

Sweebook Library Documentation

Introduction

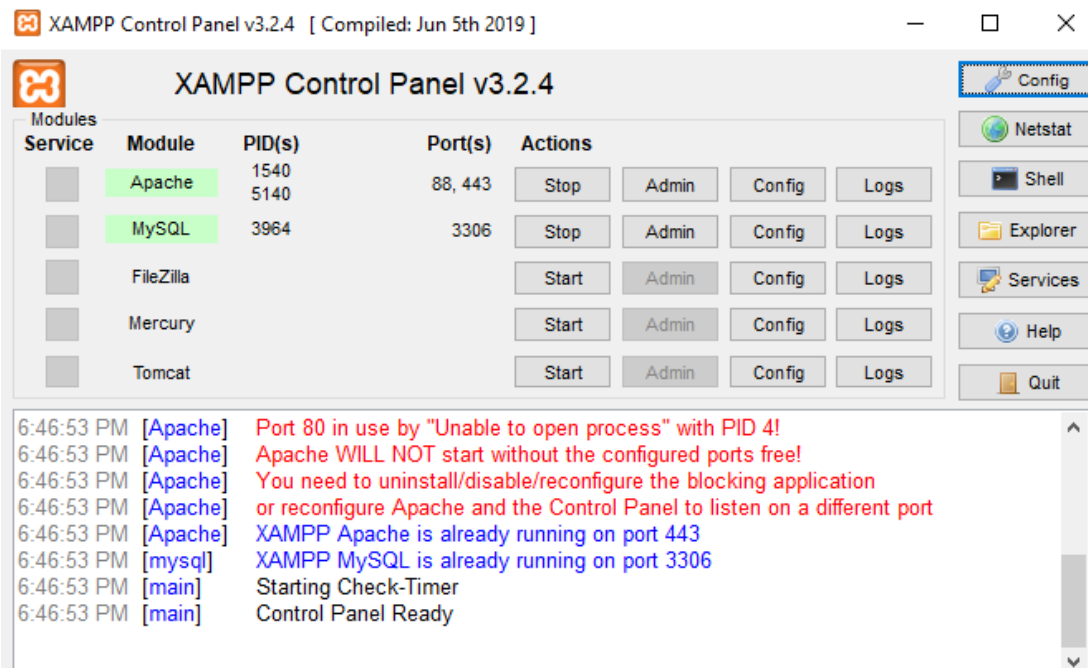
This "Sweebook Library" project is a project for our Object Oriented Design and Analysis Final Practicum Exam Program Pendidikan Teknik Informatika in Binus University. We made a program "Sweebook Library" in our project. This program is used for making an intelligent library system using MVC architecture. There are 5 actors that can use this program. There are library member, book purchasing, administrator, human capital, and manager roles. This program's source code could also be seen at

<https://github.com/mikhaeljonathan/sweebook-group1>

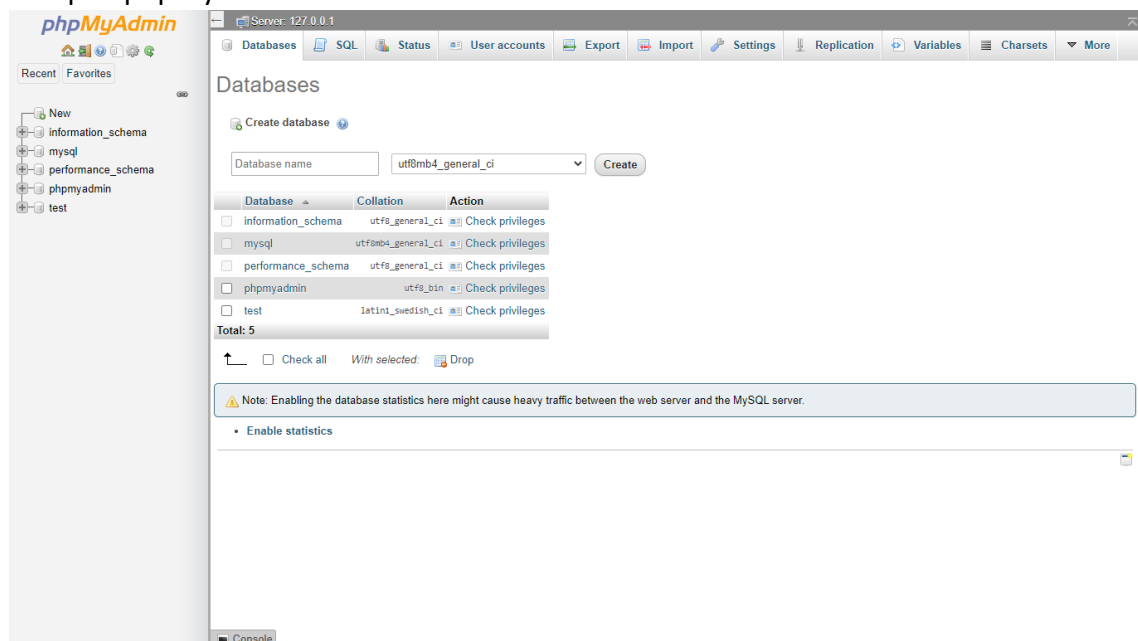
Report (Sweebook Guide)

