

**Documentation
of
Assignment 01 – Library Loans List
Application**

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Stage : 4

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Assumptions

App

- 1) There is no need for login details as it is assumed that the app on the device is used for the owners own a library account.

Books

- 1) The details on store for books will be the Books ID, Title, Author and Genre.
- 2) While several copies of each title maybe in stock, each one must be uniquely identifiable.
- 3) The details on store for unique identifier will be the ISBN, Status, Book ID.
- 4) 2 tables will be store in SQLite Database such as book and ISBN.
- 5) book table and ISBN are one to many relationship.
- 6) If a book is in cart or on loan, this must be reflected in some manner.

Cart, Loans and Returns

- 1) Once a book is loaned, added to cart or returned, this must be reflected somehow by the system.
- 2) A person can only take 4 loans, but can add unlimited book into cart.

Files

BooksActivity - Displays a list of books available for loan which are stored in an SQLite database or relevant Collection stored locally. List updates when the database changes. Allow user to add book to cart.

LoanActivity - Displays a list of books in cart which are stored in an SQLite database or relevant Collection stored locally. List updates when the database changes. Allows the loaning of a book from the cart.

ReturnActivity - Displays a list of loans which are stored in an SQLite database or relevant Collection stored locally. List updates when the database changes. Allows the returning of a book.

CustomArrayAdapter – A custom array adapter

DBOpenHelper – A Class that perform all the SQLite Database action.

BookDetails - A class to store all the details of a book.

IsbnAndStatus – A class store all the ISBN and its status

Activity_loan – A layout contains a list view

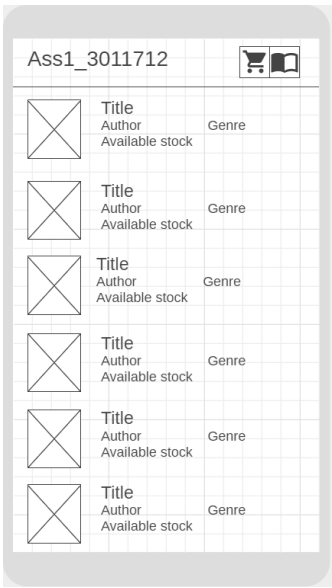
activity_main– A layout contains a list view

Activity_return– A layout contains a list view

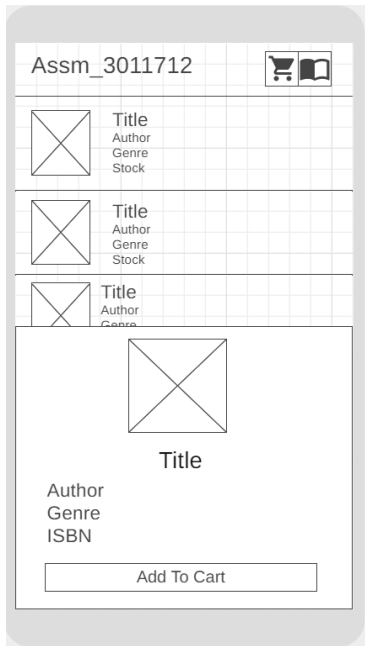
list_book– A layout that contains design of list view item.

bottom_sheet – A layout contains book details and used for bottom sheet.

