

JPA / EclipseLink Workshop Script IntelliJ

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Requirements: empty mavenized Model Project

1. Maven Dependencies
 - a. Copy POM from Moodle to Project Domain
2. Entities
 - a. Convert Project Domain to JPA Project (Right click on project -> Open Module settings-> Facets -> Add JPA Facet
 - b. Select JPA Facet -> Add Descriptor "persistence.xml" -> Path: **domian/src/main/resources/META-INF/persistence.xml**
 - c. Select "**EclipseLink**" as Default JPA Provider
 - d. Open the "Persistence" tool window -> Right click on project -> New -> Persistence Unit -> Name: **ch.bfh.swos.bookapp.domain**
 - e. Create **Author** Entity (Right click on created persistence unit in Persistence tool window -> New -> Entity...)
 - f. Java Package **ch.bfh.swos.bookapp.model**, Classname **Author** -> OK
 - g. Right click on created Entity in Persistence tool window -> New -> Id...
 - h. Name: **id**, Type: **Long**, **Generated**: checked
 - i. Repeat right click on created Entity in Persistence tool window -> New -> Basic... to add Properties:
String:firstname
String:lastname
 - j. Create **Book** Entity (Right click on created persistence unit in Persistence tool window -> New -> Entity...)
 - k. Java Package **ch.bfh.swos.bookapp.model**, Classname **Book** -> OK
 - l. Repeat right click on created Entity in Persistence tool window -> New -> ... to add Properties:
java.lang.Long:id/Id/Generated
String:title
java.util.Date:releaseDate
3. Relations
 - a. Right click on Entity **Book** in Persistence tool window -> New -> **Many to One...**
 - b. **Name: author, Type: Author**
 - c. Right click on Entity **Author** in Persistence tool window -> New -> **One To Many...**
 - d. **Name: books, Type: List<Book>, mappedBy: author**
4. persistence.xml
 - a. Open persistence.xml
 - b. Add the following to the persistence unit:

```
<properties>
  <property name="javax.persistence.jdbc.driver" value="org.h2.Driver"/>
  <property name="javax.persistence.jdbc.url" value="jdbc:h2:~/bookappDB"/>
  <property name="javax.persistence.jdbc.user" value="bfh"/>
  <property name="javax.persistence.jdbc.password" value="bfh"/>
  <property name="eclipselink.ddl-generation.output-mode" value="database"/>
  <property name="eclipselink.ddl-generation" value="drop-and-create-tables"/>
</properties>
```
5. Create Test
 - a. Copy **CreateIT.java** from Moodle to **src/test/java** in Domain Project
 - b. Right click on CreateIT.java -> **Run CreateIT** -> ValidationException
 - c. Goto Book -> releaseDate -> Add **@Temporal(TemporalType.DATE)** Annotation
 - d. Run again -> Tables created on Database -> cascade PERSIST missing,
 - e. Select Author -> books -> Add **cascade = CascadeType.ALL** as Parameter to OneToMany Annotation
 - f. Run again -> Everything OK
6. Read Test
 - a. Copy **ReadIT.java, UpdateIT.java, DeleteIT.java** and **AllTests.java** from Moodle (Same place as CreateIT)
 - b. Run AllTest .java as UnitTest-> Everything OK

Code unter: <https://github.com/rvillars/ch.bfh.swos.bookapp.parent/tree/step02>