I. Setting Up the Environment

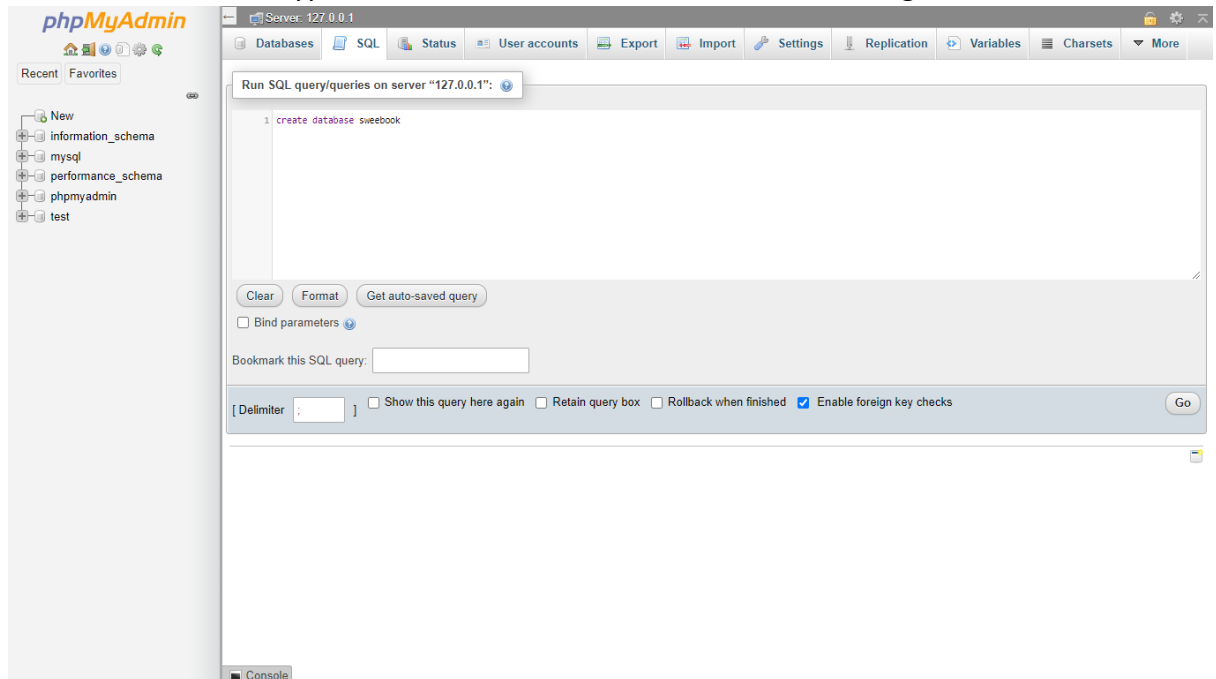
1. Install Java 8, Eclipse, XAMPP, and MySQL Java Connection.
2. Open XAMPP and connect Apache and MySQL



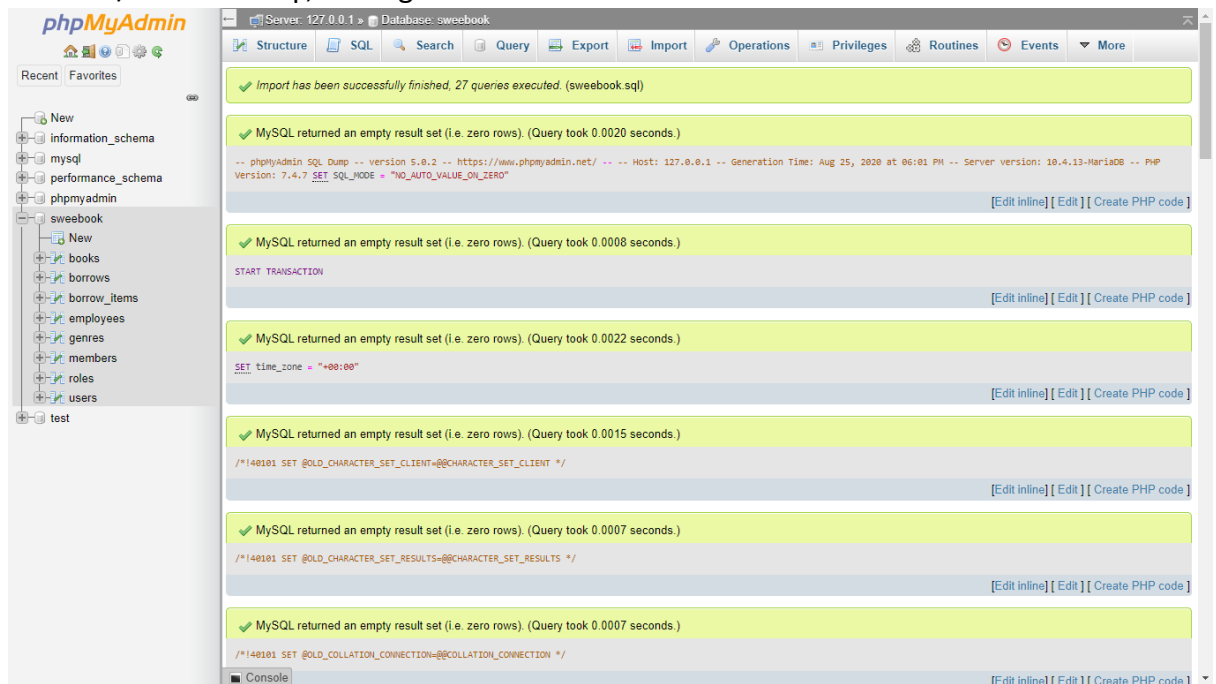
3. Open phpMyAdmin in browser



4. Go to SQL menu, type “CREATE DATABASE sweebook” and click “go” button



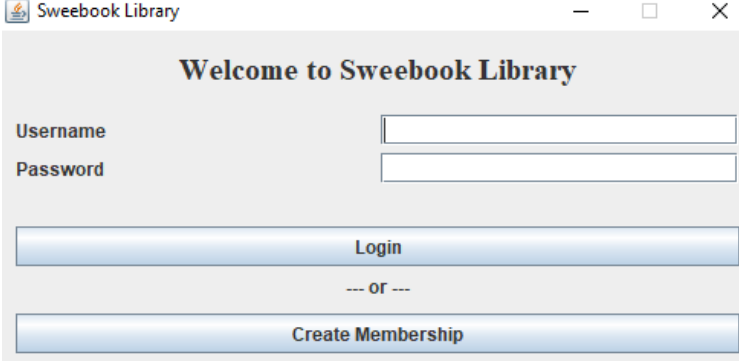
5. Click sweebook database in the left, click import menu, choose file, go to Case/sweebook.sql, click “go” button.