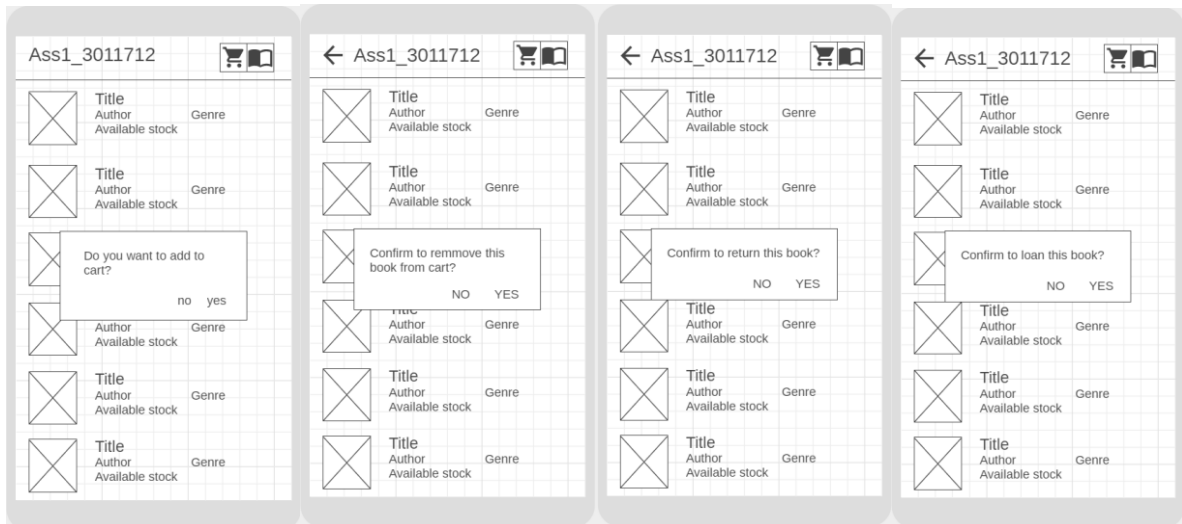
Wireframe



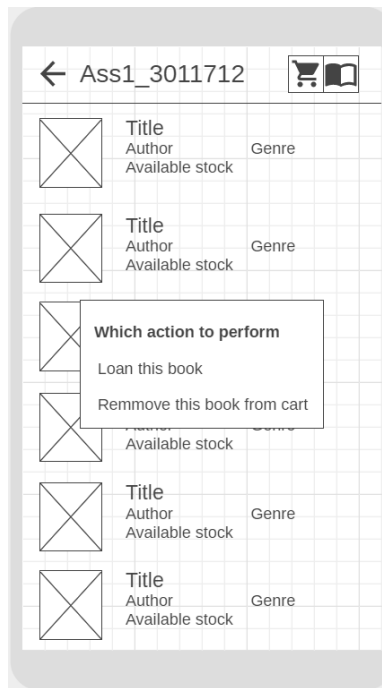
This is the design for listing books.



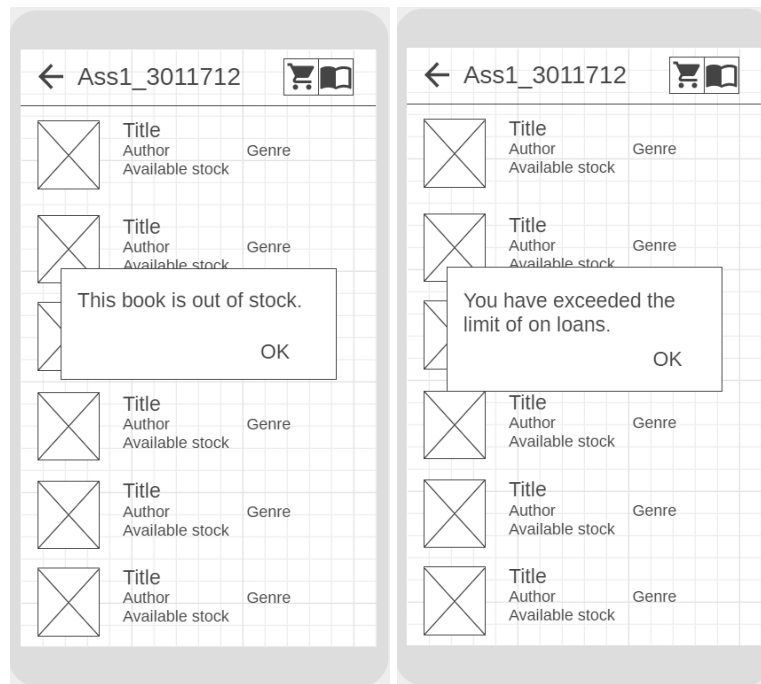
This is the design of listing the details of book with bottom sheet.



