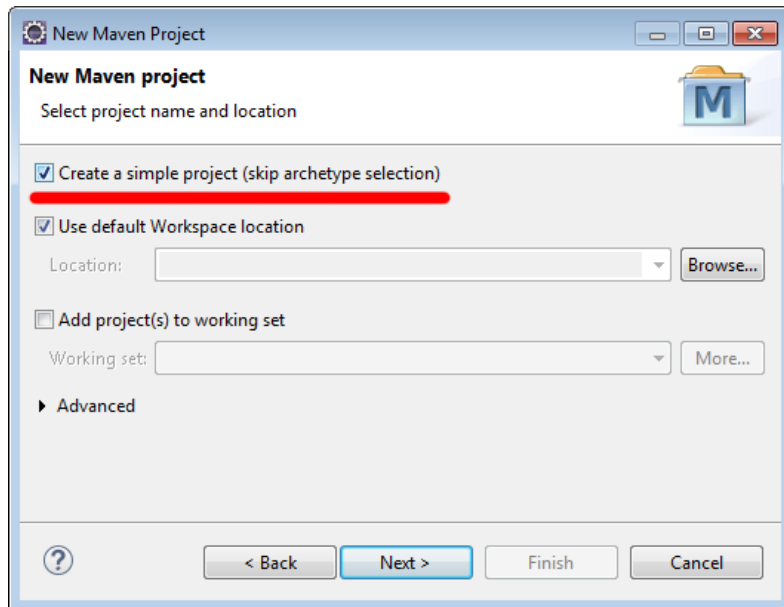


CS5220 - 2 Lab 2. ORM with Hibernate and JPA Description

1. Create a Maven project in Eclipse. During project creation, choose the *Create a simple project* option as shown in the screenshot below:



And on the next screen, fill out *Group Id*, *Artifact Id*, and make sure *Packaging* is jar. You can leave all other fields as is.

After the project is created, add the following to pom.xml (inside <project> and after <version>):

```
<build>
  <plugins>
    <plugin>
      <groupId>org.apache.maven.plugins</groupId>
      <artifactId>maven-compiler-plugin</artifactId>
      <configuration>
        <source>1.8</source>
        <target>1.8</target>
      </configuration>
    </plugin>
  </plugins>
</build>
```

Then right click on the project and select Maven -> Update Project. This will change the project compiler version from 1.5 to 1.8.

2. Add the following dependencies to the project:

- org.hibernate:hibernate-entitymanager:5.4.4.Final
- mysql:mysql-connector-java:8.0.17

3. Add the following files to the project:

- [Department.java](#)
- [Search.java](#)
- [User.java](#)
- [persistence.xml](#) - this file should be placed under the src/main/resources/META-INF folder. You also need to change the database information (i.e. url, username, and password) in the file to match your database.
- [CreateSchema.java](#)
- [Lab2.java](#)

4. Use JPA annotations to annotate the model classes to map them to relational tables. Run CreateSchema.java which will create the tables in your database based on the annotations.

5. Populate the tables with the following data:

- Four users: John, Jane, Tom, and Kate. You may assume user names are unique.
- One department Computer Science with id = 1 and the chairperson John.
- One search conducted by the Computer Science department for the position Assistant Professor. The search committee chair is Jane, and the search committee has one member Tom.

6. Complete Lab2.java based on the comments in the code. Note that you may only use information given in the comments in your query. For example, if the comments say John, you must use user name John in your query instead of the user's id.

7. Please package the project into a zip file and upload it to Canvas.