6. Open sweebook-library.exe

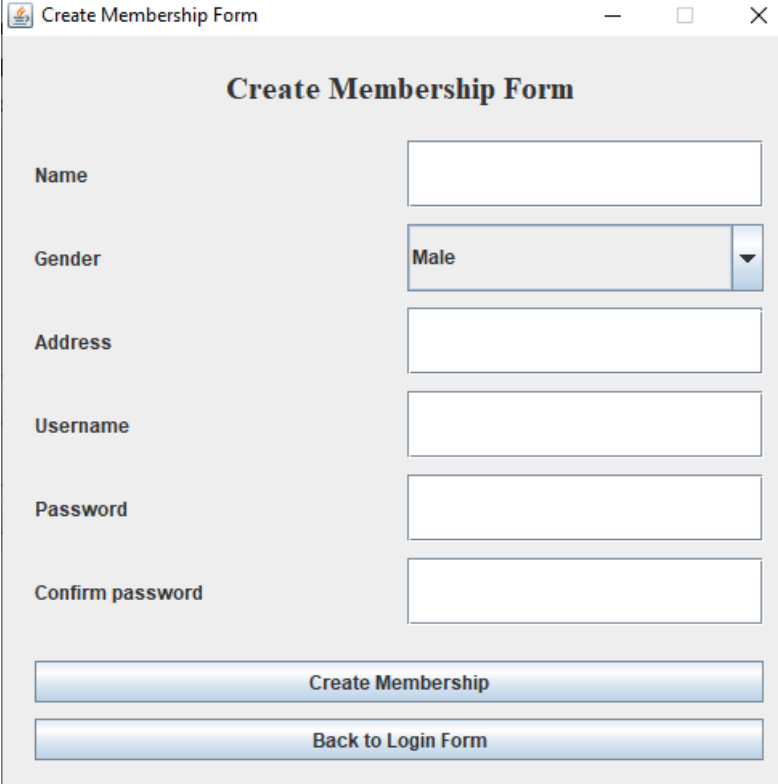
II. The Main Program

7. There is a Login Form. Fill the Username and password field. After filling the field, click login or just press enter button on keyboard. If username and password doesn't match or you're a fired or pending employee, you aren't allowed to enter the program. If you haven't registered a membership you can click on "Create Membership Button". If the username and password is correct, then the main form would appear according to the user's role.



The screenshot shows a window titled "Sweebook Library" with a standard Windows title bar (minimize, maximize, close buttons). The window content has a light gray background and a title "Welcome to Sweebook Library" in bold black text. Below the title, there are two text input fields labeled "Username" and "Password". Below these fields is a blue button with the text "Login". Underneath the button is the text "--- or ---". At the bottom is another blue button with the text "Create Membership".

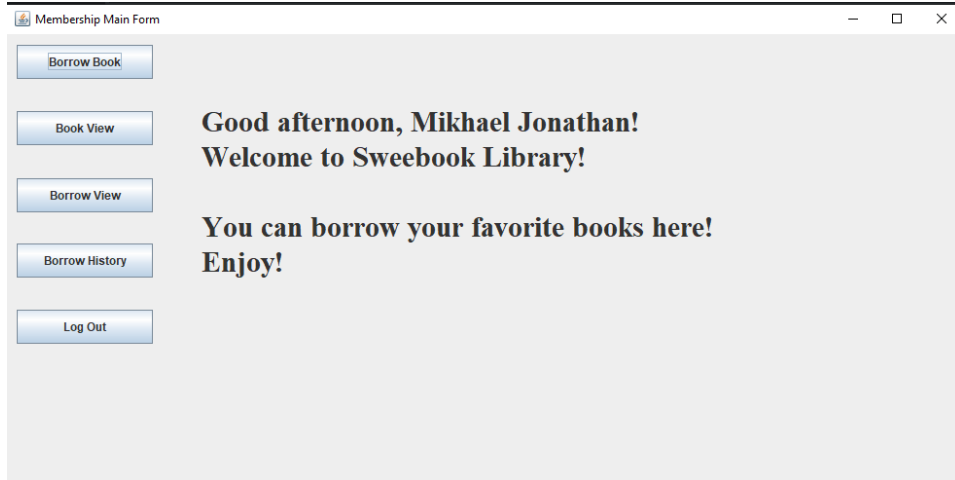
8. After clicking "Create Membership Button", Create Membership Form would appear. Fill the field. All of the field couldn't be empty. Username must be unique. Password has to contain minimum 8 characters alphanumeric and lowercase uppercase letter. After filling the field, click "Create Membership" button or just press enter button on keyboard. When the filled data is validated, then the Membership Main Form would appear.