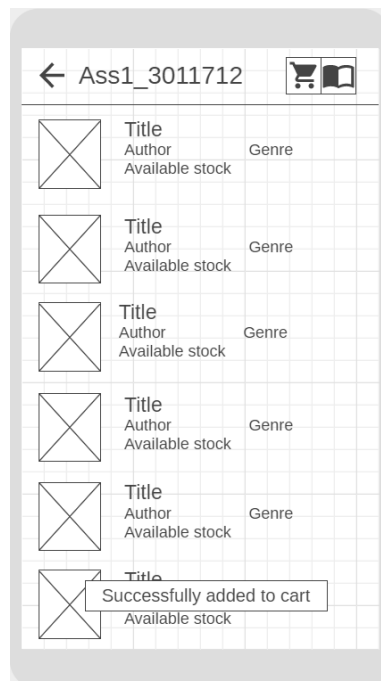
This is the design for confirmation of action.



This is the design for user to select which action to perform.



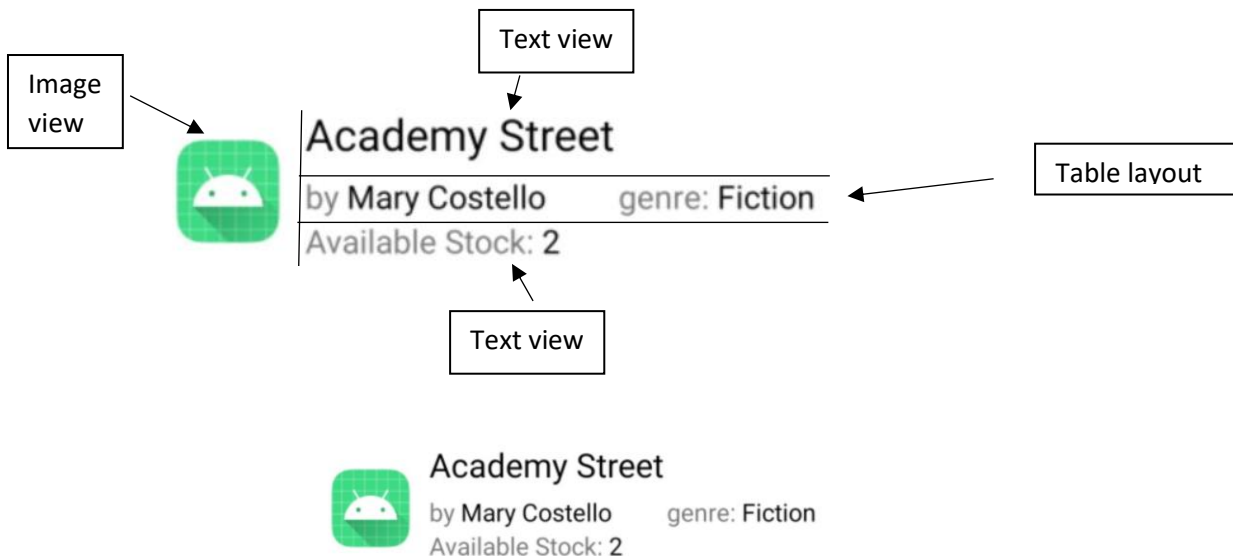
This is the design that tells user that they cannot perform the action.



