

## Changes to the menu application

In this section, you will be working in `ProjectsApp.java`.

- ✓ 1. Add the line `"4) Update project details"` to the list of operations.
- ✓ 2. Add `case 4` to the `switch` statement and call method `updateProjectDetails()`. Let Eclipse create the method for you.
3. In method `updateProjectDetails()`:
  - ✓ a. Check to see if `curProject` is `null`. If so, print a message `"\nPlease select a project."` and return from the method.
  - ✓ b. For each field in `Project` object, print a message with current setting in `curProject`.
  - ✓ c. Create a new `Project` object. If the user input for a value is not `null`, add the value to the `Project` object. If value is `null`, add the value from `curProject`. Repeat for all variables.
  - ✓ d. Set the project ID field in the `Project` object to the value in the `curProject` object.
  - ✓ e. Call `projectService.modifyProjectDetails()`. Pass the `Project` object as a parameter. Let Eclipse create the method for you in `ProjectService.java`.
  - ✓ f. Reread the current project to pick up the changes by calling `projectService.fetchProjectById()`. Pass the project ID obtained from `curProject`.
  - ✓ g. Save all files. At this point you should have no compilation errors.

## Changes to the project service

In this section you will be working in `ProjectService.java`.



1. In the method `modifyProjectDetails()`,
  - ✓ a. Call `projectDao.modifyProjectDetails()`. Pass the `Project` object as a parameter. The DAO method returns a `boolean` that indicates whether the `UPDATE` operation was successful. Check the return value. If `false`, throw a `DbException` with a message that says the project does not exist.
  - ✓ b. Let Eclipse create the `modifyProjectDetails()` method in `ProjectDao.java`. Save all files

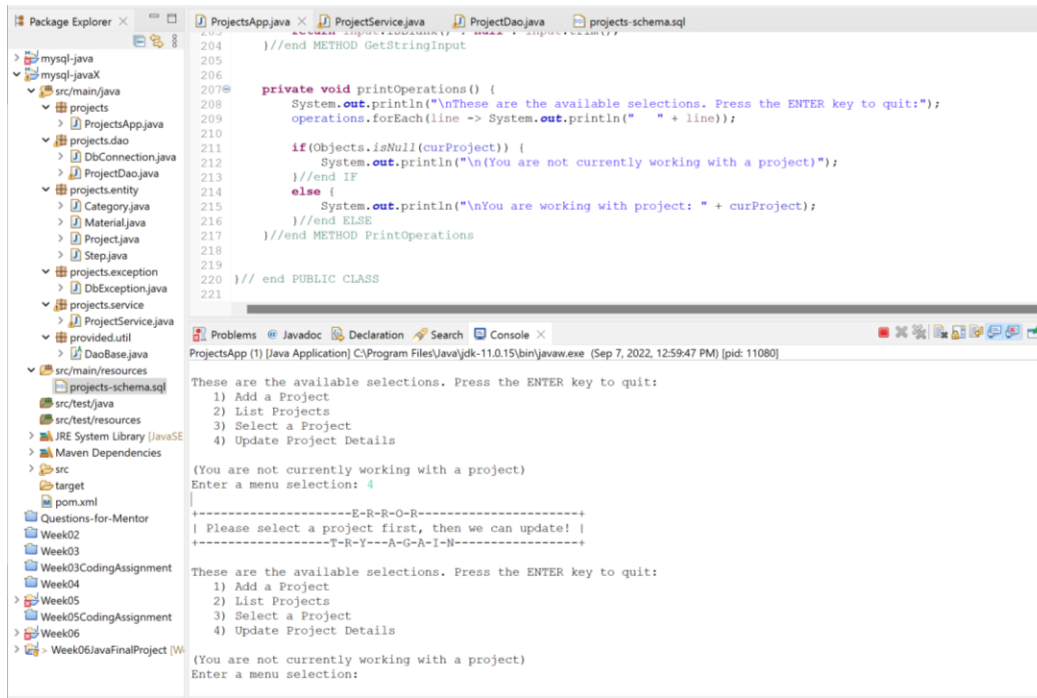
## Changes to the project DAO

In this section you will be working in `ProjectDao.java`.