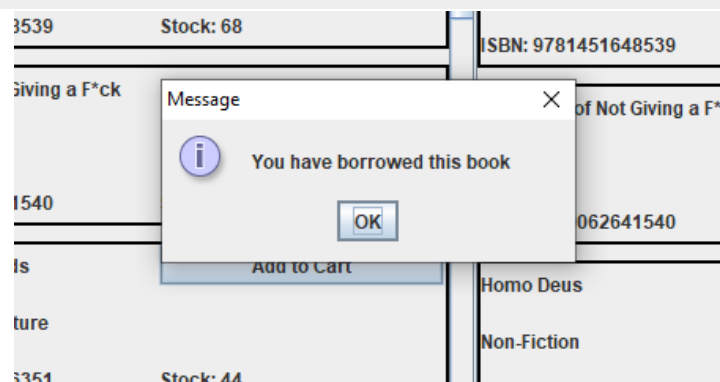
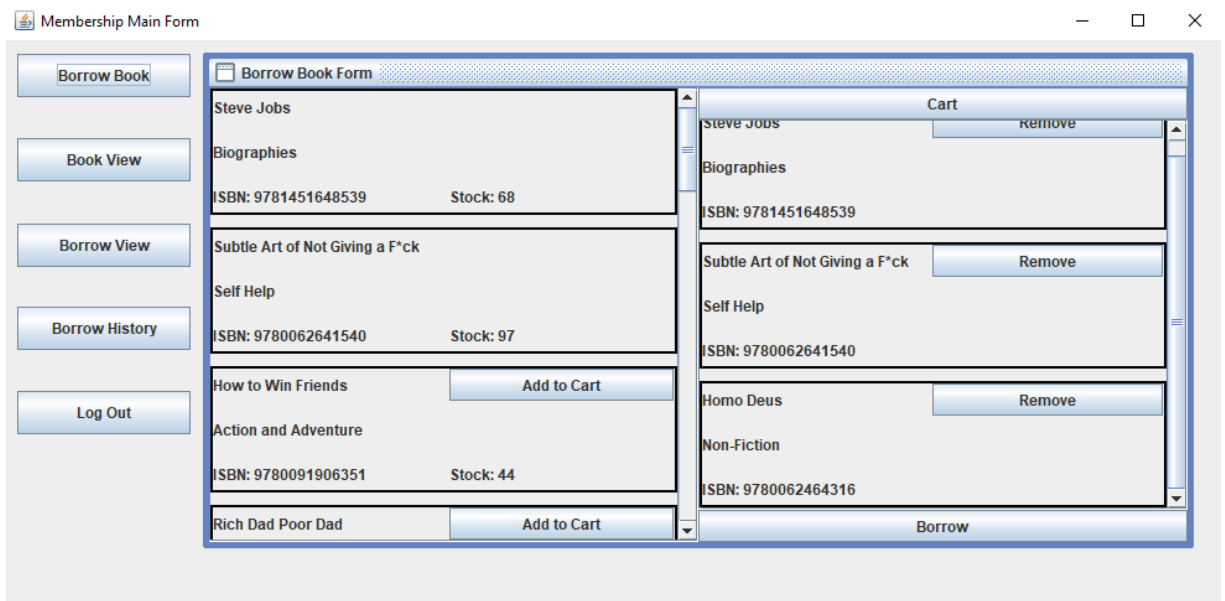
The screenshot shows a window titled "Create Membership Form" with a standard Windows title bar. The window content has a light gray background and a title "Create Membership Form" in bold black text. Below the title, there are several form fields: a text input field for "Name", a dropdown menu for "Gender" with "Male" selected, a text input field for "Address", a text input field for "Username", a text input field for "Password", and a text input field for "Confirm password". At the bottom, there are two blue buttons: "Create Membership" and "Back to Login Form".

A. Membership

9. When the membership main form appeared, you can borrow book, view book, view pending borrows, view borrow history, and of course you can log out and switch user.



10. When you want to borrow book, just click “Borrow Book” button in the left menu. You can add or remove the books into the cart and borrow the books in the cart. You could only borrow up to 10 books and you couldn’t borrow the same book.



11. When you want to view book, just click “Book View” button in the left menu. It only shows list of books in our library no matter it’s available to borrow or not.

The screenshot shows a web application window titled "Membership Main Form". On the left is a vertical menu with buttons: "Borrow Book", "Book View", "Borrow View", "Borrow History", and "Log Out". The main content area is titled "View Book Form" and displays a list of books. Each book entry shows the title, genre, and ISBN.

Book Title	Genre	ISBN
Steve Jobs	Biographies	9781451648539
Subtle Art of Not Giving a F*ck	Self Help	9780062641540
How to Win Friends	Action and Adventure	9780091906351
Rich Dad Poor Dad	Business	9781513666613

12. When you want to view pending borrow, just click “Borrow View” button in the left menu. It shows list of your pending borrows that haven’t accepted by the admin. You can click “detail” button for viewing list of books of the single borrow.

The screenshot shows a web application window titled "Membership Main Form". On the left is a vertical menu with buttons: "Borrow Book", "Book View", "Borrow View", "Borrow History", and "Log Out". The main content area is titled "Borrow View" and displays a list of pending borrows. Each entry shows the book title, genre, and a "Details" button.

Borrow ID	Book Title	Genre	Status
1.	The Power of Positive Thinking	Non-Fiction	Pending
	Introduction to Algorithms	Computer Science	
	A Brief History of Time	Science	

13. When you want to view borrow history, just click “Borrow View” button in the left menu. It shows the accepted borrow that you’ve ever borrowed. There is month and year spinner to show borrow of specific month and year. If you want to show all borrows without specific month and year, just set the month and year into - symbol. You could click “detail” button for viewing list of books of the single borrow. You could return the book if the book hasn’t returned. You would be given a fine if you return the book more than 2 weeks from borrowing date. The fine would be bigger if you return later.