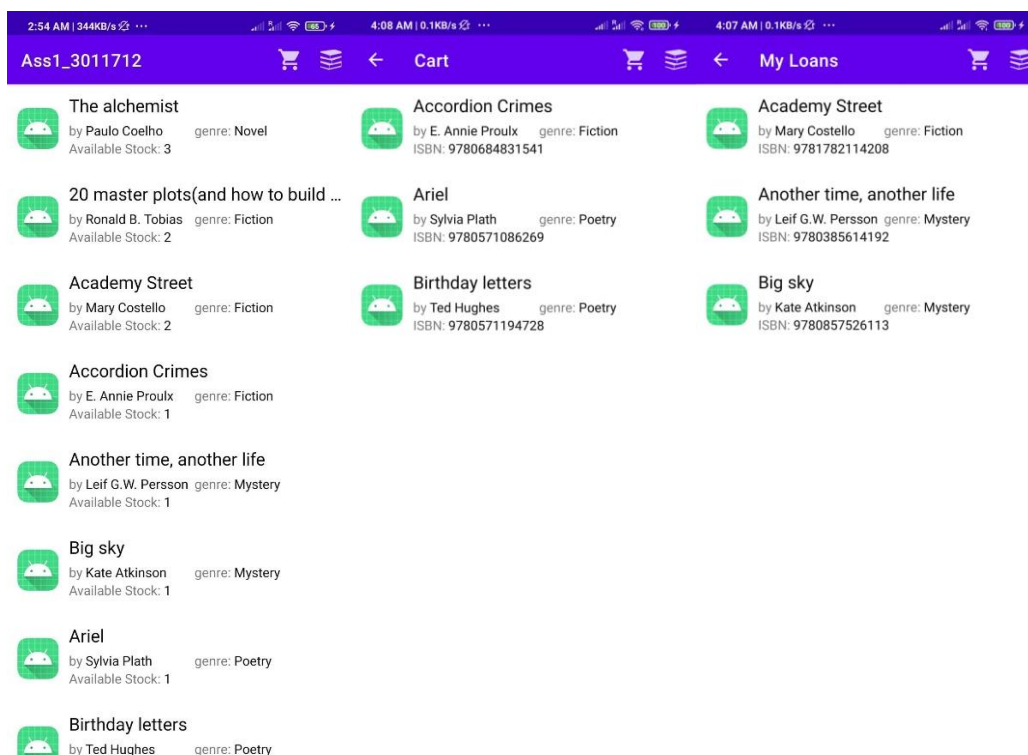
This is the design for telling user that the action is successfully proceeded.

Screenshot

The screenshots below are captured from Xiaomi 9 with API29.



This is an item of list view that using relative layout.



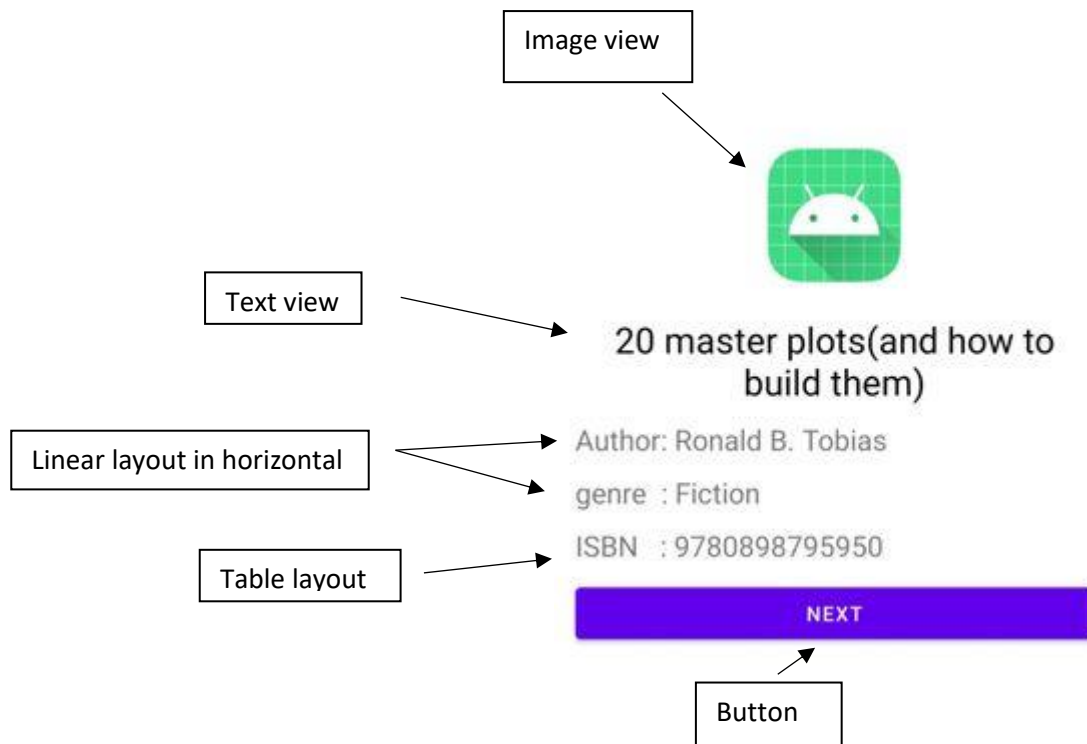
This is the layout of Books Activity, Loan Activity and Return Activity.

