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Coding Assignment Week 9 MySQL Lesson

Background

In the homework exercises, you are creating an application that will perform CRUD (Create, Read, Update, and Delete) operations on a MySQL database. This application connects to a DIY Project database and demonstrates many features of SQL and JDBC. Learning these skills will help prepare you for using these skills in the workplace.

As a reminder, in the last two weeks you used JDBC to connect to a MySQL database. Then, you diagrammed the project tables using Draw.io. Lastly, you wrote the CREATE TABLE statements for the five tables and created the tables in DBeaver.

In this week's exercises, you will begin development of the menu-driven application. You will use proper exception handling to gracefully manage any errors. You will write code to add project details to the project tables. This will involve properly creating and managing JDBC resources as well as database transactions.

In future exercises you will write code to read from a single table as well as from joined tables. Finally, you will write code to update and delete table rows.

Objectives

In these exercises, you will:

Learn to write a menu-driven application with correct exception handling.

Implement a scanner to gather user input from the console.

Learn how to work with `BigDecimal` objects.

Use JDBC to correctly handle resources (Connections and PreparedStatements) ensuring that they are closed properly.

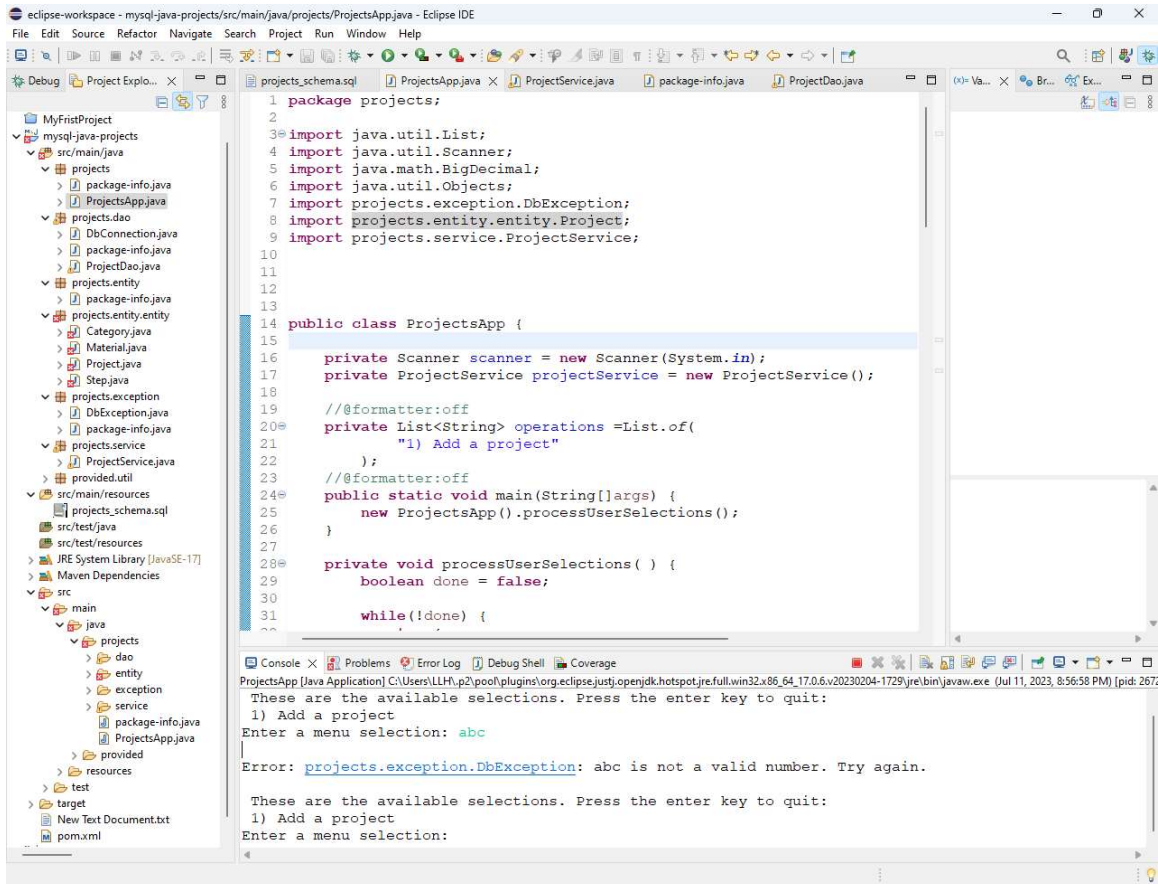Implement JDBC methods to insert a Project object into the project table.