The screenshot shows the 'Membership Main Form' with a left sidebar containing buttons: 'Borrow Book', 'Book View', 'Borrow View', 'Borrow History', and 'Log Out'. The 'Borrow History' button is selected. The main area displays a 'Borrow History' window with filters for 'Month' (11) and 'Year' (2019). It lists two borrow records:

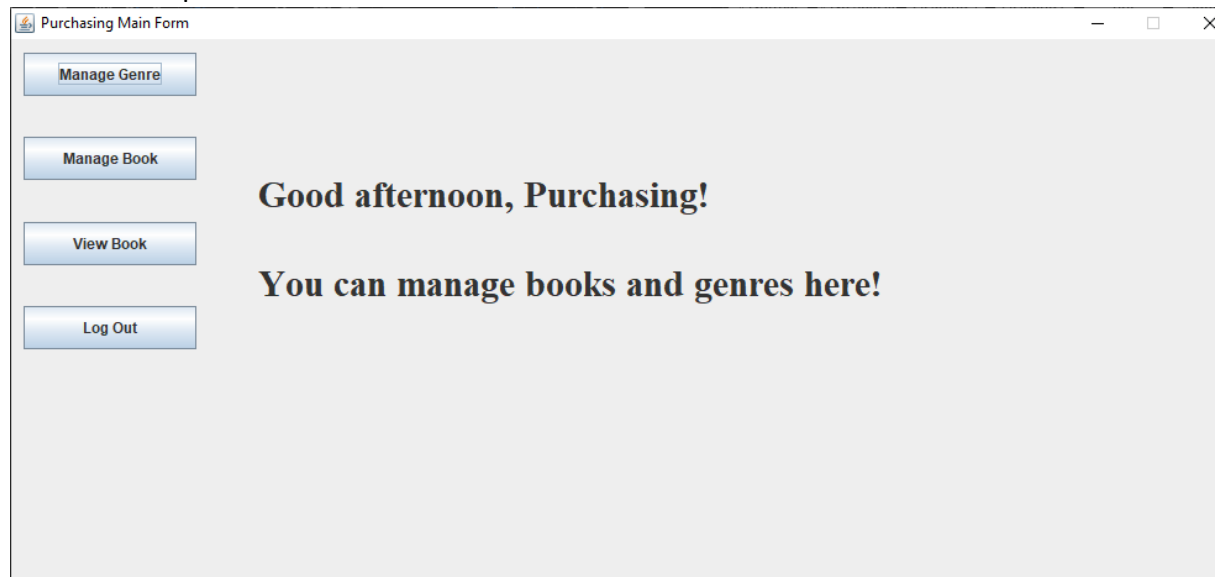
Index	Borrow date	Username	Book Title	Return time	Status
1.	2019-11-25	anthon	How to Win Friends	Hasn't returned	Accepted
2.	2019-11-25	anthon	Rich Dad Poor Dad	Hasn't returned	Accepted

Each record has a 'Details' button. A 'Return' button is present for each record.

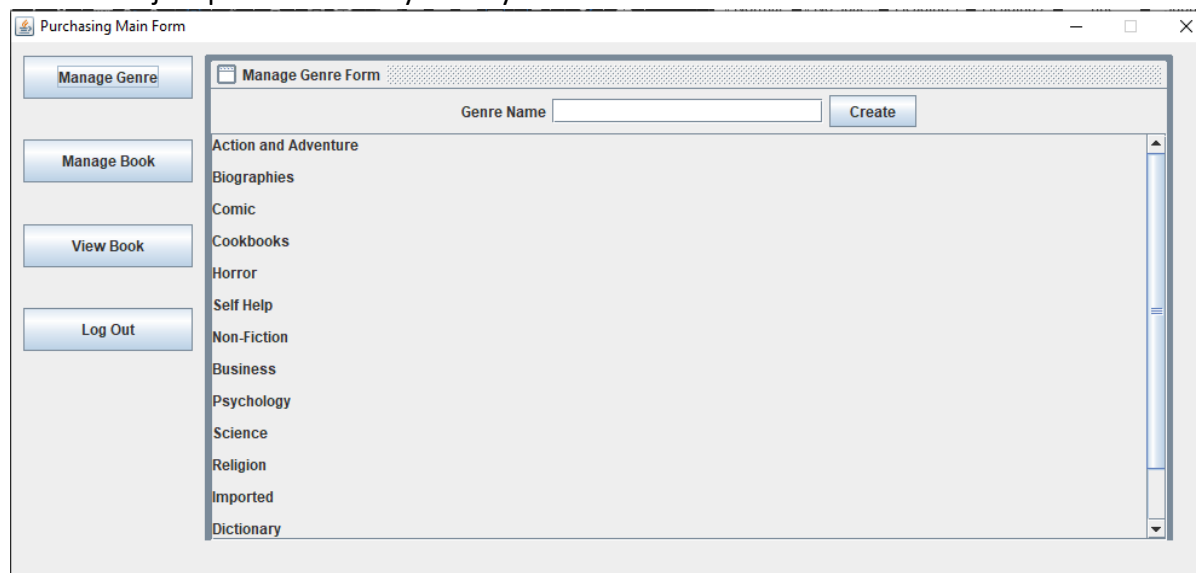
An 'Input' dialog box is displayed over the borrow history. It contains a green question mark icon, the text 'Fine: 264000', and a prompt 'Enter your money:' followed by an input field. There are 'OK' and 'Cancel' buttons at the bottom.

B. Purchasing

14. If you log in as purchasing employee, the Purchasing Main Form would appear. You can manage genre, manage book, and view book here. The view book is the same as membership.



15. When you want to manage genre, just click "Manage Genre" button in the left menu. It shows the list of genres and there is a genre name field if you want to add genre. The added genre must be unique. If you're sure to add the genre name, just click "create" button or just press enter on your keyboard.



16. When you want to manage book, just click “Manage Book” button in the left menu. It shows the list of genres and the list of books in our library. If you want to delete the book in the library just pressed “delete” button on a single book. If the book is still borrowed you can’t delete the book. You also can restock or add book by typing the ISBN in the field. ISBN has to contain 10 until 13 numeric characters. Then, click “restock” button or just press enter on keyboard. If the ISBN exists, then increment the book with corresponding ISBN number by one. If not exist then “Add Book Form” would appear. You can fill the book name, genre, and quantity for the new book. Book name can’t be empty and the quantity must be in range 1 until 100. After being filled then click “ok” button or just press enter on keyboard.