It is using custom list view that contains a dozen of items that stated in last screenshots.

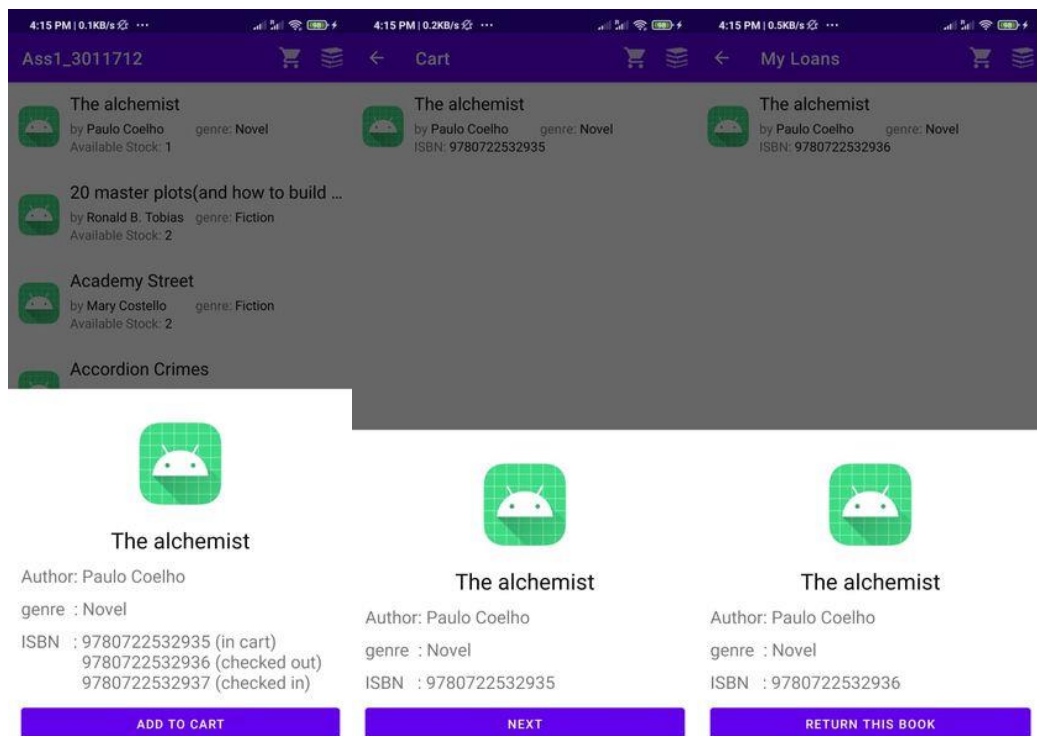
There are 2 icon on the right of action bar, which is

Cart icon – navigate to cart page (Loan Activity).