- ✓ 1. In `modifyProjectDetails()`, write the SQL statement to modify the project details. Do not update the project ID – it should be part of the `WHERE` clause. Remember to use question marks as placeholders.
- ✓ 2. Obtain the `Connection` and `PreparedStatement` using the appropriate `try-with-resource` and `catch` blocks. Start and rollback a transaction as usual. Throw a `DbException` from each `catch` block.
- ✓ 3. Set all parameters on the `PreparedStatement`. Call `executeUpdate()` and check if the return value is 1. Save the result in a variable.
- ✓ 4. Commit the transaction and return the result from `executeUpdate()` as a `boolean`. At this point there should be no compilation errors.

## Test it

1. First, test the application by updating project details without selecting a project. You should receive an error message. Submit a screen shot of the console showing the selections and error message.  



```
Package Explorer | ProjectsApp.java | ProjectService.java | ProjectDao.java | projects-schema.sql
mysql-javaX
src/main/java
  projects
    ProjectsApp.java
    projects.dao
      DbConnection.java
      ProjectDao.java
    projects.entity
      Category.java
      Material.java
      Project.java
      Step.java
    projects.exception
      DbException.java
    projects.service
      ProjectService.java
    provided.util
      DaoBase.java
src/main/resources
  projects-schema.sql
src/test/java
src/test/resources
JRE System Library [JavaSE
Maven Dependencies
src
target
pom.xml
Questions-for-Mentor
Week02
Week03
Week03CodingAssignment
Week04
Week05
Week05CodingAssignment
Week06
Week06JavaFinalProject [W

ProjectsApp (1) [Java Application] C:\Program Files\Java\jdk-11.0.15\bin\javaw.exe (Sep 7, 2022, 12:59:47 PM) [pid: 11080]



These are the available selections. Press the ENTER key to quit:
1) Add a Project
2) List Projects
3) Select a Project
4) Update Project Details

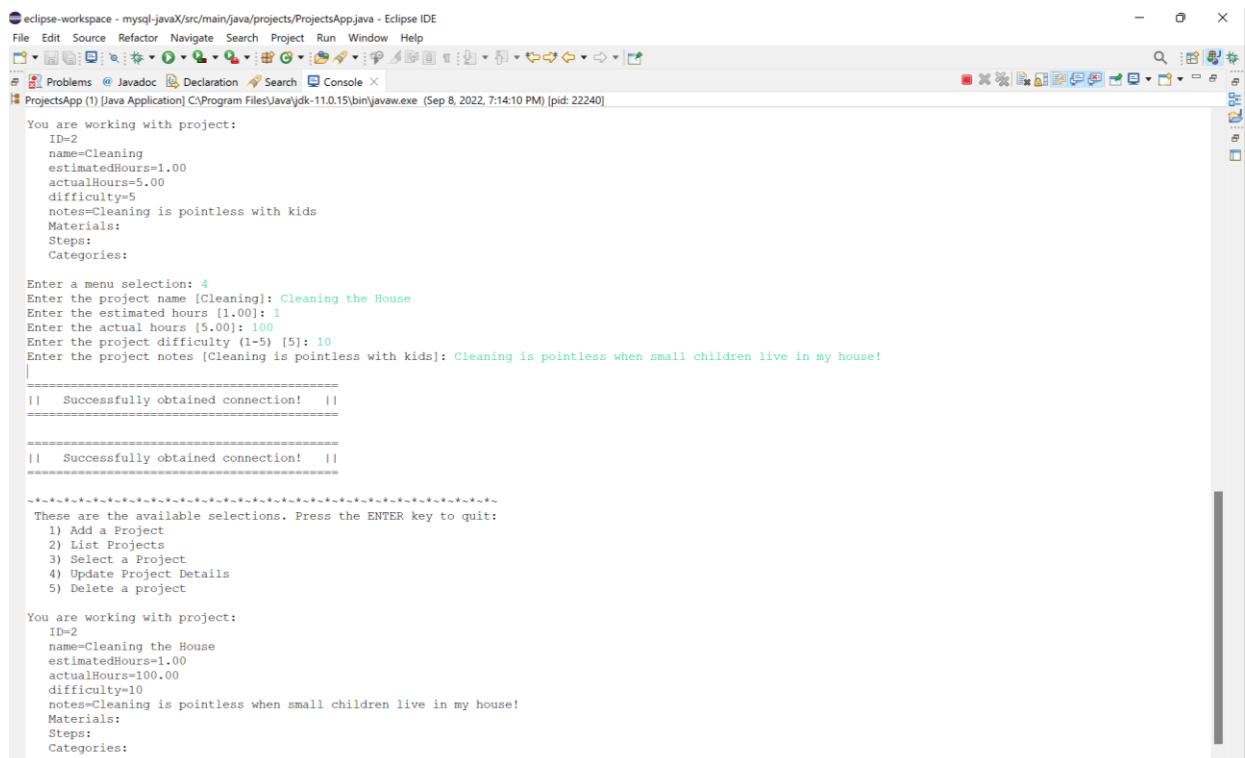
(You are not currently working with a project)
Enter a menu selection: 4

-----E-R-R-O-R-----
| Please select a project first, then we can update! |
-----T-R-Y--A-G-A-I-N-----

These are the available selections. Press the ENTER key to quit:
1) Add a Project
2) List Projects
3) Select a Project
4) Update Project Details

(You are not currently working with a project)
Enter a menu selection:
```

