Mobile Application Development

Kolb Library

North Penn High School

Tejas Priyadarshi

Christopher Seiler

Neelay Velingker

Application Overview

The Kolb Library mobile application manages issuance of books to administrators, teachers, and students and provides other information about the school library.
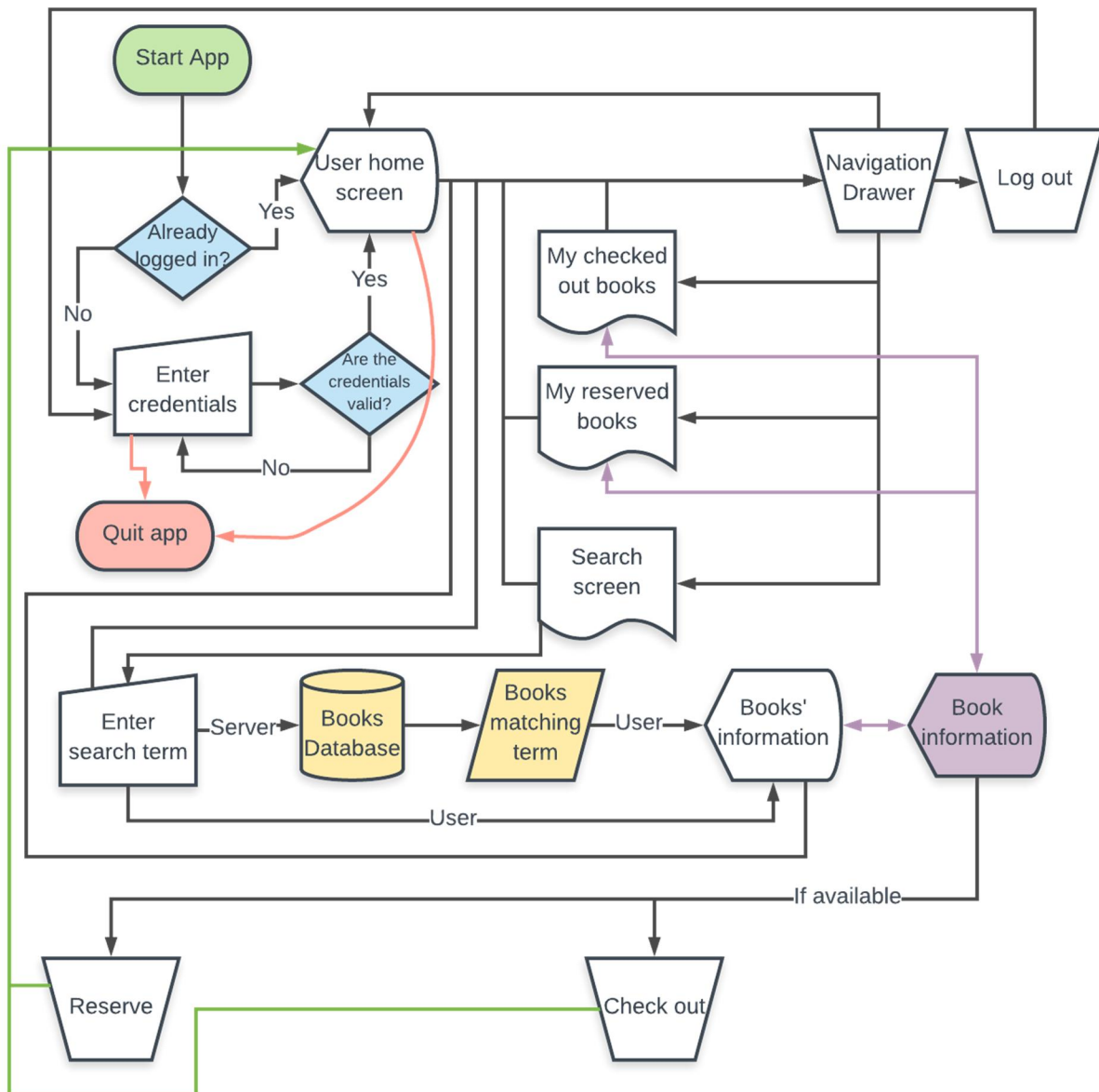
Main features of the application include ability to:

- Search for a book based on keyword, title, author, or subject
- Sign In using a native account or a **Google** account
- Reserve and check out books
- Share book information and comments via **Twitter**
- Report bugs in the application
- Pinch-to-zoom enabled map of the school library
- Push notifications to users via **Google** when a book is overdue
- Maintain user accounts and books
- View Inventory of books reserved and checked out
- Approve reservations or checkouts

Application Flow Chart

A high level flow of the system is shown in the following diagram:
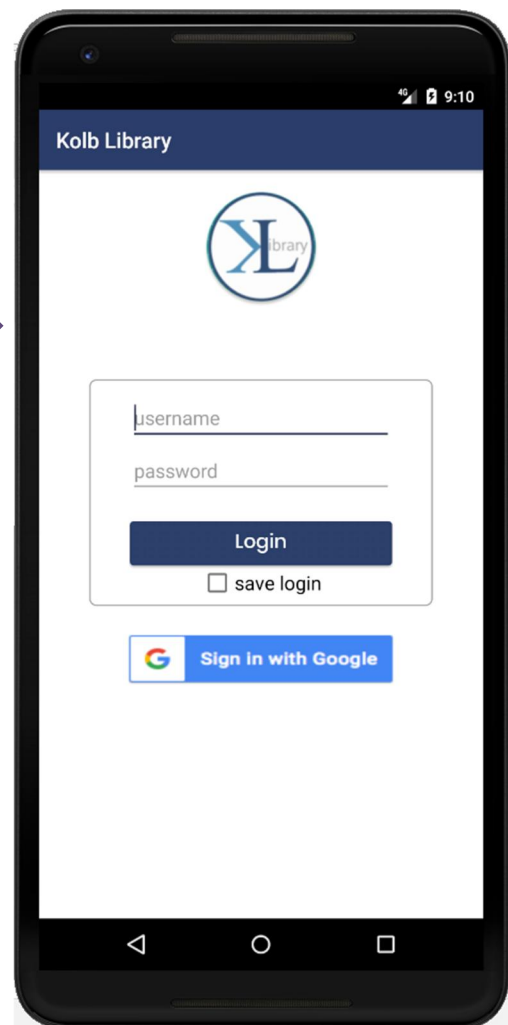
Operating Manual

User Operations

Launch the application

Tap on the application icon on your Android device. The App will launch and the splash screen will be displayed
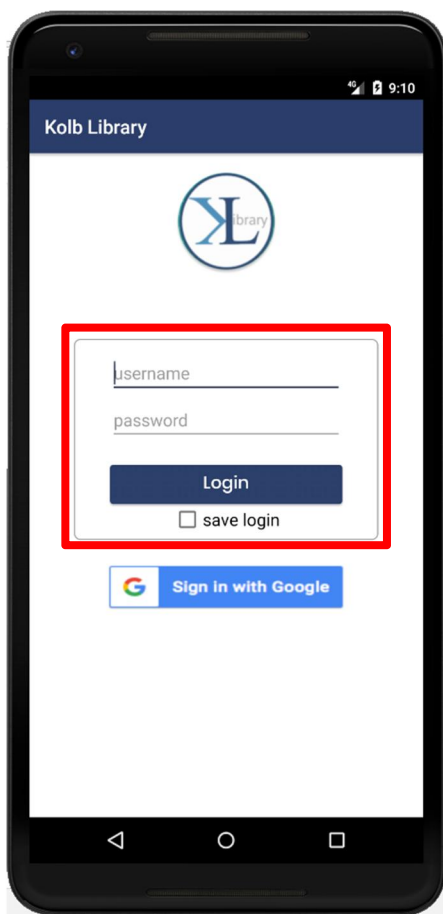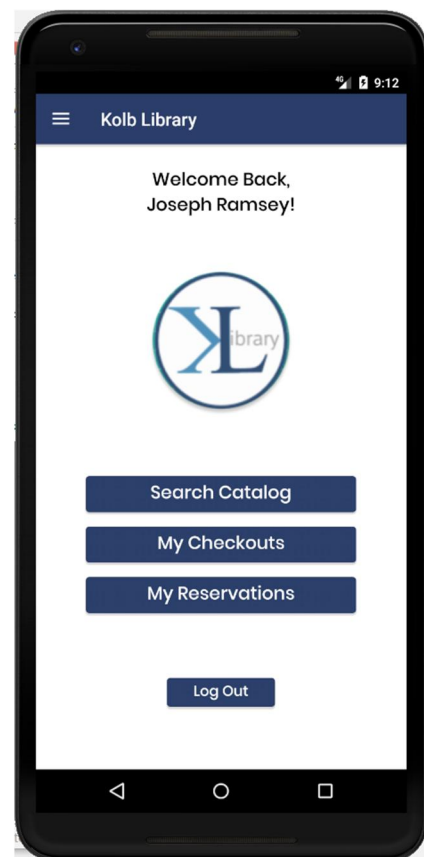

Login Screen will be displayed after 8 seconds.

