# *Introduction*:

The goal of this project is to create a library database system using Java, JDBC and SQL\*Plus. It allows different type of users (clerk, borrower or librarian) to perform their own transactions by using our designed user interface. For instance, a borrower can search for books using keyword search on titles, authors and subjects. The result will shows a list of books that match the search, with the number of its copies that available in stocks. After all, the system will automatically updates all the information that is added or modified to the database.

## How to Run:

This project will require a bit of setup to run on a personal machine.

- 1. Using the sql file "cs304.sql" in our project to create the library database. (by putting this file to the SQL\*Plus server, and typing "START cs304.sql" in the SQL command line)
- 2. After all the tables are created, open our project in Eclipse, and load the JDBC and Oracle libraries provided by the instructor to the project. (This file name is called "classes12.zip")
- 3. Then, compile and run our project as "Java application" in Eclipse. It will automatically starts our library database system. (The database access is granted to your Oracle account: "ora\_yourUnix id", and password: a"StudentNumber")
- 4. Finally, you are able to perform any transactions on our designed library database system.

#### For clerk:

- -add a new borrower to the library
- Check-out items borrowed by a borrower
- Processes a return
- Checks overdue items

### *For borrower:*

- -search for books
- -Check his/her account.
- Place a hold request for a book that is out.
- Pay a fine

## For librarian:

- Adds a new book or new copy of an existing book to the library
- -Generate a report with all the books that have been checked out
- Generate a report with the most popular items in a given year