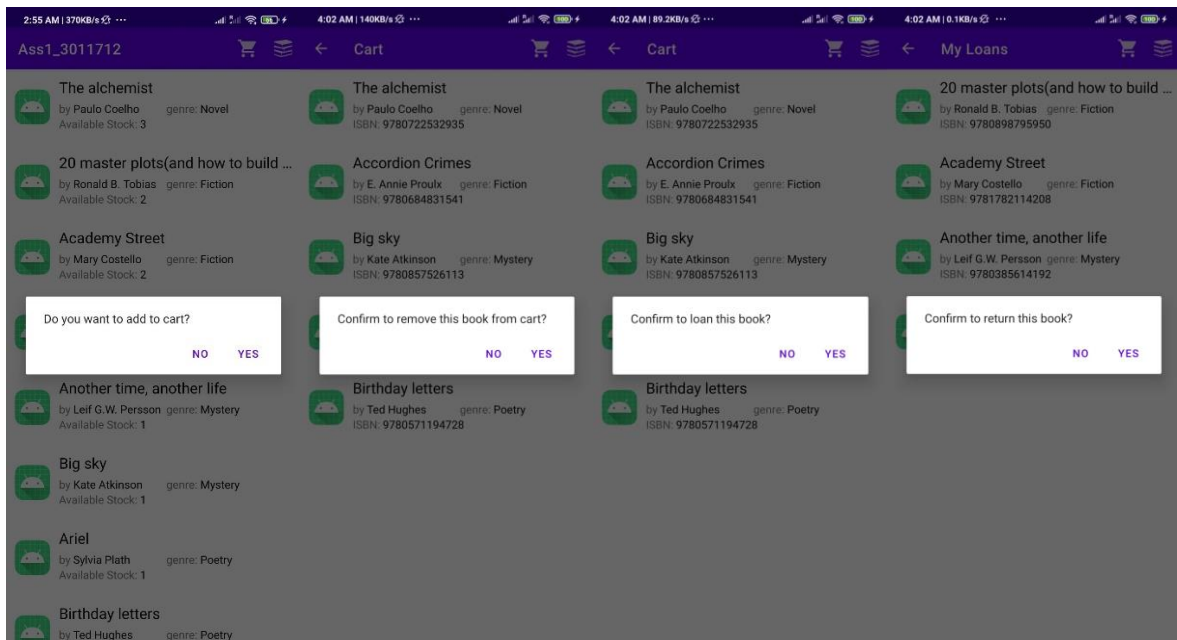
Book icon – navigate to loan page (Return Activity).



This is a bottom sheet design with linear layout in vertical.

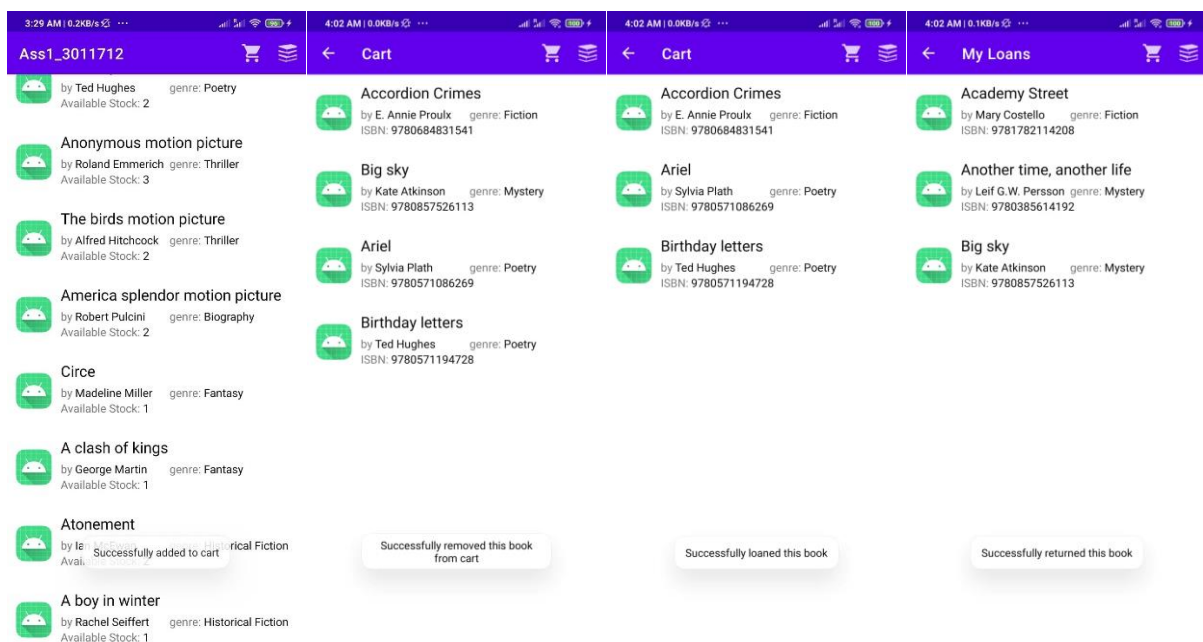


Bottom sheet will appear in Books Activity, Loan Activity and Return Activity when an item is clicked in list view.

