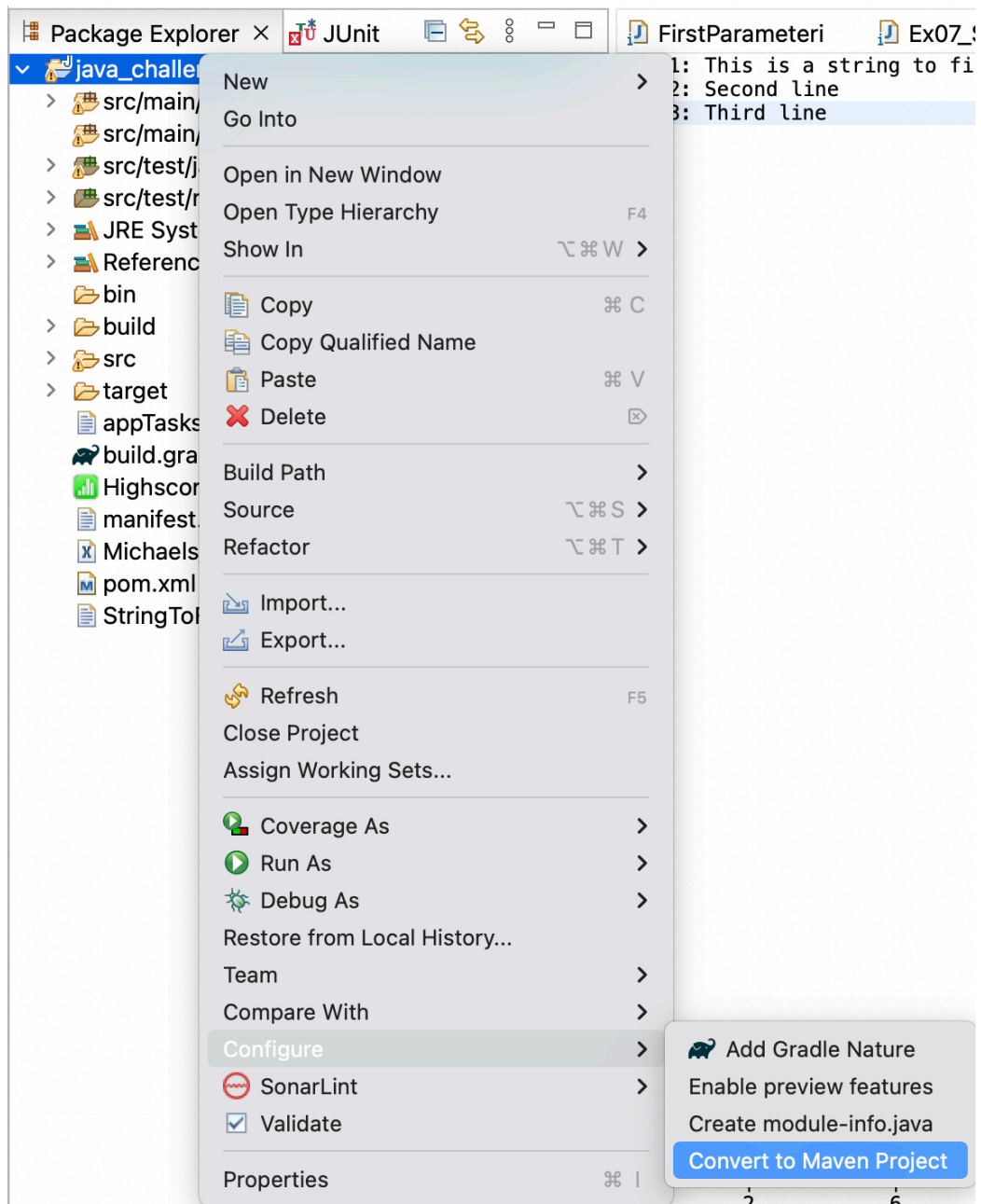
```
gradle cleanEclipse eclipse
```

This also updates the dependencies on your computer. This should result in the following:

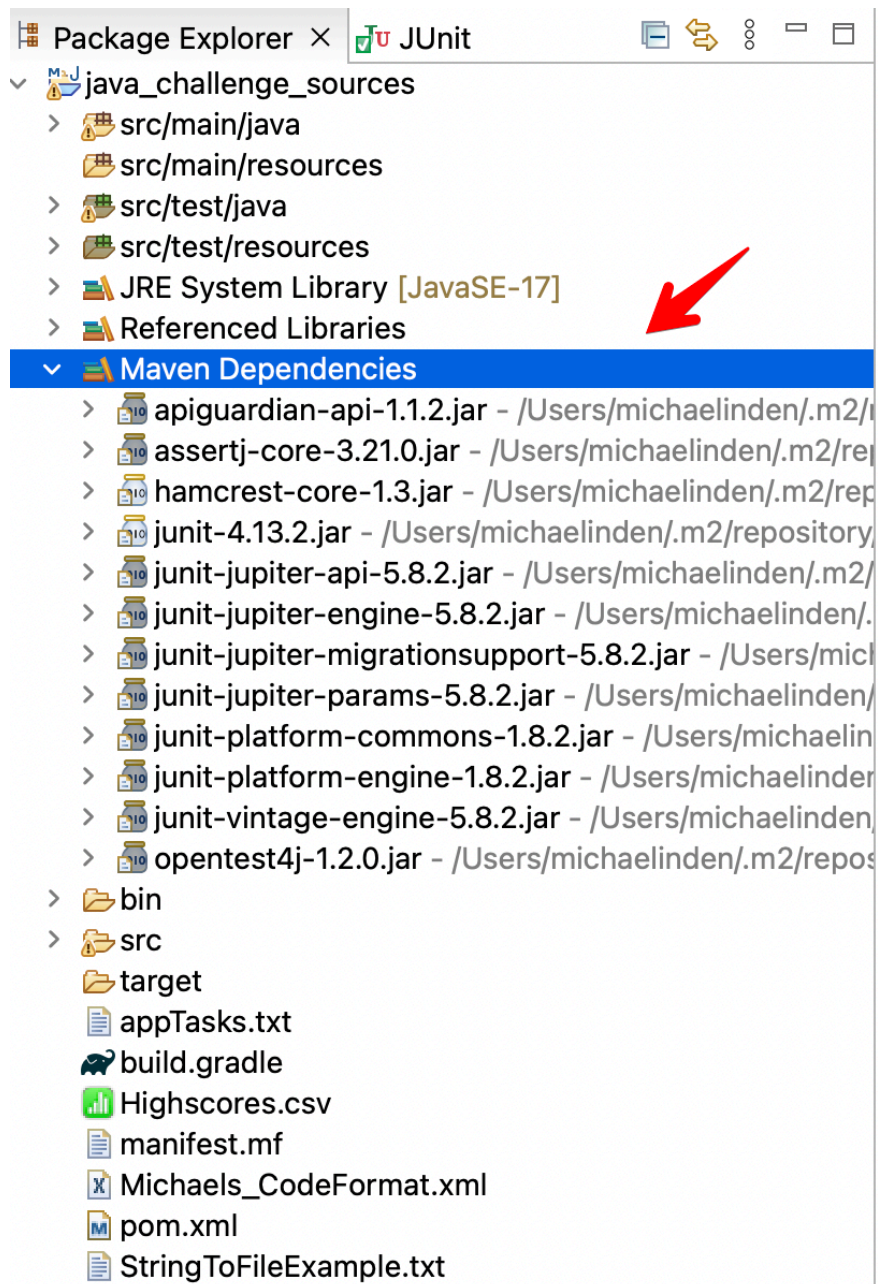


Maven

Alternatively, after the normal project import, the project can be converted to a Maven project:



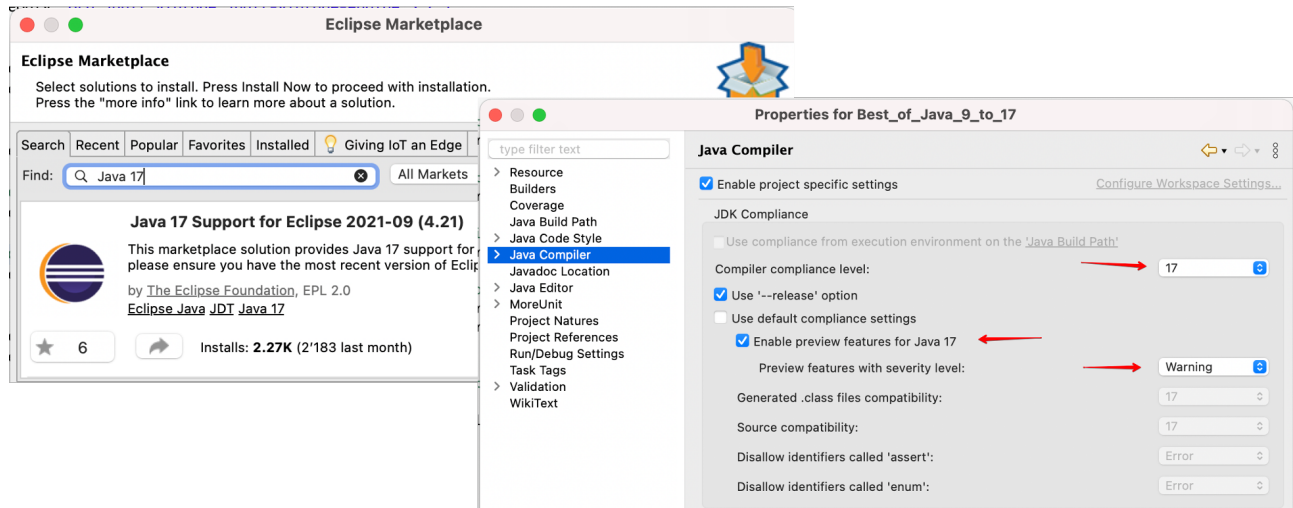
For a Maven project the dependencies should look as follows:



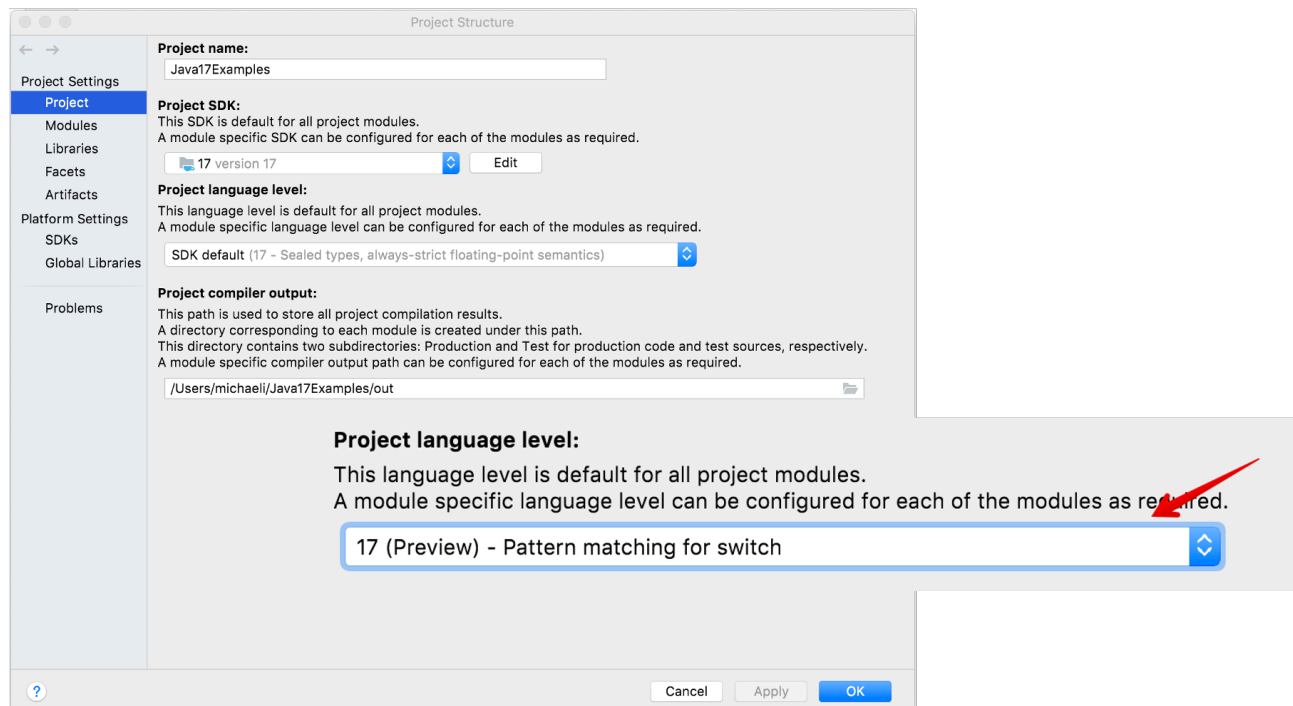
Java 17 Configuration Eclipse / IntelliJ

Please keep in mind that we have to configure and activate some small things before solving the exercises if you like to use the latest and greatest syntax features from current Java 17 (or even some preview features).

Eclipse



IntelliJ



Starting the programs

Running some programs can be done either in the IDE or on the command line in the main directory based on Gradle. There is a Gradle build file `build.gradle` in the main directory, which can be used to start some programs specified as executable in the book. Open a console and start the respective program by calling

```
gradle <Programmname>
```

At the first start, various referenced libraries may be downloaded from the Internet. Therefore the build and program start will take a while. Later launches should then be much faster.

For most programs / exercises there are corresponding unit tests in the `src/main/test` folder. These can be executed within the IDE or all in one go by calling

```
gradle test
```

or

```
mvn test
```

ATTENTION: The tests should be green for all exercises, but show 6 failures for examples (just for demonstration).

Further information

More information about the programs are available in the book. The source code is located in the `src/main/java` subfolder. The Eclipse project for import resides in the main directory. That's all ;-)

If you have any questions, you can reach me at: michael_inden@hotmail.com