Instructions

URL to GitHub Repository: https://github.com/lindhage22/MySQL-java-projects

URL to Public Link of your Video: https://youtu.be/YbvBXIUQmos

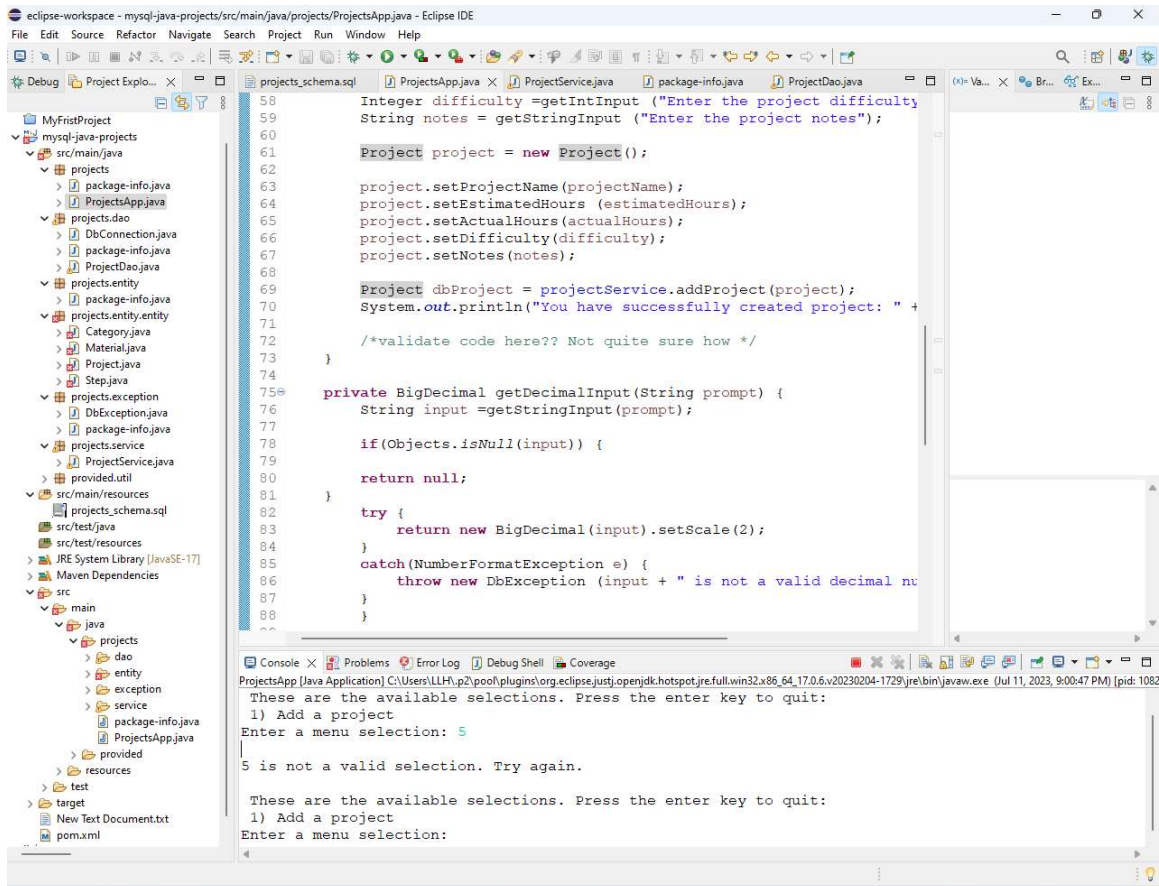——————————————————————————————————
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Instructions:

1. Follow the **Exercises** below to complete this assignment.

- In Eclipse, or an IDE of your choice, write the code that accomplishes the objectives listed below. Ensure that the code compiles and runs as directed.

- Create a new repository on GitHub for this week's assignment and push your completed code to this dedicated repo, including your entire Maven Project Directory (e.g., mysql-java) and any .sql files that you create. In addition, screenshot your ERD and push the screenshot to your GitHub repo.

- Include the functionality into your Video when you see: 📷

- Create a video showcasing your work:

    - In this video: record and present your project verbally while showing the results of the working project. Don't forget to include the requested functionality, indicated by: 📷

    - Easy way to Create a video: Start a meeting in Zoom, share your screen, open Eclipse with the code and your Console window, start recording & record yourself describing and running the program showing the results.

    - Your video should be a maximum of 5 minutes.

    - Upload your video with a public link.

    - Easy way to Create a Public Video Link: Upload your video recording to YouTube with a public link.

2. In addition, please include the following in your Coding Assignment Document:

- The URL for this week's GitHub repository.

- The URL of the public link of your video.

3. Save the Coding Assignment Document as a .pdf and do the following:

- Push the .pdf to the GitHub repo for this week.