2. Next, select a project. Select "Update project details". Enter new project details & update the project. Submit a screen shot of the console showing the selected project details, the data you input, and the new project details.  



```
eclipse-workspace - mysql-javaX/src/main/java/projects/ProjectsApp.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help

ProjectsApp (1) [Java Application] C:\Program Files\Java\jdk-11.0.15\bin\javaw.exe (Sep 8, 2022, 7:14:10 PM) [pid: 22240]

You are working with project:
ID=2
name=Cleaning
estimatedHours=1.00
actualHours=5.00
difficulty=5
notes=Cleaning is pointless with kids
Materials:
Steps:
Categories:

Enter a menu selection: 4
Enter the project name [Cleaning]: Cleaning the House
Enter the estimated hours [1.00]: 1
Enter the actual hours [5.00]: 100
Enter the project difficulty (1-5) [5]: 10
Enter the project notes [Cleaning is pointless with kids]: Cleaning is pointless when small children live in my house!

=====
|| Successfully obtained connection! ||
=====

These are the available selections. Press the ENTER key to quit:
1) Add a Project
2) List Projects
3) Select a Project
4) Update Project Details
5) Delete a project

You are working with project:
ID=2
name=Cleaning the House
estimatedHours=1.00
actualHours=100.00
difficulty=10
notes=Cleaning is pointless when small children live in my house!
Materials:
Steps:
Categories:
```

## Delete a project

### Changes to the menu application

In this section you will be working in `ProjectsApp.java`.

- ✓1. Add a new option: "5) Delete a project" to the list of operations.
- ✓2. Add case 5 to the switch statement. Call the method `deleteProject()`. Let Eclipse create the method for you.
3. In method `deleteProject()`:
  - ✓a. Call method `listProjects()`.
  - ✓b. Ask the user to enter the ID of the project to delete.
  - ✓c. Call `projectService.deleteProject()` and pass the project ID entered by the user.
  - ✓d. Print a message stating that the project was deleted. (If it wasn't deleted, an exception is thrown by the service class.)
  - ✓e. Add a check to see if the project ID in the current project is the same as the ID entered by the user. If so, set the value of `curProject` to `null`.
  - ✓f. Have Eclipse create the `deleteProject()` method in the project service.
  - ✓g. Save all files. At this point there should be no compilation errors.

### Changes to the project service

In this section you will be working in `ProjectService.java`.

- ✓1. Call `deleteProject()` in the project DAO. Pass the project ID as a parameter. The method returns a `boolean`. Test the return value from the method call. If it returns `false`, throw a `DbException` with a message stating that the project doesn't exist.
- ✓2. Have Eclipse create the `deleteProject()` method in the `ProjectDao` class.
- ✓3. Save all files. At this point there should be no compilation errors.

### Changes to the project DAO


In this section you will be working in `ProjectDao.java`.