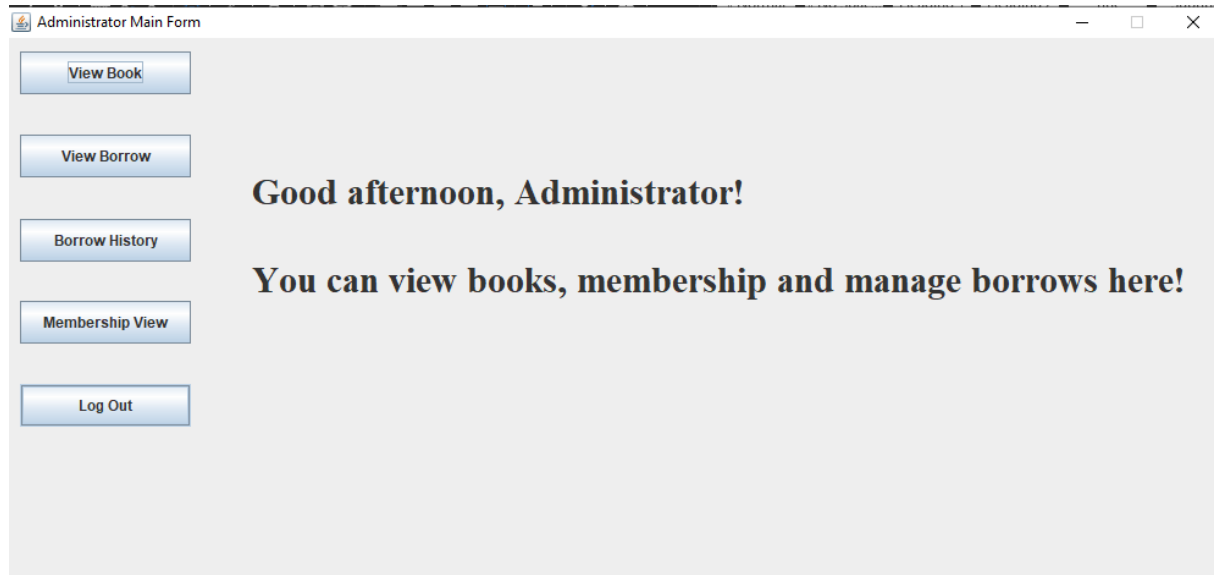
The screenshot shows the 'Purchasing Main Form' window. On the left is a sidebar with buttons: 'Manage Genre', 'Manage Book', 'View Book', and 'Log Out'. The main area is titled 'Manage Book Form' and contains an 'ISBN:' input field with a 'Restock' button to its right. Below the input field is a list of genres: 'Action and Adventure', 'Biographies', 'Comic', 'Cookbooks', 'Horror', 'Self Help', 'Non-Fiction', 'Business', and 'Psychology'. To the right of the genre list is a table of books. The table has columns for 'Book Name', 'Genre', 'ISBN', and 'Stock'. The first row shows 'Book Name: Steve Jobs', 'Genre: Biographies', 'ISBN: 9781451648539', and 'Stock: 68'. Below this row is a 'Delete' button. The second row shows 'Book Name: Subtle Art of Not Giving a F*ck', 'Genre: Self Help', 'ISBN: 9780062641540', and 'Stock: 97'. Below this row is a 'Delete' button. The third row shows 'Book Name: How to Win Friends' and 'Genre: Action and Adventure'.

The screenshot shows a 'Message' dialog box with an information icon and the text: 'The book is still in the borrow list and hasn't returned yet'. There is an 'OK' button at the bottom.

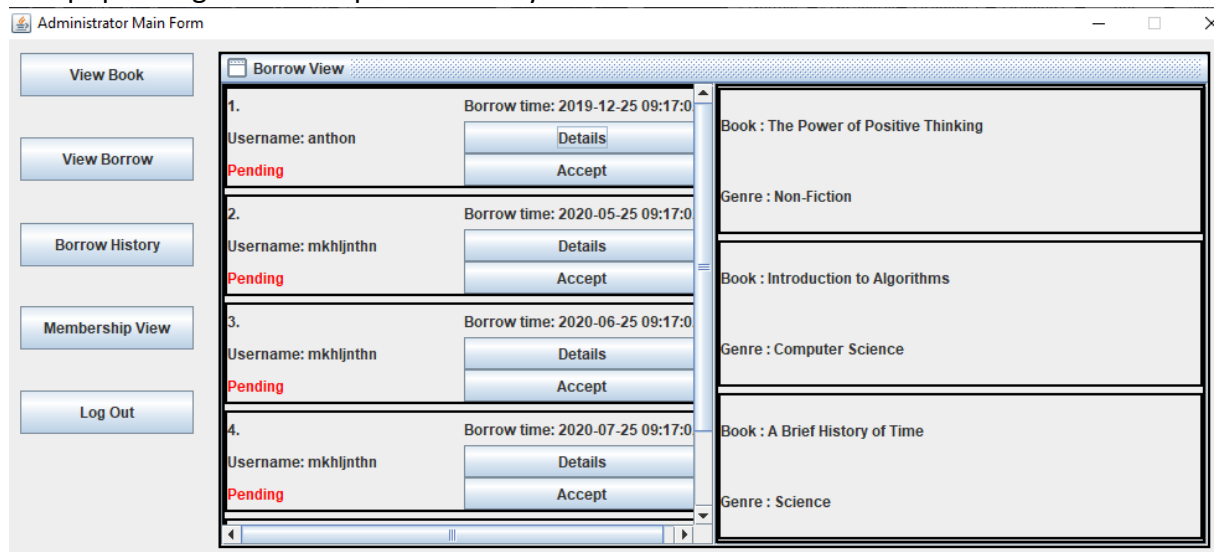
The screenshot shows the 'Add Book Form' dialog box. It has a green question mark icon and the following fields: 'Book Name:' with a text input field, 'Genre:' with a dropdown menu showing 'Action and Adventure', and 'Quantity:' with a text input field and a spinner control set to '1'. There is an 'OK' button at the bottom.