Sign In the Application

A user can sign in using one of the 2 methods: 1) Sign In using Kolb Library Account 2) Sign In using Google Account

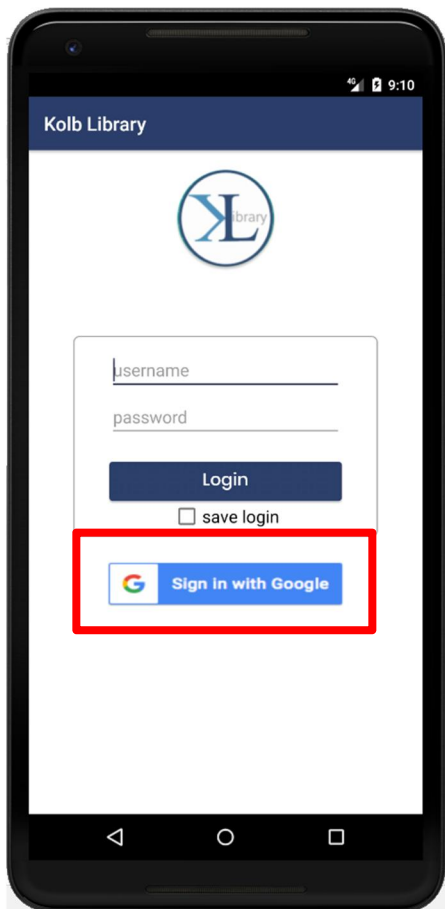Type Username and password and tap on Login button

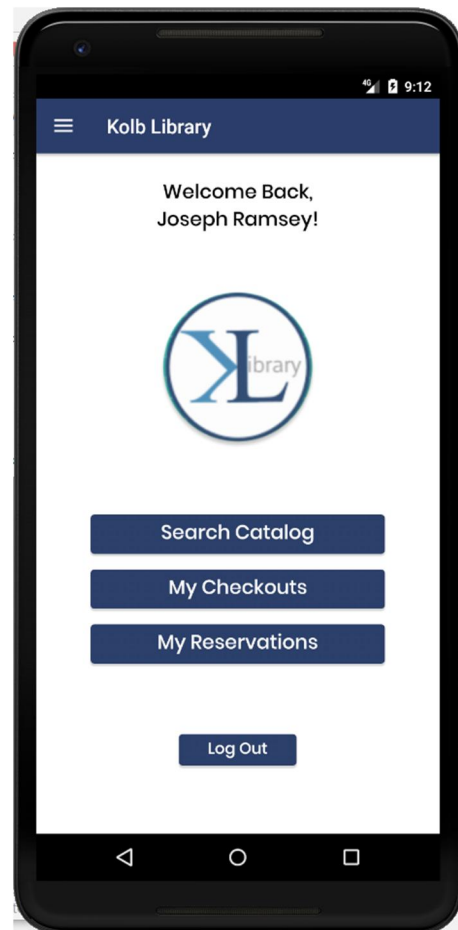Home screen will be displayed if the login is successful

Sign In the application with Google Account
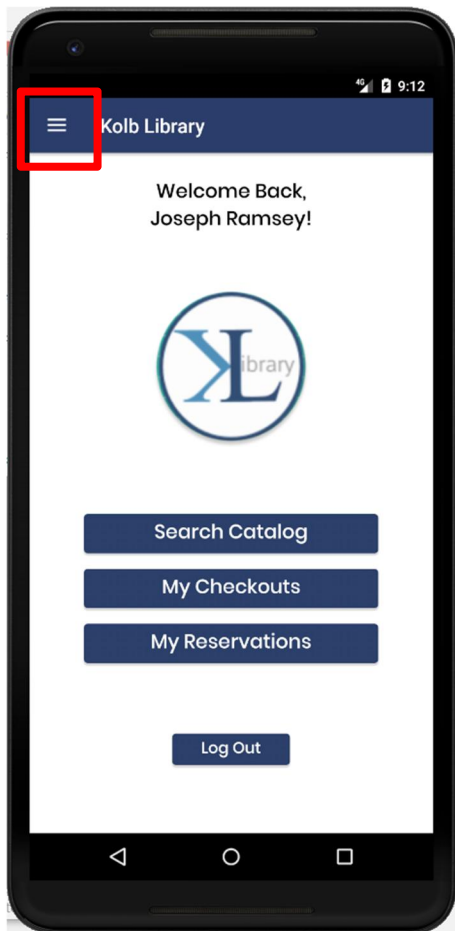
Tap on **Sign In with Google** button

User confirmation screen will be displayed. Type in the First and Last Name and tap on Continue button. Home screen will be displayed.
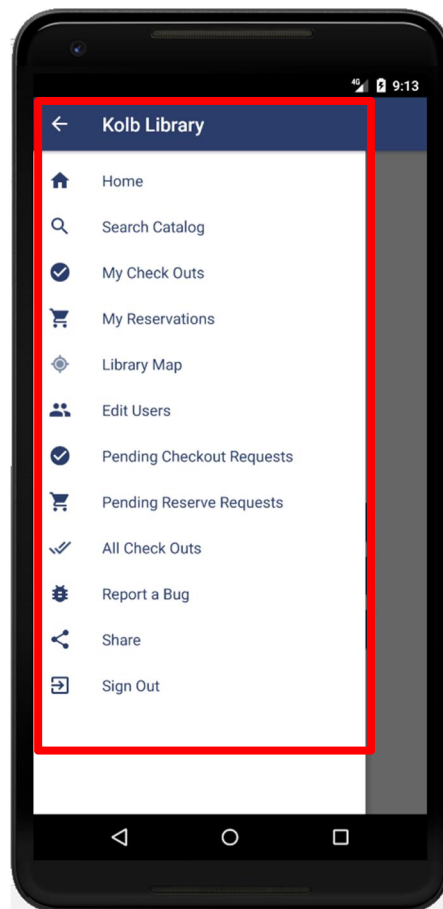
Navigation Bar

Navigation Bar allows a user to easily navigate from one screen to another.

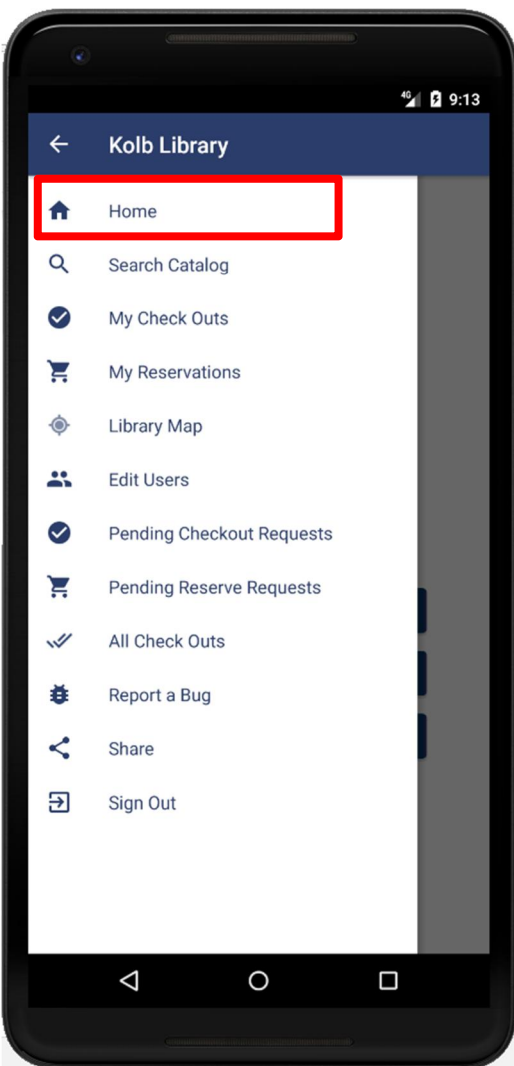Tap on the Drawer icon in the upper left corner.