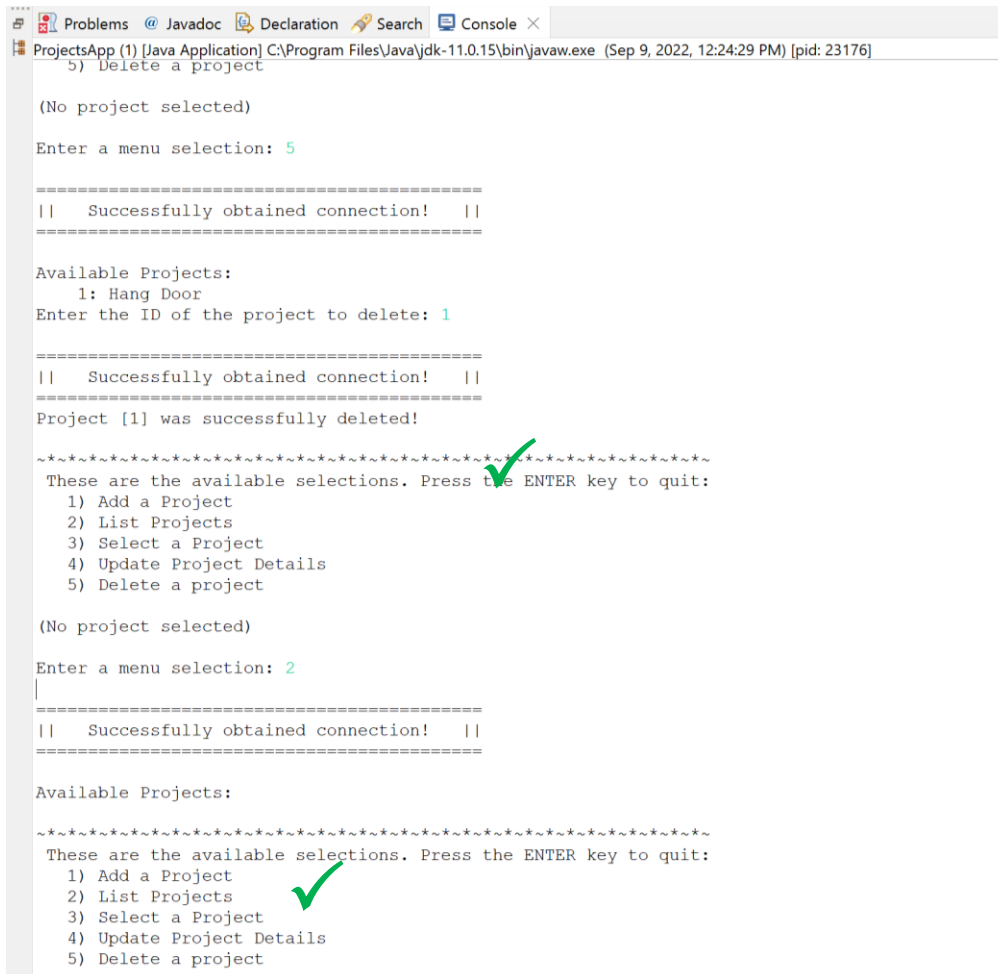
1. In the method `deleteProject()`:
  - ✓a. Write the SQL `DELETE` statement. Remember to use the placeholder for the project ID in the `WHERE` clause.
  - ✓b. Obtain a `Connection` and a `PreparedStatement`. Start, commit, and rollback a transaction in the appropriate sections.
  - ✓c. Set the project ID parameter on the `PreparedStatement`.
  - ✓d. Return `true` from the menu if `executeUpdate()` returns 1.



## Delete a project

In this section you will test that you can do an actual deletion.

- ✓ 1. Run the application.
- ✓ 2. Select "Delete a project". When you are prompted to enter a project ID to delete, enter a valid ID.
- ✓ 3. List the projects to show that the project was deleted with no errors.
- ✓ 4. Submit a screen shot of the console. 



```
Problems @ Javadoc Declaration Search Console X
ProjectsApp (1) [Java Application] C:\Program Files\Java\jdk-11.0.15\bin\javaw.exe (Sep 9, 2022, 12:24:29 PM) [pid: 23176]
5) Delete a project

(No project selected)
Enter a menu selection: 5

=====
|| Successfully obtained connection! ||
=====

Available Projects:
1: Hang Door
Enter the ID of the project to delete: 1

=====
|| Successfully obtained connection! ||
=====
Project [1] was successfully deleted!

~~~~~
These are the available selections. Press the ENTER key to quit:
1) Add a Project
2) List Projects
3) Select a Project
4) Update Project Details
5) Delete a project

(No project selected)
Enter a menu selection: 2

=====
|| Successfully obtained connection! ||
=====

Available Projects:

~~~~~
These are the available selections. Press the ENTER key to quit:
1) Add a Project
2) List Projects
3) Select a Project
4) Update Project Details
5) Delete a project
```

- ✓ 5. Verify that materials, steps, and project\_category rows were deleted as well. Use DBeaver or the MySQL CLI for this. The child rows should have been deleted due to the ON DELETE CASCADE in the foreign key statements.

## GitHub Project Link

<https://github.com/JaxYoungblood/MySQLCodingProject.git>