Used Book Sale And Recycle Library System

Functionalities

Our book sale system has the following functionalities:

1. Login/Logout: User needs to login to our system to buy or sell books. Without login to view our website will be denied.

2. Register: If a user is new to our website, he will be navigated to register a new account and saved in our database.

3. Token: Our website use token to ensure the security. Access our website functionality without token will be denied. Every time when a user login, a unique will be generated to access website functions. Token has an expired time. During the period user do not need to login the second time and he is able to access all the functionalities.

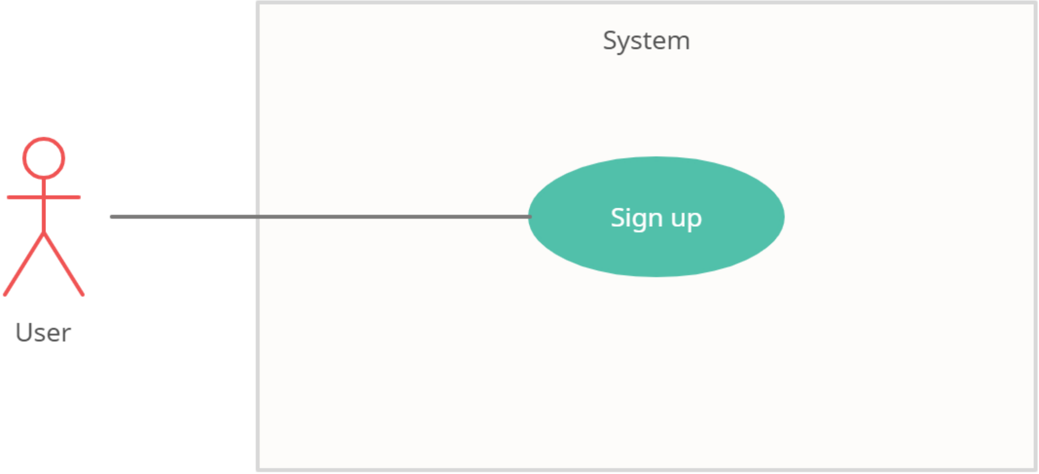
4. Search: Our website has search function for users to get what exactly book they want. After login, users can access to search page to do ad search. By searching names, users will see ads posted by other users related to the names. If they find the ad which is selling the exactly book they are looking for, they can go the page and check out more information about the book.

5. PostAD: After login, users can post ads to sell books. All they need to do is to access PostAD page and fill out the form of book information. They can also modify or delete ad they posted. Once an ad is posted, other users can find the ad by searching the name.

6. Google Search API: Our website calls google search API. If a user cannot find desired book through Search function, he can access to google search page to do an advanced search. Users can find more types of books through google search.