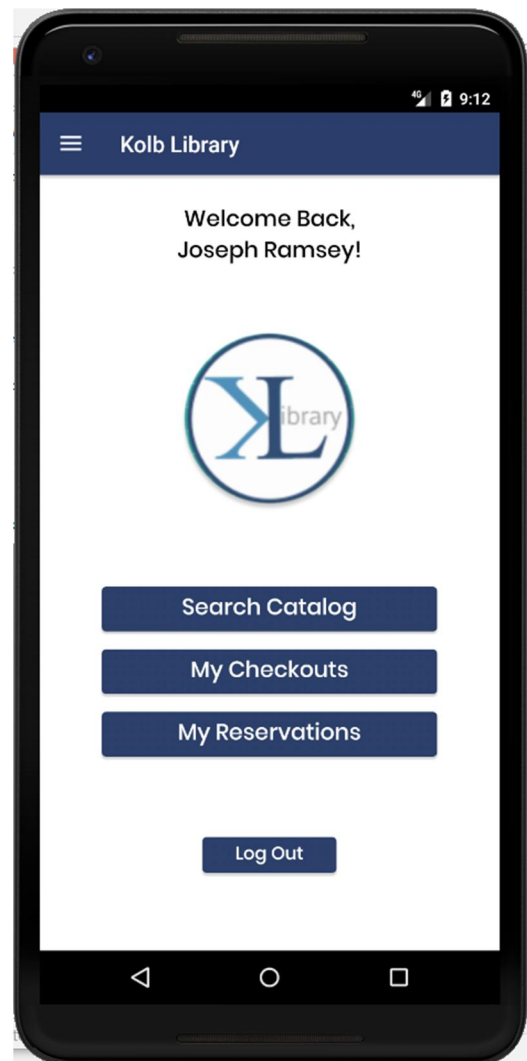Navigation Bar will be displayed. Tap on the left arrow to close the navigation bar.

Home Screen

User can navigate to the Home screen from any other screen using the Home button on the Navigation drawer.

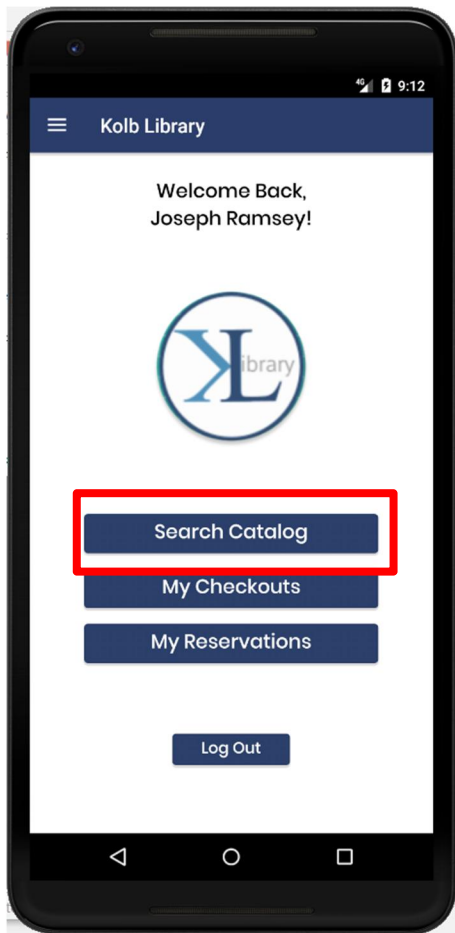Tap on the **Home** button on the navigation bar to go to the Home screen.
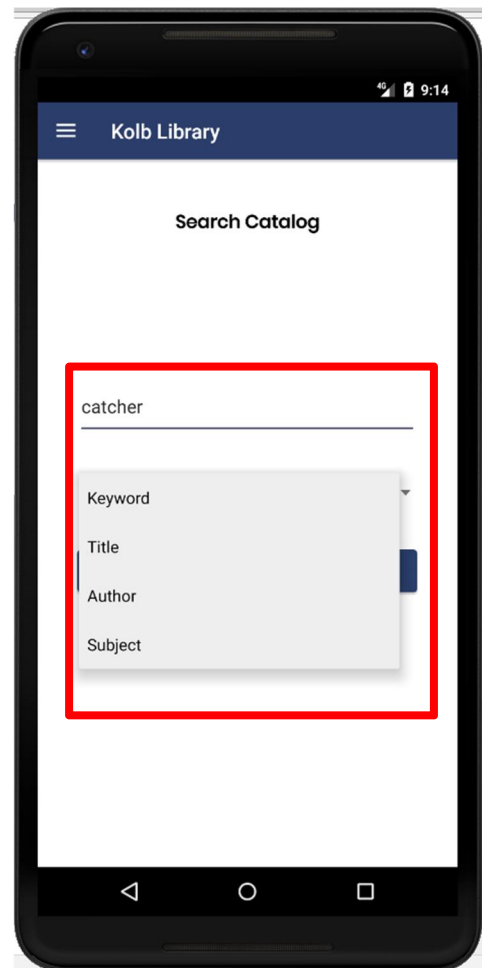
Home screen will be displayed

Search Catalog

Search Catalog button open the Search Catalog screen for searching.
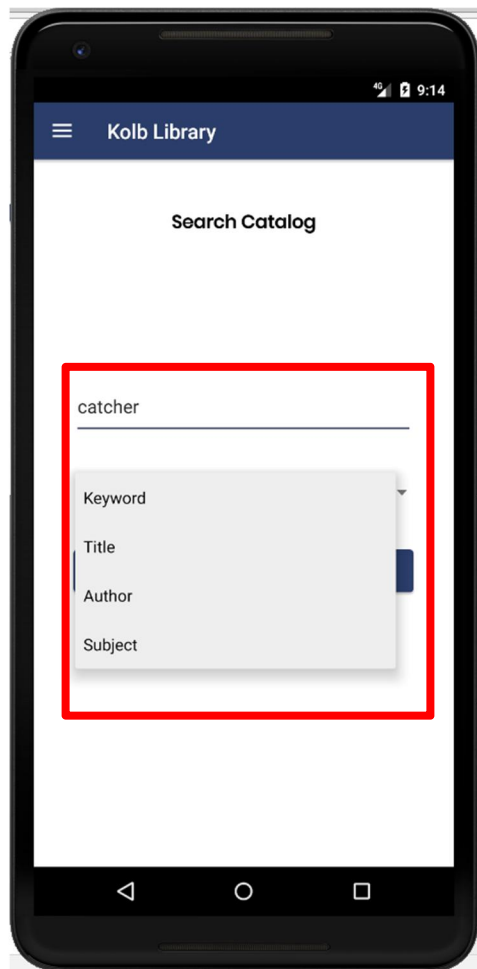
Tap on **Search Catalog** button
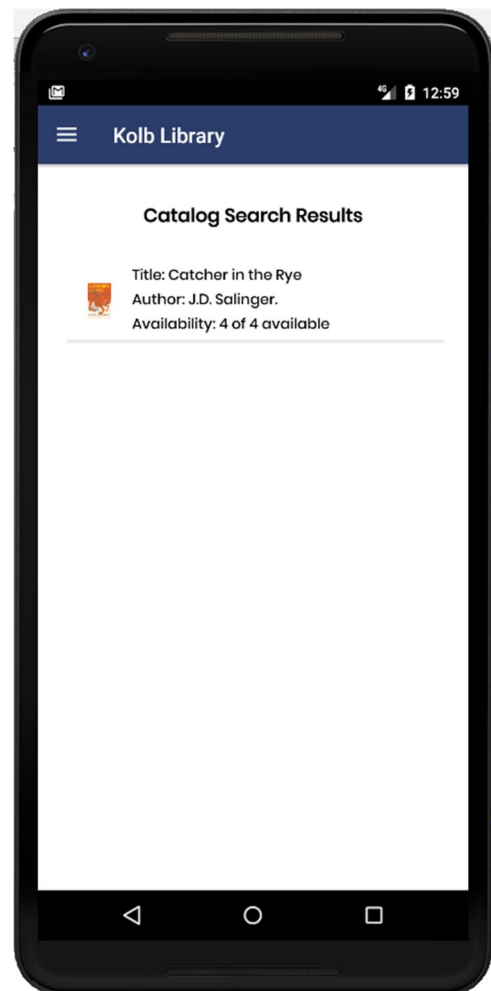

Search Catalog screen will be displayed

Search Catalog Results

Search results are listed in a table. User can tap on a row to view the details of the book.

