# Lab Assignment #6

**Due Date:** **On or before Midnight Monday 8th December 2019** **Marks/Weightage: 30/10%**

**Purpose:** The purpose of this Lab assignment is to:

- Practice the use of JDBC

**References:** Read the course's text "Java How to program, 11th edition Early Objects", **Chapter 24** and the lecture notes/ppts. This material provides the necessary information that you need to complete the exercises.

**Instructions**: Be sure to read the following general instructions carefully:

This lab should be completed individually by all the students. You will have to demonstrate your solution in a scheduled lab session and submitting the assignment **through drop box link on e-Centennial**.

>> At the start, you must name your **Eclipse work space** according to the following rule:

***FirstName_LastName_SectionNumber_COMP228_Labnumber***

*For Example:* ***John_Smith_Sec006_COMP228_Lab06 (say if your section number is 006 )***

>> And after that your **project name** should be as follows:

***FirstName_LastName_SectionNumber _Labnumber***

*For Example:* ***John_Smith_Sec006_Lab06***

>>Each exercise should be placed in a separate package named as firstname_last-name_*exercise1*, firstname_last-name_*exercise2* etc.

>> After you complete, exit eclipse and go to workspace folder, zip it up and you will get the following zip file.

**FirstName_LastName_SectionNumber_COMP228_*Labnumber*.zip**

Example: **John_Smith_Sec006_COMP228_Lab06.zip** *(if your section is 006..)*

>> Apply the naming conventions for variables, methods, classes, and packages:

- *variable names* start with a *lowercase* character for the first word and uppercase for every other word
- *classes* start with an *uppercase* character of every word
- **packages** use only *lowercase* characters
- *methods* start with a *lowercase* character for the first word and uppercase for every other word

**Note: Late submissions are accepted until up to three days past due date with 25% deductions. After that no submission will be considered.**

**For this assignment, you need to have a database to complete the following exercises.**
**Now question is which RDBMS, one is supposed to use.**

You are free to use any one of the following RDBMS:

#1). Oracle. You might be having a course on databases – COMP214 and there you might have set up credentials for Oracle Database. You can use existing tables or create a new three new tables of Authors, Titles and AuthorISBN ( Books database , refer Ppts, chapter 24, text book). Scripts for creating above tables is posted on e-centennial.

#2). SQL Server. You might be having a course on databases or any web development course where you might have access to or used SQL Server RDBMS.

#3.) Open source RDBMS - MySQL

#4) Textbook Database JavaDB which is version of Apache Derby – refer chapter 24 of text book

*Note: Exception handling implementation is mandatory.*

**Exercise 01:**

This is based on JDBC. Refer the code examples covererd in the class. Following is based on the sample database of **Books** ( having tables **Authors**, **Titles** and **AuthorISBN ).** In this exercise, you need to use **ResultSet** and implement and show the output of the following SQL queries:

a) Display the first name and last name of the all the authors where AuthorID is greater than 3. Arrange them by first name. ( refer Authors table of Books database, notes on e-centennial or textbook chapter 24)
b) Display the ISBN and Title of the all the **Titles** where Edition numebr is between 6 and 10. Arrange them by ISBN. ( refer Titles table of Books database, notes on e-centennial or textbook chapter 24)

**Exercise 02:**

This is based on JDBC. Refer the code examples covered in the class. Following is based on the sample database of **Books** ( having tables **Authors**, **Titles** and **AuthorISBN).**
In this exercise, you need to re-write the above SQL queries ( exercise 1(a) and 1(b)) using **RowSet** and implement and show their output.