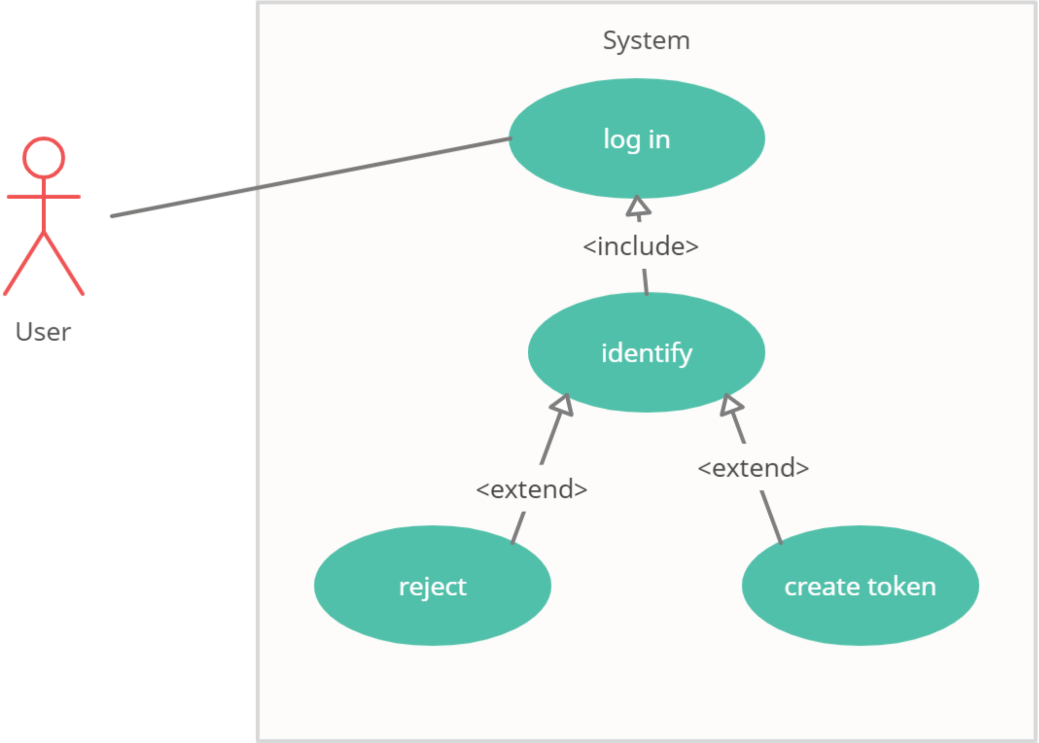
List of use cases and use case diagrams

Use Case Name:	register
Actors:	user
Description:	User sends the password and username to the system server, and the system will store this information to its database.
Pre- Condition:	1. User comes up with a username and password.
Post-Condition:	1. Server receives the register request. 2. Server stores the username and password.
Basic Path:	1. User clicks the sign up button. 2. User enters the username and password. 3. User clicks the submit button.
Alternative Path:	1. User can click the login button. 2. In the login page, user click the sign up button to go to the sign up page.

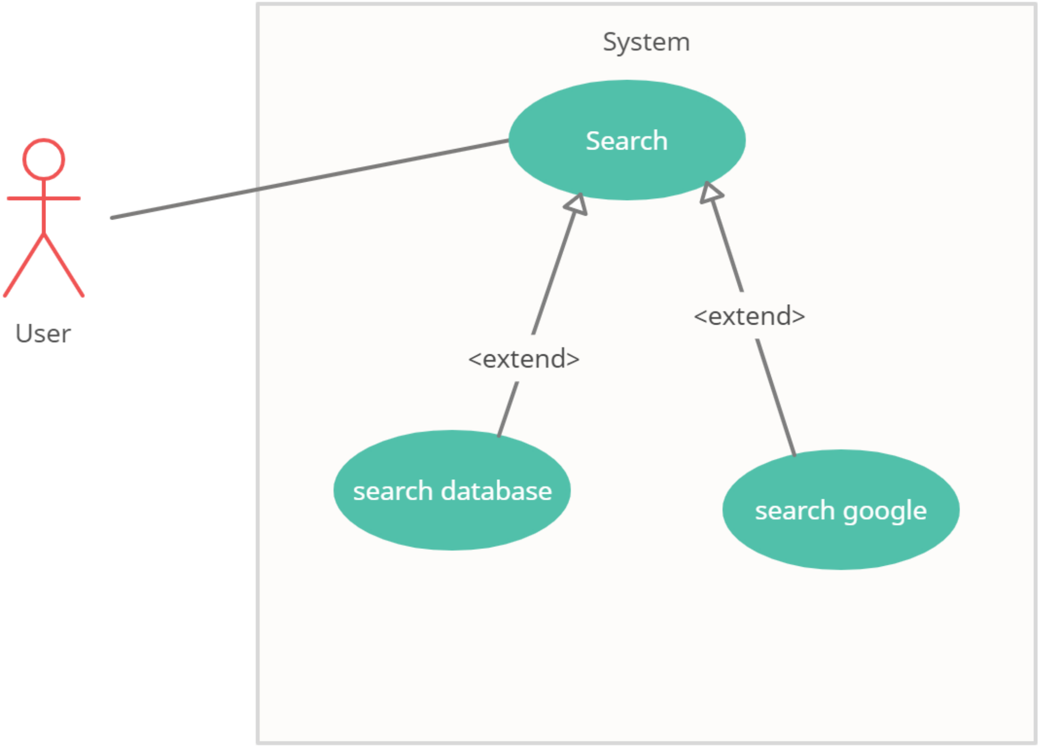


Use Case Name:	login
Actors:	user
Description:	User enters the username and password in the blanks and sends them to the server. Server returns a token to the user.
Pre- Condition:	User has register to the system.