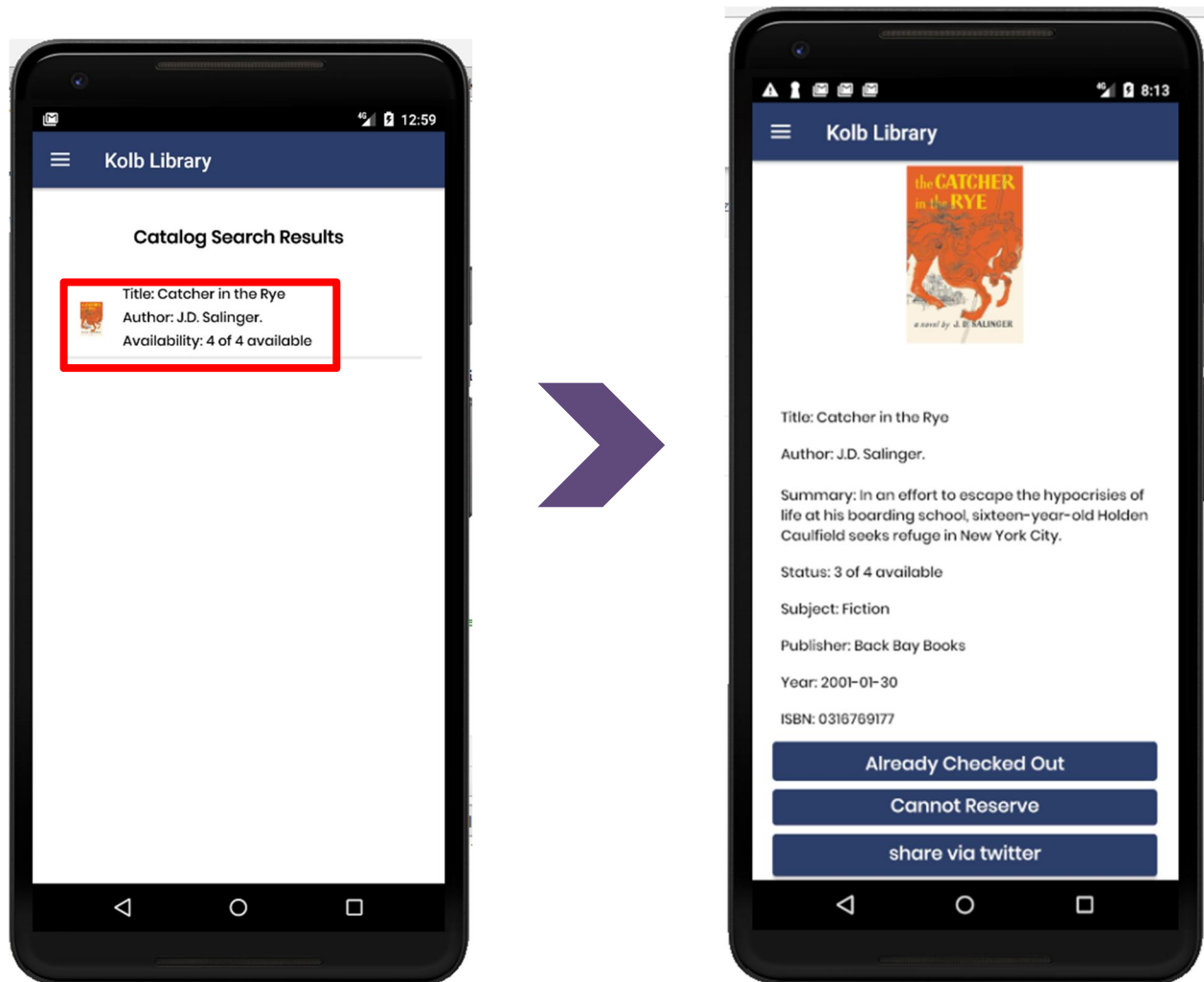Type a keyword to search, select the search field and tap on the **Search** button.

Search Results will be displayed.

Book View

Book View screen provides details on the selected book. You can check out a book, join the wait list, or share the book via Twitter.
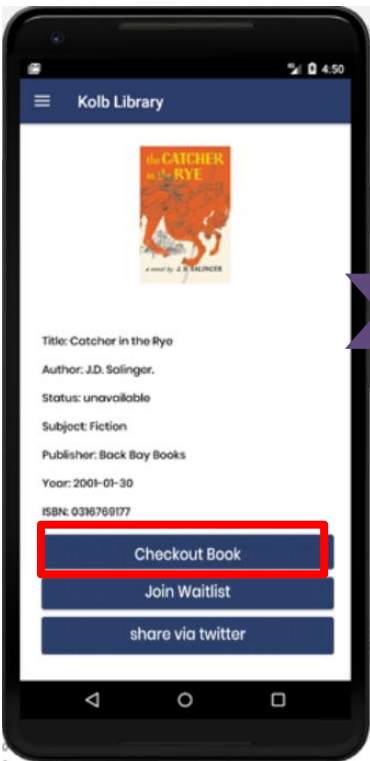
Tap on the search item to display book details

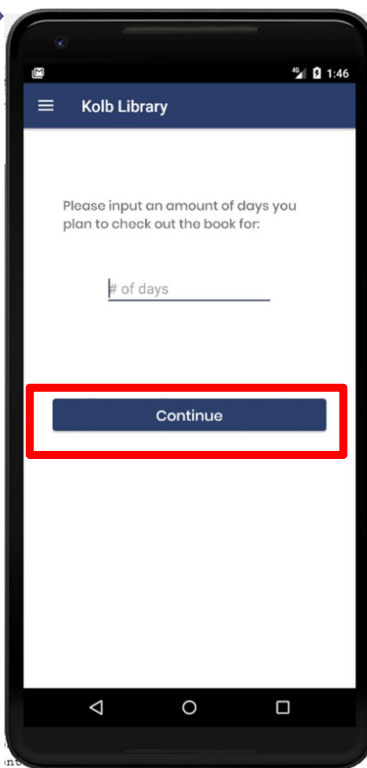Detailed Book View will be displayed

Check Out a Book

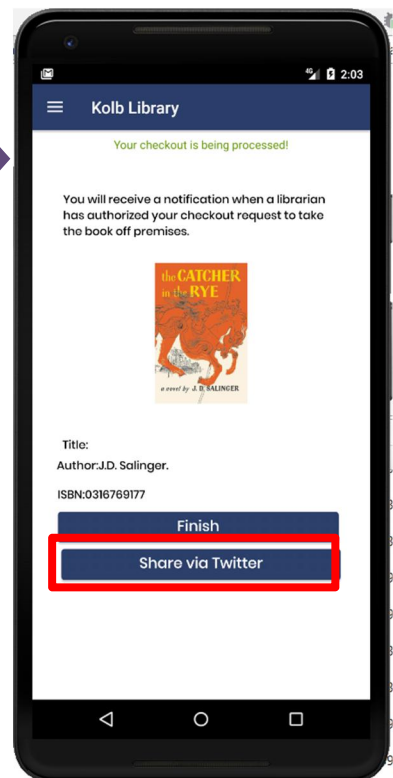User can check out a book from the Book View screen.

Tap on **Checkout Book** button to check out the book

Enter the # of days you plan to check out the book for

Check out confirmation will be displayed. You can also share the book information via Twitter from here.
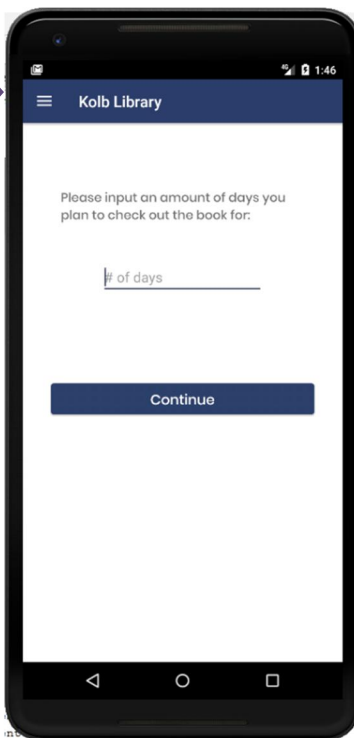
Join a Waitlist

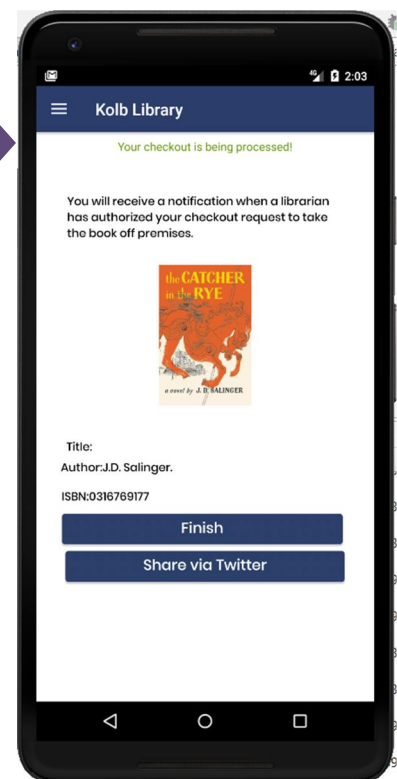User can join the wait list for a book from the Book View screen.

