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 Book' to checkout items borrowed by a borrower
- select 'Process Book Return' to process a return
- select 'Check Overdue Book' to see a list of overdue books

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