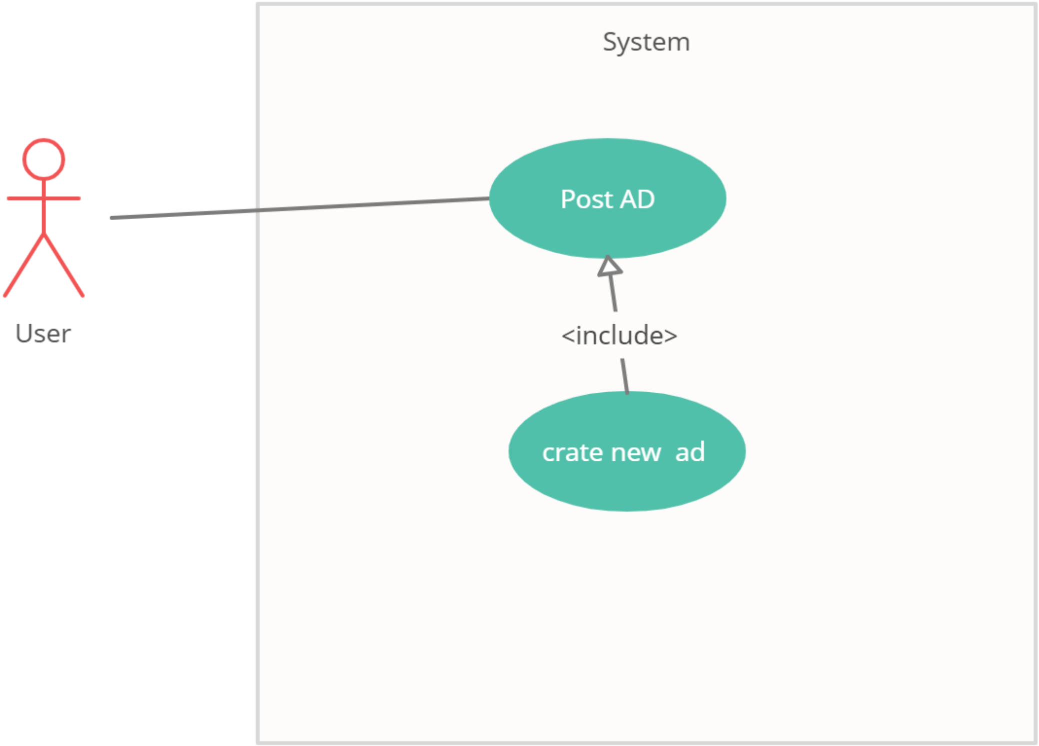
Post-Condition:	Server stores the token that has created and sent to the user.
Basic Path:	1. User enters username and password. 2. User submits the username and password. 3. User receives the token.
Alternative Path:	1. User gets rejected because of no Authorization. 2. User goes to sign up page and register for an account.



Use Case Name:	SearchAD
Actors:	User
Description:	Users search a certain ad based on the ID of an ad.
Pre- Condition:	1. User has logged in.
Post-Condition:	1. Server receives the query. 2. Server executes the query on database. 3. Server returns the result.
Basic Path:	1. User selects the search button. 2. User inputs the ID of an ad that he is looking for. 3. Browser shows the ad that matches the query.
Alternative Path:	1. Database has no result that matches the key word. 2. User can select a button “search by google book”. 3. Server sends a request to an external Google book API. 4. Server returns the result from Google book API.



Use Case Name:	Post AD
Actors:	User
Description:	User submits a form to post an AD that includes the book info and the AD info.
Pre- Condition:	1 User has logged in. 2. User chooses to post AD. 3. User fills out a form which includes the information of the book and AD, and submits it.
Post-Condition:	1. Server receives the request and stores the information of the book and AD.
Basic Path:	1. User selects button “postAD”. 2. User inputs book’s title, year, and etc., and submit the form. 3. User inputs AD’s title, description, price, and quantity, and submit the form.
Alternative Path:	



Usage of external service

The system will employ the Amazon search service API on certain cases.

1. Search book

   When users cannot find certain books in the library, they would like search them externally. The application provides users with a service to get the result from searching on google book service.

Technology, language, and the development platform:

Roughly, we divide our application into 3 parts that are front-end, back-end, database, and deployment.

Front-End: we use JavaScript to create our client side along with html, CSS. To make our application more efficient and productive, we use react framework and other useful dependencies. The redux, browser, Ajax, bootstrap are applied to make this application more efficient or fancy.

Back-End: we use java to build this project and maven to manage dependencies. Spring boot framework is applied to integrate our related technologies, like JDBC, rest, Mybatis, spring security, etc.

Data-Base: We use JDBC data source to connect our database and MySQL database to manage our data.