Lab Assignment 5: Developing database applications using JDBC.

Student: _____

Due Date: Week 12.

Purpose: The purpose of this Lab assignment is to:
- Practice JDBC in Java Applications
- Develop a GUI Java application with data access capabilities

References: Read the course's text, ppt slides and class examples. This material provides the necessary information you need to complete the exercises.

Instructions: Be sure to read the following general instructions carefully:
- Students can work in pairs for this assignment using **pair programming** technique (https://en.wikipedia.org/wiki/Pair_programming).
- You will have to demonstrate your solution in a scheduled lab session and submitting the project through the **dropbox link on eCentennial**.
- You must name your Eclipse project according to the following rule:

  YourFullName_COMP228Labnumber
  Example: **JohnSmith_COMP228Lab5**

  Each exercise should be placed in a separate package named *exercise1*, *exercise2*, etc.

  Submit your assignment in a **zip file** that is named according to the following rule:
  YourLastName_COMP228Labnumber.zip
  Example: **JohnSmith_COMP228Lab5.zip**

  For a pair submission include both full names. Example:
  JohnSmith_JaneSmith_COMP228Lab5

  Apply the naming conventions for variables, methods, classes, and packages:
  - *variable names* start with a *lowercase* character
  - *classes* start with an *uppercase* character
  - **packages** use only *lowercase* characters
  - *methods* start with a *lowercase* character

Exercise 1:

Develop a GUI Java application that will allow the players to submit information about themselves and the games that they are playing on-line. The information will be stored in a simple Oracle database. The database tables are as follows:

Player:
- Player_id [primary key]
- First_name
- Last_name
- Postal_code

Game:
- Game_code [primary key]

PlayerAndGame:
- Player_id
- Game_code

You can use SQL Developer to create your database in Oracle server.

You should pre-populate the table *Game* with game_code. A player may have one or more game_code.

Your GUI should provide the necessary SWING or JavaFX components that will allow the user to enter and display the data. You will use JDBC to provide the following functionality:

Use prepared statements to implement all database operations.

Evaluation:

Functionality	Option	Max marks
1. Insert player information along with his/her games into the database. 2. Update player's details (without updating games) 3. Provide a 'reset' button that will clear all UI elements 4. Provide a 'report' button that will query DB for all players with last_name that was entered by user and display all players in a text area. No need to display games. 5. Close database connections etc. when window is closed	Required	80%
Update player's details along with his/her games. Player may change, add, remove games.	Optional	20%