C. Administrator


17. If you log in as administrator employee, the Administrator Main Form would appear. You can view book, view pending borrows, view borrow history, and view membership. The “view book” functions the same as before.

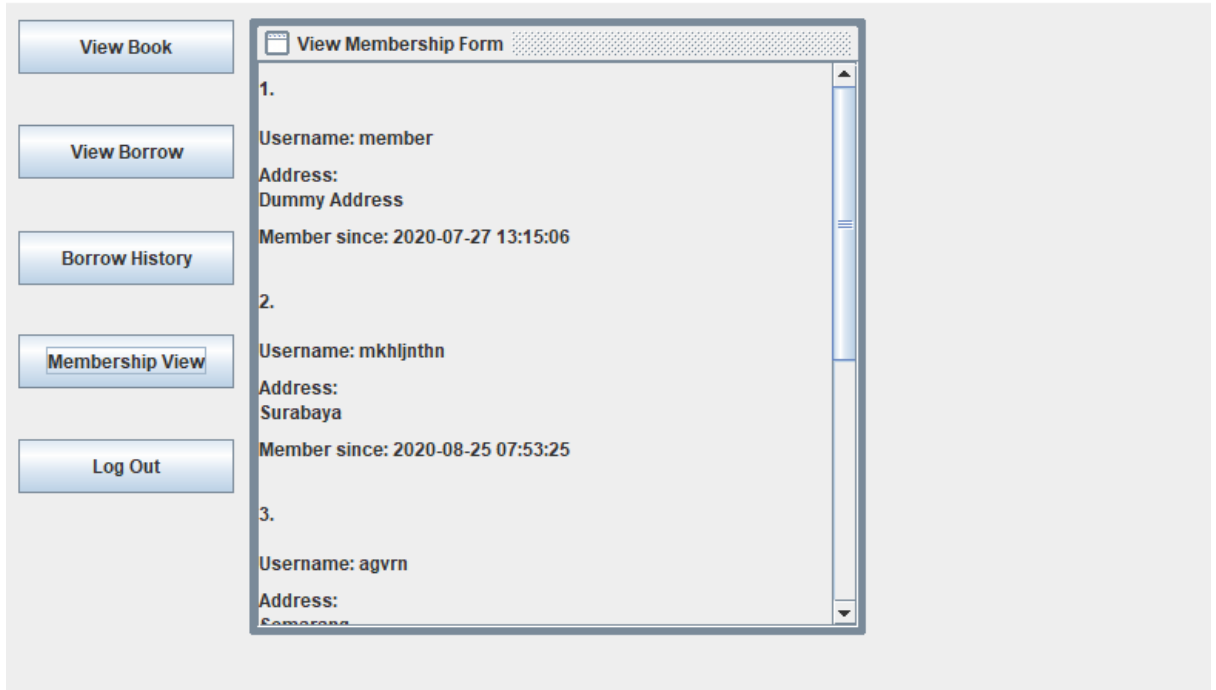


18. The “view borrow” is a little bit different. There is an additional “accept” button to accept pending borrow request from any members.



19. The “borrow history” is almost the same as before but it shows all of the accepted borrow history from all members.
20. When you want to see all the member registered, just click “membership view” button on the left menu. The “View Membership Form” would appear.

 Administrator Main Form

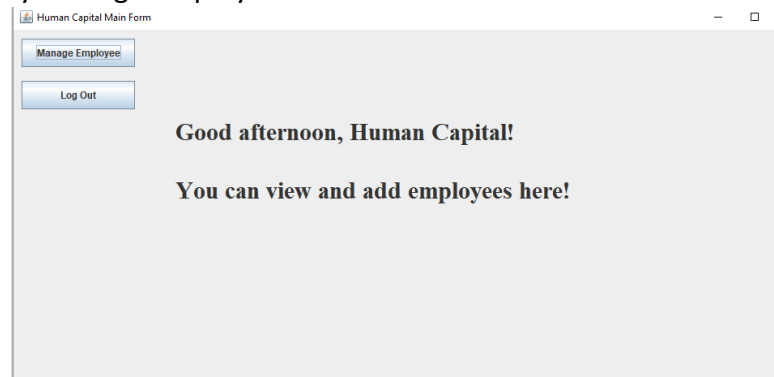


The screenshot displays the Administrator Main Form interface. On the left, there is a vertical menu with five buttons: "View Book", "View Borrow", "Borrow History", "Membership View", and "Log Out". The "Membership View" button is highlighted. To the right of the menu, a window titled "View Membership Form" is open. This window contains a list of three members, each with their username, address, and the date they became a member.

Member ID	Username	Address	Member since
1.	member	Dummy Address	2020-07-27 13:15:06
2.	mkhlnthn	Surabaya	2020-08-25 07:53:25
3.	agvrn	Semarang	

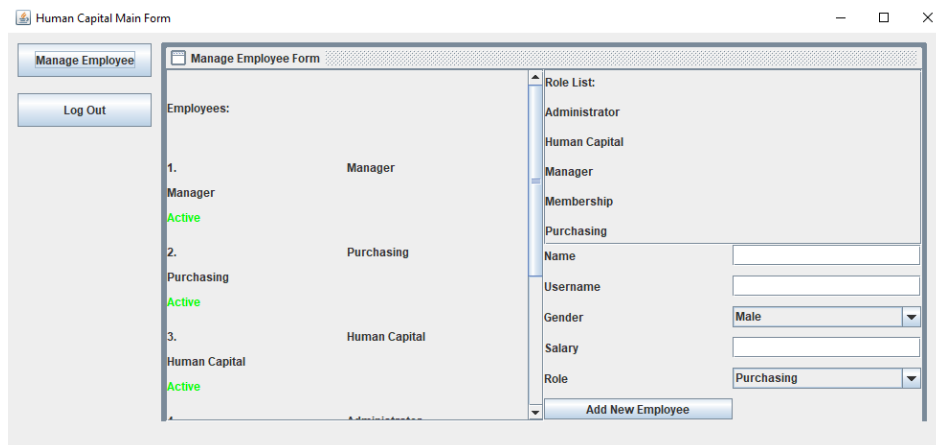
D. Human Capital

21. If you log in as human capital employee, the Human Capital Main Form would appear. You could only manage employee here.



