# Introduction

The goal of this project is to create a library database management system using a combination of Java, JDBC and SQL\*Plus. It allows different types of users(clerks, borrowers or librarians) to perform transactions through the use of a simple graphical user interface. The system automatically updates and processes all the information that is added or modified in the database.

# How to Run

The following setup steps are required before running the project:

- Use the SQL file, "cs304.sql", in the project directory to create the database library. (You can do so by putting the file to a SQL\*Plus server, and entering "START cs304.sql" in the SQL command line)
- Import and open the project in Eclipse, and configure the build path of the project so that the "classes12.zip" file is added as an external JAR.
- Compile and run our project as "Java application" in Eclipse to start the library database system. You will first be prompted with a login window, requesting your Oracle id and password.
- Once logged in, you will be able to perform any transactions of the following transactions and actions in our designed library database system depending your user type.

## For clerks:

- select 'Add Borrower' to add a new borrower to the library
- select 'Checkout' to checkout items borrowed by a borrower
- select 'Return' to process a return
- select 'Check Overdue Items' to see a list of overdue items

### For borrowers:

- select 'Search Book' to search for books
- select 'Check Borrowed Books' to check the account's borrowed books
- select 'Check Outstanding Fines' to see the account's outstanding items
- select 'Check Hold Request' to see all the hold request related to the account
- select 'Make Hold Request' to make a hold request for a book
- select 'Pay Outstanding Fine' to pay any of the account's outstanding fines

## For librarians:

- select 'Add Book' to add a new book or new copy of an existing book to the library
- select 'View Checked Out Items' to generate a report with all the books that have been checked out
- select 'Popular Items' to generate a report with the most popular items in a given year