Tap on **Join Waitlist** button to check out the book

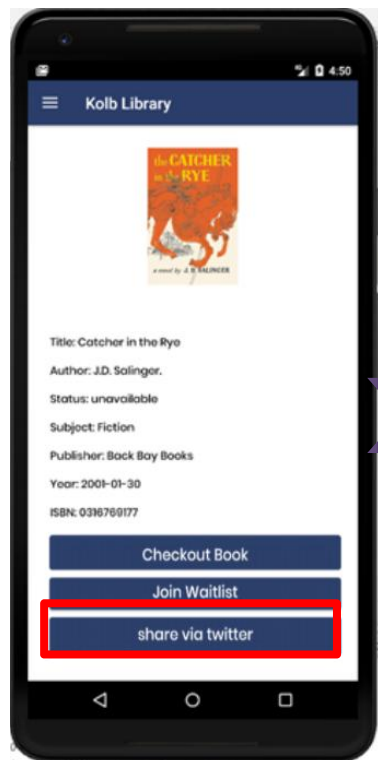Enter the # of days you plan to check out the book for

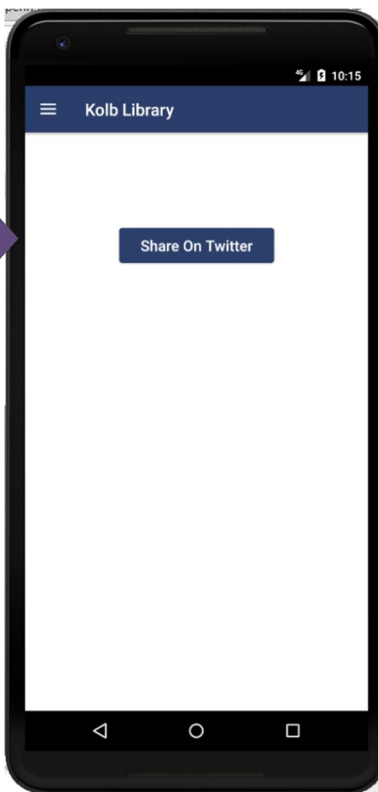Waitlist confirmation will be displayed.

Share via Twitter

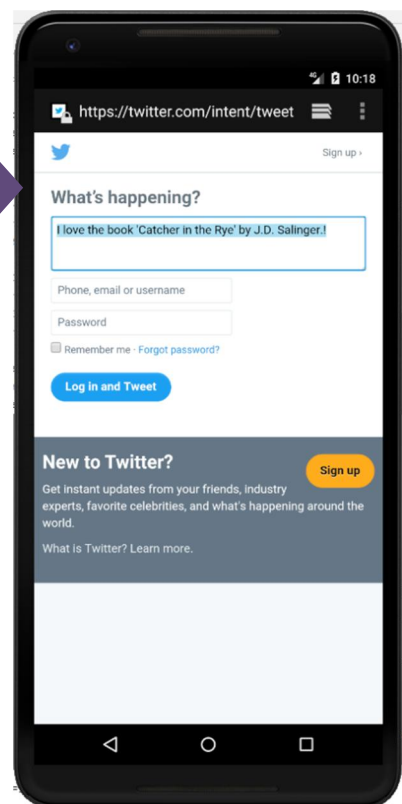User can share book information via Twitter

Tap on **Share via Twitter** button to share
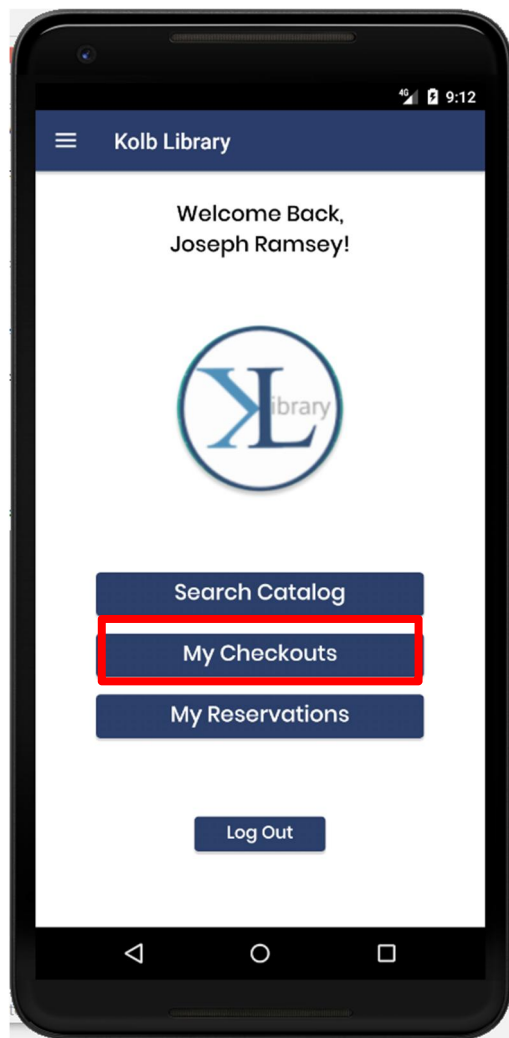

Tap on the **Share on Twitter** button

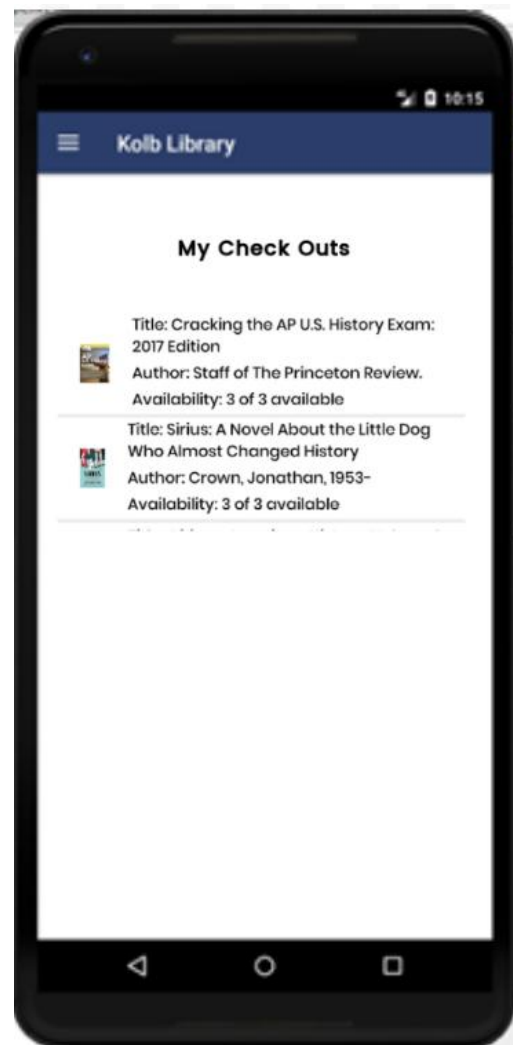A message with book title will be added to twitter screen. User can sign in and twit the message.

My Checkouts

A user can view his/her book check outs from the **My Check Outs** button from Home screen. The feature is also available from the **My Check Outs** button on the Navigation drawer.
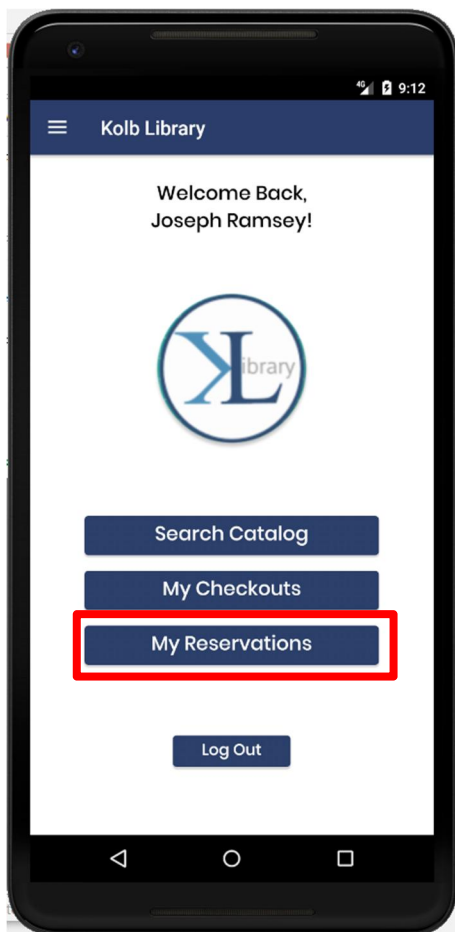
Tap on **My Checkouts** button

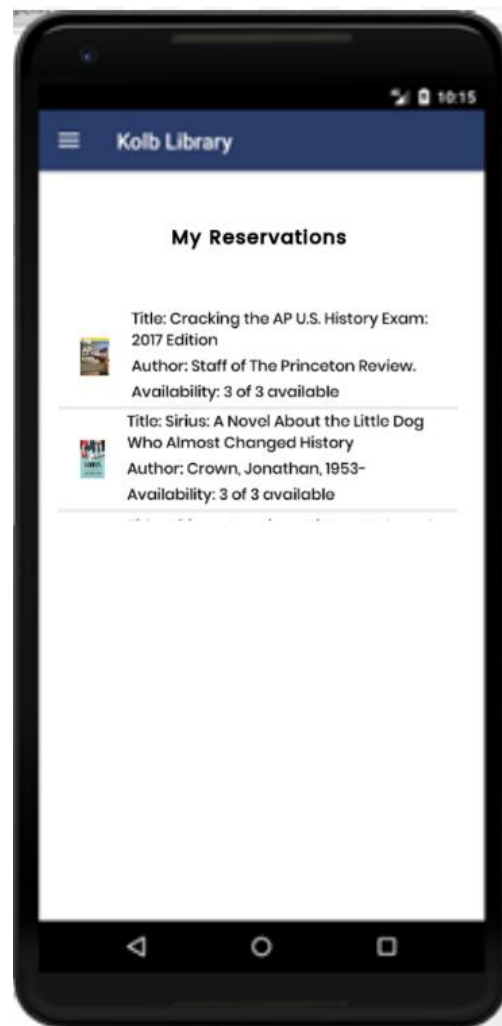**My Check Outs** screen will be displayed