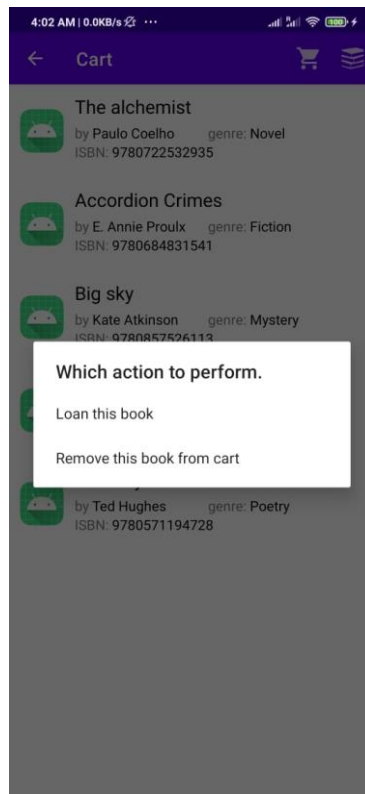


When the user has decided to perform an action, the android page will generate the confirmation dialog box.

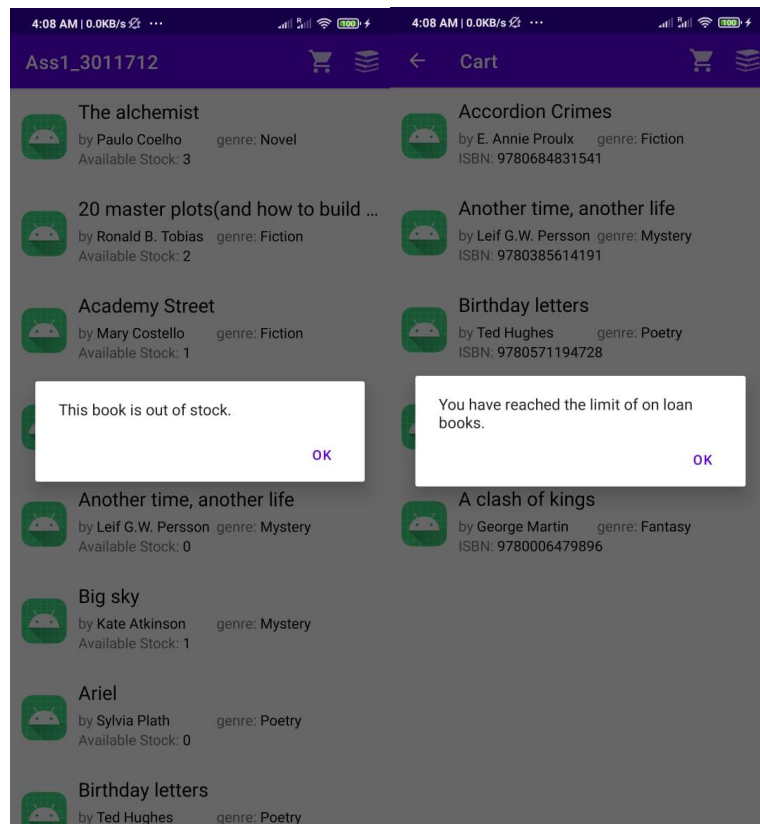
This dialog is implemented by alert dialog and comes with 1 negative button(no) and 1 positive button(yes).



After the user have confirmed to perform the action, a toast will be shown in bottom to tell the user successfully performed the action.



This is a list dialog to ask user which action to perform.



A dialog box will be generated if user has reached the limit of on loan books or the book that user decided to add to cart is out of stock.