The screenshot shows the 'Human Capital Main Form' window. On the left, there are two buttons: 'Manage Employee' and 'Log Out'. The main area of the window displays the text: 'Good afternoon, Human Capital!' followed by 'You can view and add employees here!'.

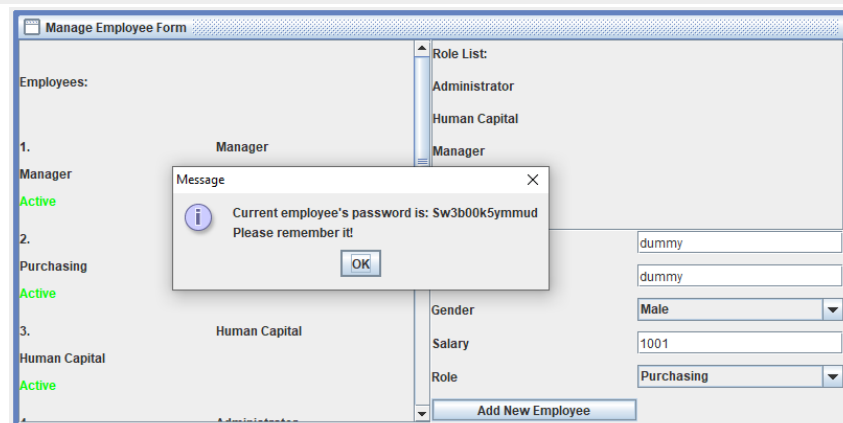
22. When you want to manage employee, just click “manage employee” button in the left menu. The Manage Employee Form would appear. It shows the list of the employee with their role and the list of the roles. There is also a form to add a new employee, of course the roles excluding membership and the manager. All of the fields couldn't be empty, the username must be unique, and the salary must numeric and above 1000. After the field has been filled, click “Add New Employee” button or just press enter on keyboard. The status of new employee would be “Pending” and wait for the approval from the manager. The password would be generated by the program and you have to remember it.



The screenshot shows the 'Manage Employee Form' window. On the left, there are two buttons: 'Manage Employee' and 'Log Out'. The main area is divided into two sections. The top section, titled 'Employees:', contains a table with three rows of employee data:

No.	Employee Name	Role
1.	Manager	Manager
2.	Purchasing	Purchasing
3.	Human Capital	Human Capital

The bottom section, titled 'Role List:', contains a list of roles: Administrator, Human Capital, Manager, Membership, and Purchasing. Below the role list, there is a form to add a new employee with fields for Name, Username, Gender (dropdown menu), Salary, and Role (dropdown menu). The 'Add New Employee' button is at the bottom right.



The screenshot shows the 'Manage Employee Form' window with a message dialog box displayed. The message dialog box contains the text: 'Current employee's password is: Sw3b00k5ymud Please remember it!'. The 'Add New Employee' button is at the bottom right.

E. Manager

23. If you log in as manager, the Manager Main Form would appear. You can view borrow history, view membership, and manage employee. The “Borrow history” and “view membership” function the same as before.

The screenshot shows the 'Manager Main Form' window. On the left side, there is a vertical menu with four buttons: 'Borrow History', 'View Membership', 'Manage Employee', and 'Log Out'. The main area of the form displays a greeting: 'Good afternoon, Boss Manager!' followed by a bold statement: 'You can view borrows, memberships, and manage employees here!'.

24. The manage employee menu is a little bit different as before. You can accept the employee pending request that inputted by human capital employee. Of course, the active and fired employee couldn't be accepted. You can also fire the employee except yourself. Of course, the fired and pending employee couldn't be fired. When you want to add employee, the employee's status is “active”, unlike employee that inputted by human capital employee.

The screenshot shows the 'Manage Employee Form' window, which is a sub-form of the Manager Main Form. It features a table with employee data and a sidebar with a role list and form fields.

ID	Status	Role	Action
3.	Active	Human Capital	Fire
4.	Active	Administrator	Fire
5.	Fired	Dummy Employee	
6.	Pending	Pending Employee	Accept

On the right side of the form, there is a 'Role List' containing: Administrator, Human Capital, Manager, Membership, and Purchasing. Below this list are input fields for 'Name', 'Username', 'Gender' (set to 'Male'), 'Salary', and 'Role' (set to 'Purchasing'). At the bottom right, there is an 'Add New Employee' button.

25. Available user you can test and check:

- Username: member
Password: member
Role: Membership
- Username: purchasing
Password: purchasing
Role: Purchasing
- Username: admin
Password: admin
Role: Administrator
- Username: hc
Password: hc
Role: Human Capital
- Username: manager
Password: manager
Role: Manager
- Username: agvrn
Password: Rianganteng123
Role: Membership
- Username: anthon
Password: Anthonganteng123
Role: Membership
- Username: mkhljnthn
Password: Mjganteng123
Role: Membership
- Username: dummyemployee
Password: dummyemployee
Role: Purchasing
- Username: pendingemployee
Password: pendingemployee
Role: Human Capital

Reference

- <https://www.petanikode.com/java-mysql/>
- <https://youtu.be/dTVVa2gfht8>
- <https://www.vogella.com/tutorials/MySQLJava/article.html>

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