My Reservations

A user can view his/her book reservations from the **My Reservations** button from Home screen. The feature is also available from the **My Reservations** button on the Navigation drawer.
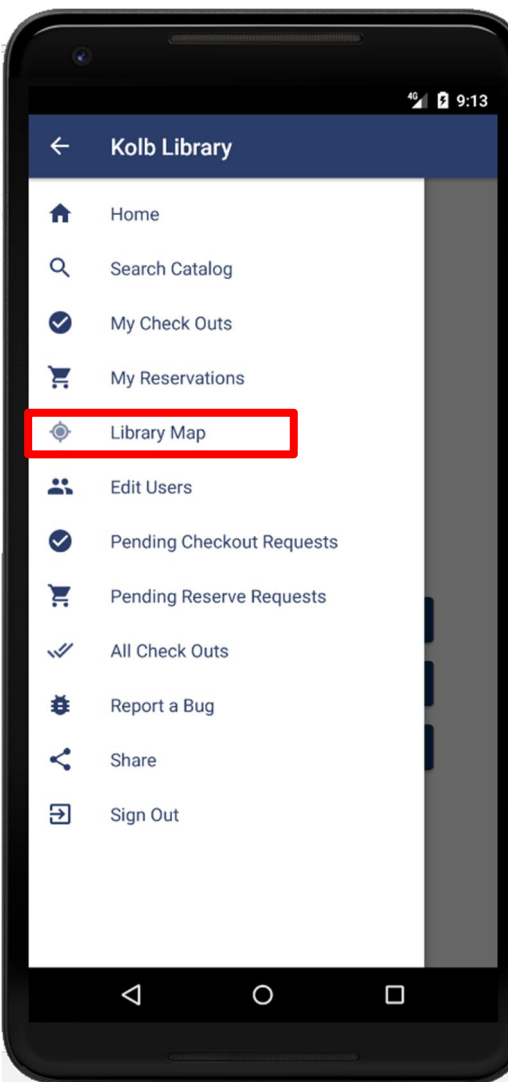
Tap on **My Reservations** button

My Reservations screen will be displayed

Library Map

User can view the library map from the **Library Map** button on the navigation drawer

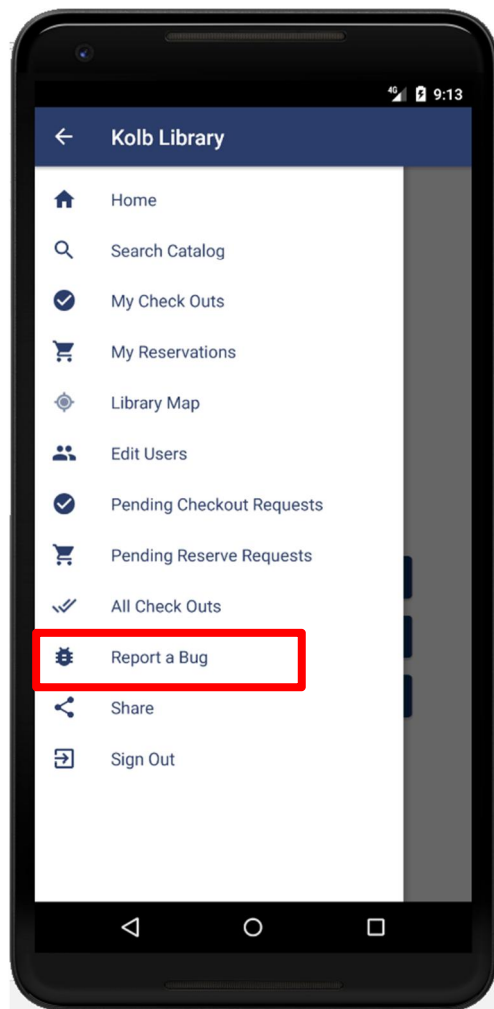Tap on the **Library Map** item on the navigation drawer

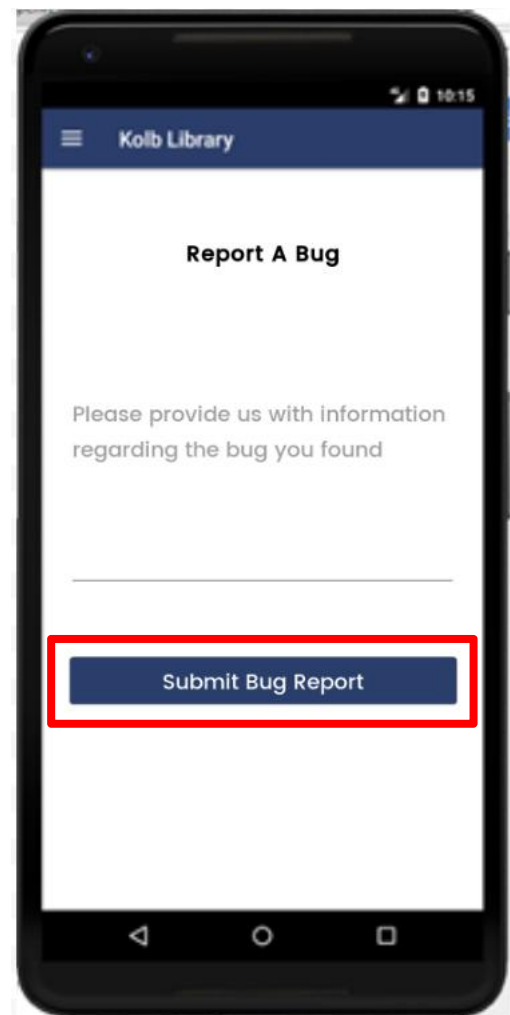A pinch-to-zoom enabled library map will be displayed.

Bug Report

User can report a bug in the application using the Bug Report screen.
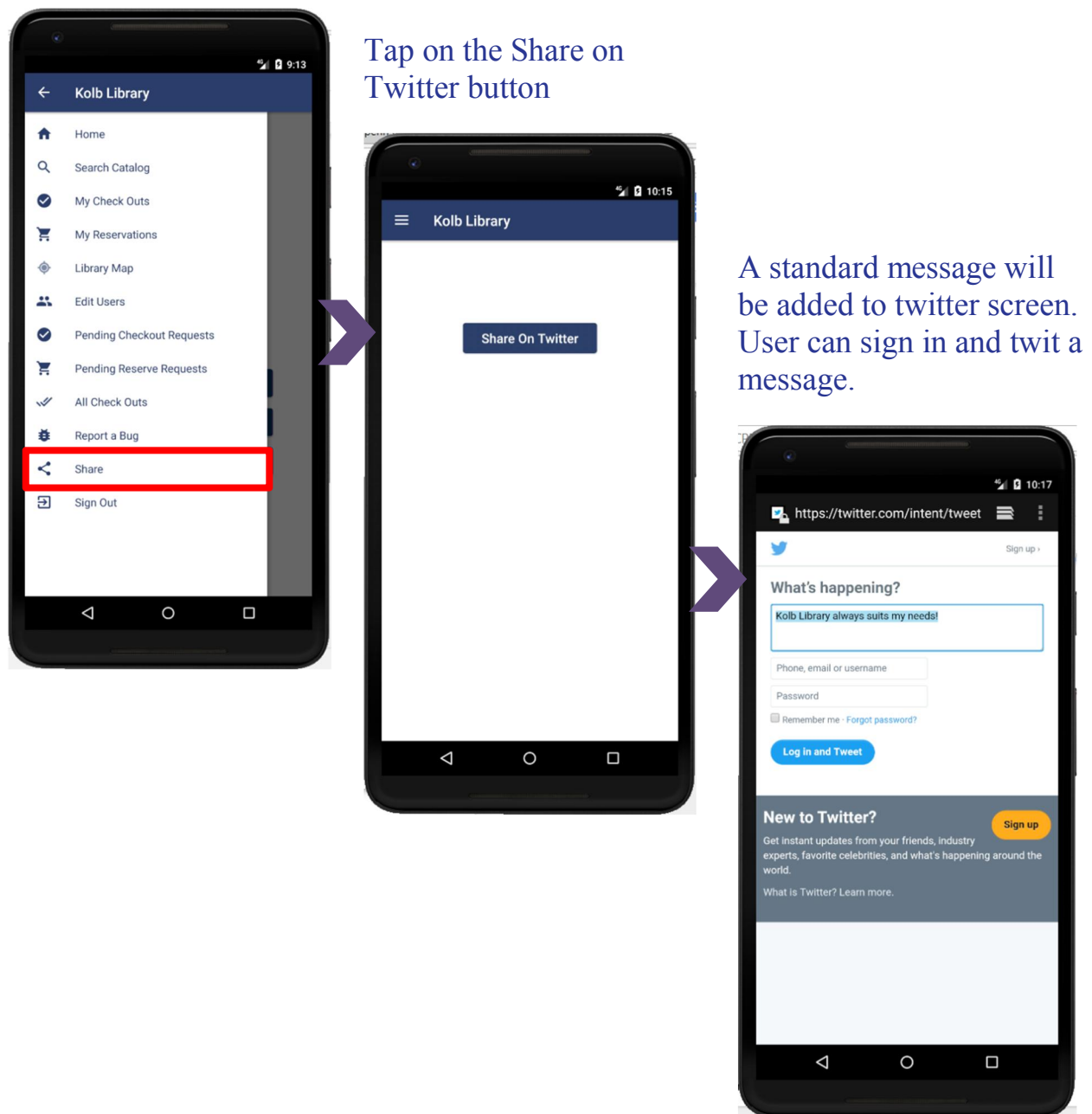
Tap on the **Report a Bug** item on the navigation drawer