- Upload the .pdf to the LMS in your Coding Assignment Submission.
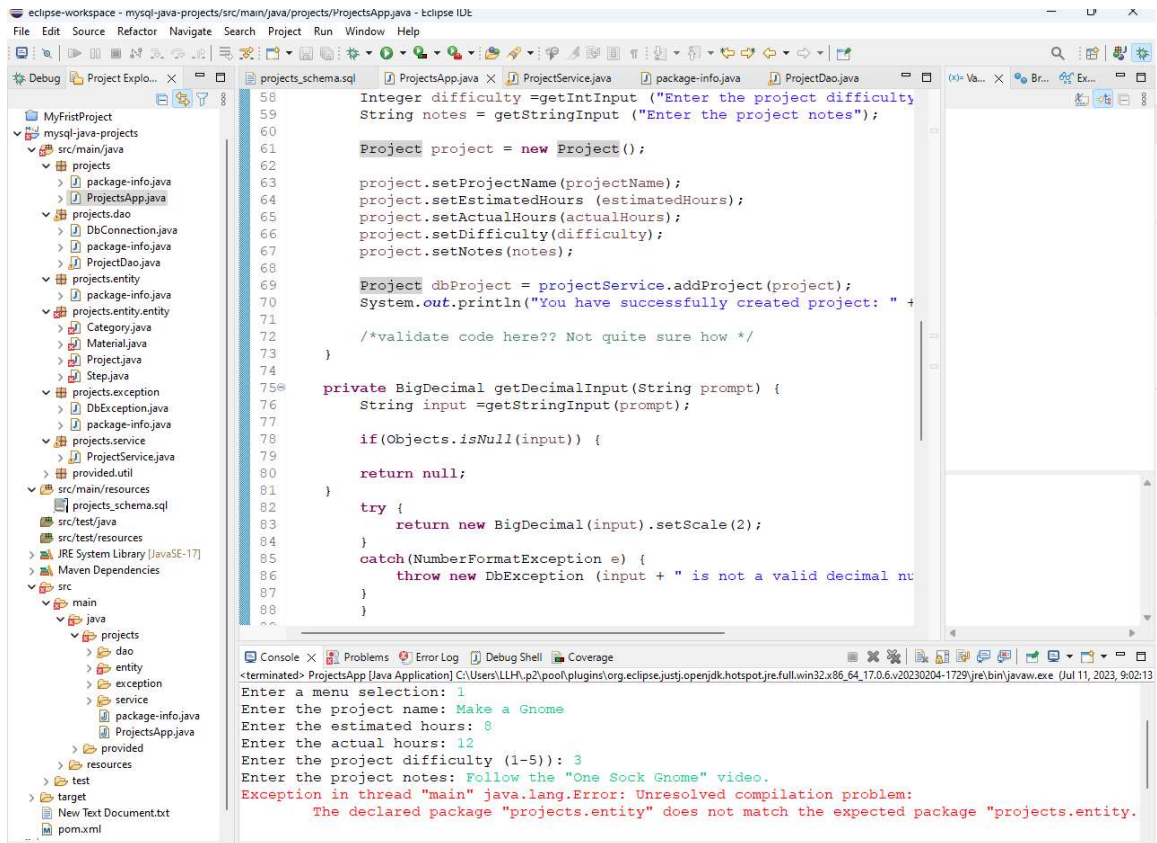
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Application Output with abc:

Testing the entering a valid integer

Testing!!

First time has an issue. Same kind of issue I had with ProjectsAPP.Java file for my import I had to change it to projects.entity.entity.projects.

The fix was that I change Project.java package name to projects.entity.entity

File   Edit   Source   Refactor   Navigate   Search   Project   Run   Window   Help

Project Explorer:
- MyFristProject
- mysql-java-projects
  - src/main/java
    - projects
      - package-info.java
      - ProjectsApp.java
    - projects.dao
      - DbConnection.java
      - package-info.java
      - ProjectDao.java
    - projects.entity
      - package-info.java
    - projects.entity.entity
      - Category.java
      - Material.java
      - Project.java
      - Step.java
    - projects.exception
      - DbException.java
      - package-info.java
    - projects.service
      - ProjectService.java
    - provided.util
  - src/main/resources
    - projects_schema.sql
  - src/test/java
  - src/test/resources
  - JRE System Library [JavaSE-17]
  - Maven Dependencies
  - src
    - main
      - java
        - projects
          - dao
          - entity
          - exception
          - service
          - package-info.java
          - ProjectsApp.java
        - provided
      - resources
    - test
  - target
  - New Text Document.txt
  - pom.xml

```java
1  package projects;
2
3  import java.util.List;
4  import java.util.Scanner;
5  import java.math.BigDecimal;
6  import java.util.Objects;
7  import projects.exception.DbException;
8  import projects.entity.entity.Project;
9  import projects.service.ProjectService;
10
11
12
13
14 public class ProjectsApp {
15
16     private Scanner scanner = new Scanner(System.in);
17     private ProjectService projectService = new ProjectService();
18
19     //@formatter:off
20     private List<String> operations =List.of(
21         "1) Add a project"
22         );
23     //@formatter:off
24     public static void main(String[]args) {
25         new ProjectsApp().processUserSelections();
26     }
27
28     private void processUserSelections( ) {
29         boolean done = false;
30
31         while (!done) {
```

Console | Problems | Error Log | Debug Shell | Coverage

ProjectsApp [Java Application] C:\Users\LLH\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.6.v20230204-1729\jre\bin\javaw.exe (Jul 11, 2023, 9:06:36 PM) [pid: 6536

```
Enter the project notes: Watch "One Sock Gnome" video.
Connecting with url=jdbc:mysql://localhost:3306/projects?user=projects&password=projects&useSSL=fals
Successfull obtained connection!

Error: projects.exception.DbException: java.sql.SQLException: Field 'project_id' doesn't have a defa

 These are the available selections. Press the enter key to quit:
 1) Add a project
Enter a menu selection:
```