Type in the bug report and tap on **Submit** button to send the report.

Share

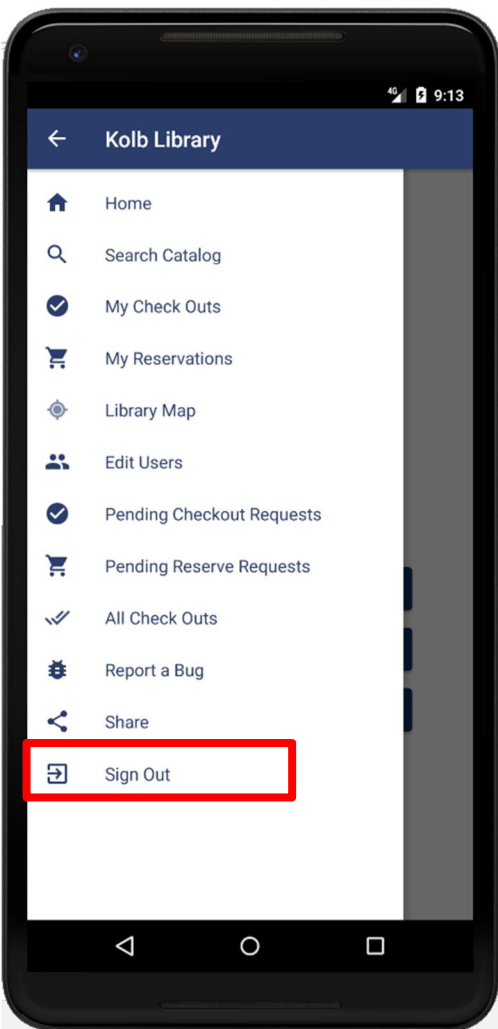The application provides a feature to twit directly via **Share** button on the navigation drawer.

Tap on **Share** button to share any message

Tap on the Share on Twitter button

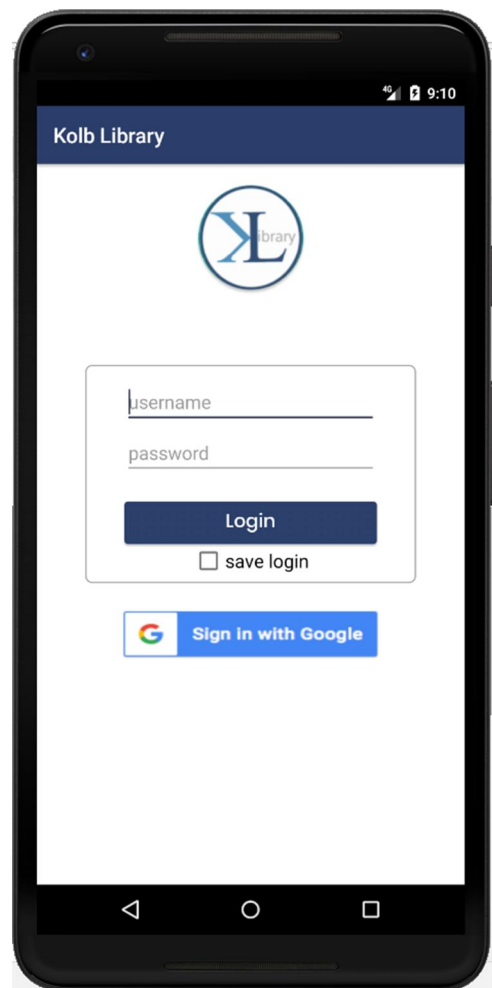A standard message will be added to twitter screen. User can sign in and twit a message.

Sign Out

User can sign out of the application via the **Sign Out** button on the navigation drawer. The **Log Out** button from the Home screen is also available for sign out.

Tap on the **Sign Out** button on the navigation drawer

User will be signed out of the application and the Login screen will be displayed.
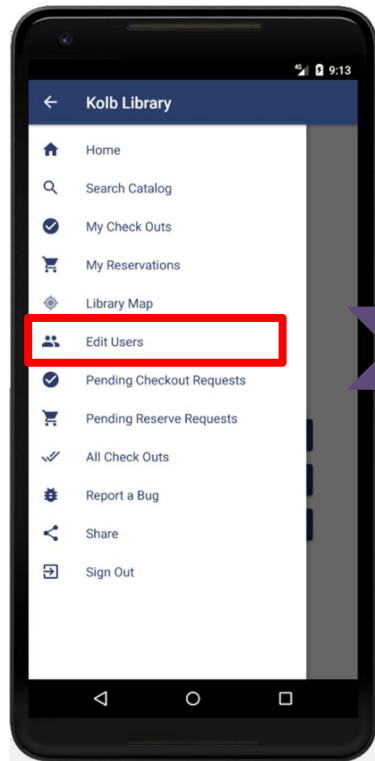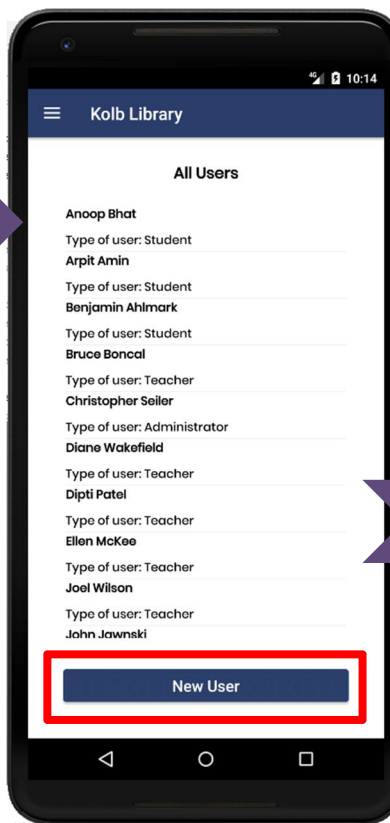
Administrative Operations

Edit Users

Library Administrators can manage user accounts from the Edit Users screen.
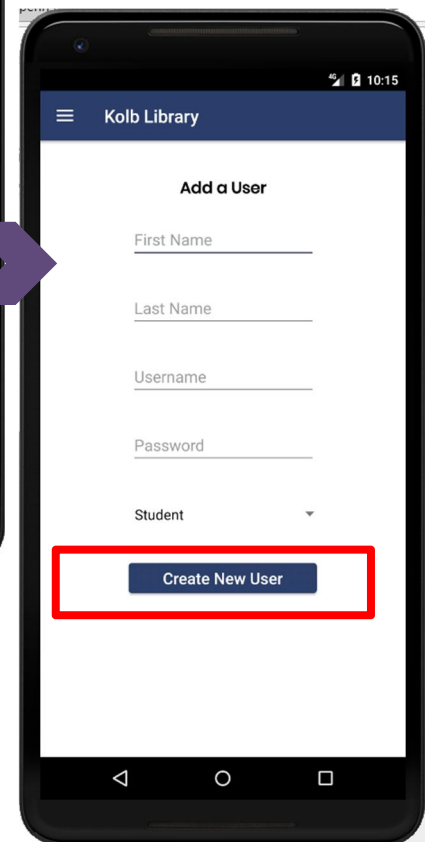
Tap on the **Edit User** item on the navigation drawer
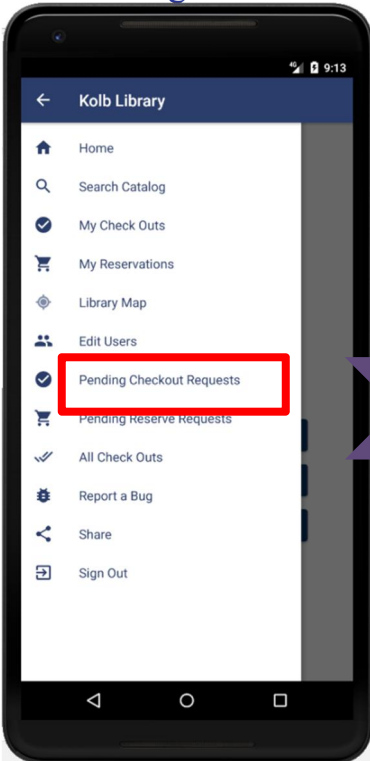
All Users Screen will be displayed.

Tap on **New User** button to add a user. Fill in the information tap on **Create New User** button to create a new user.
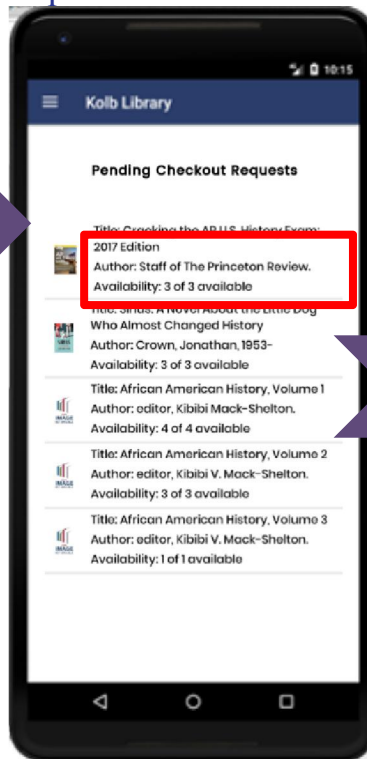
Pending Checkout Requests

Administrators can view pending check out requests and approve/deny a request.
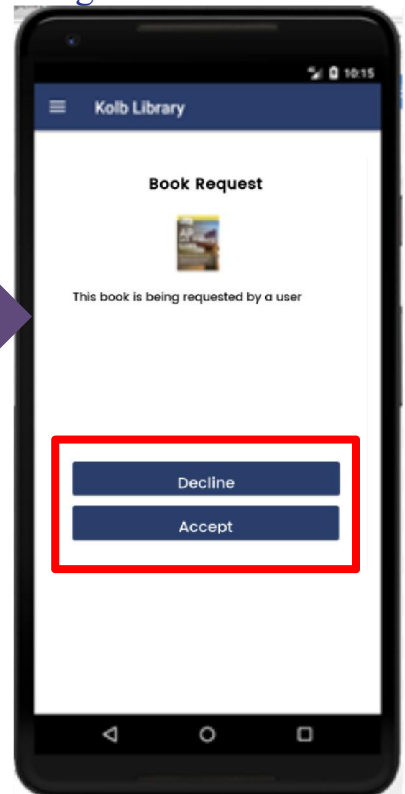
Tap on the **Pending Checkout Requests** item on the navigation drawer

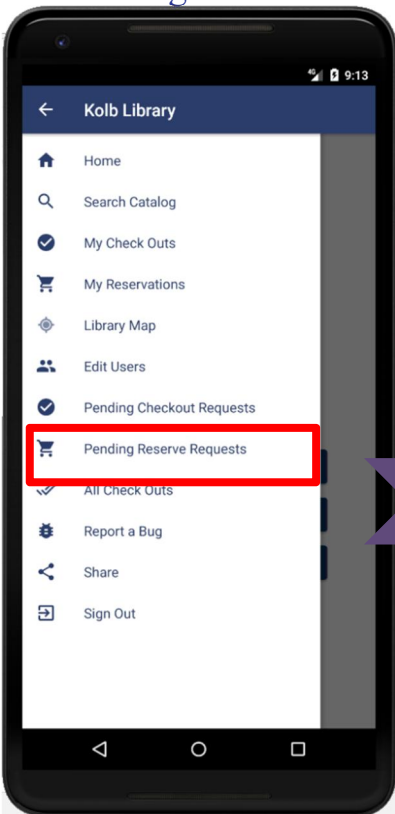Tap on a request to view the book details and approve/deny the request.

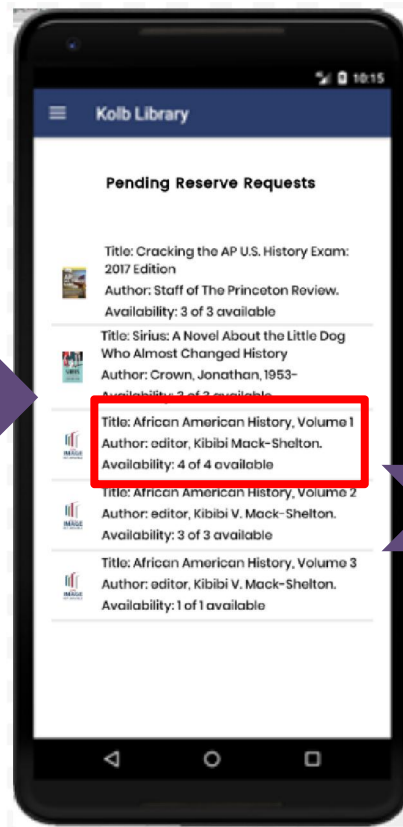Accept/Decline the request using buttons

Pending Reserve Requests

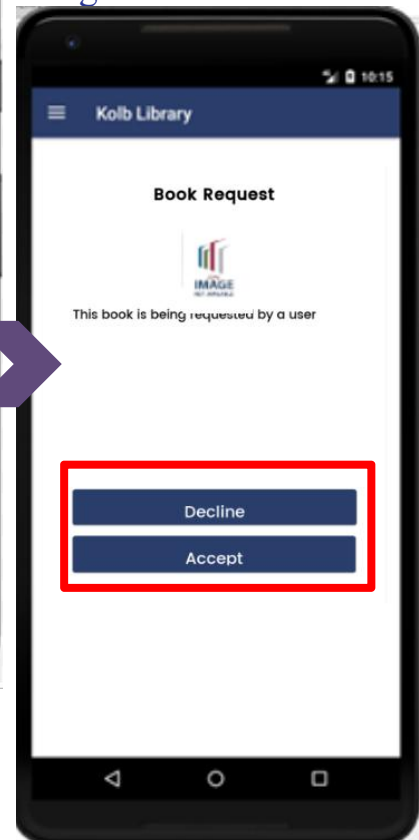Administrators can view pending check reserve requests and approve a request.

Tap on the **Pending Reserve Requests** item on the navigation drawer
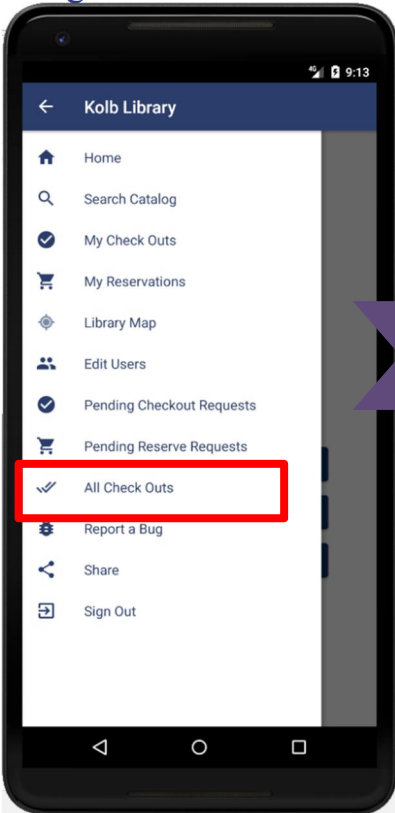
Tap on a request to view the book details.

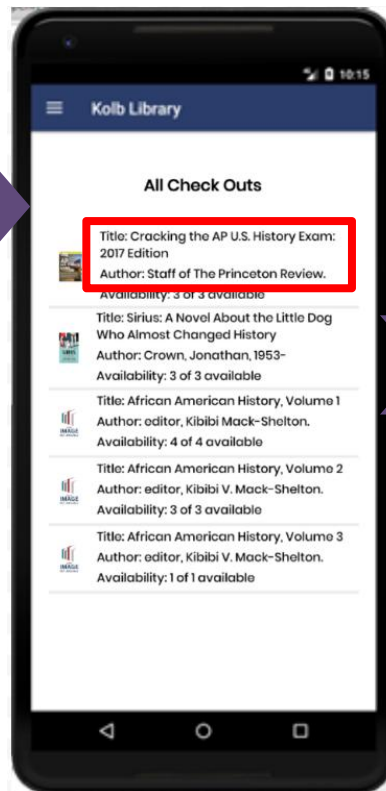Accept/Decline the request using buttons

All Check Outs

Administrators can view all checkouts and mark returned items.

Tap on the **All Checkouts** item on the navigation drawer

Tap on a request to view the book details

Mark the book as Returned