

PHS LIBRARY APP

**MASON DALE
PLYMOUTH HIGH SCHOOL**



FBLA MOBILE APPLICATION DEVELOPMENT

Project Description



Created a mobile application for a library that allows patrons to reserve and check out books



Developed on Xcode IDE



Swift Programming Language

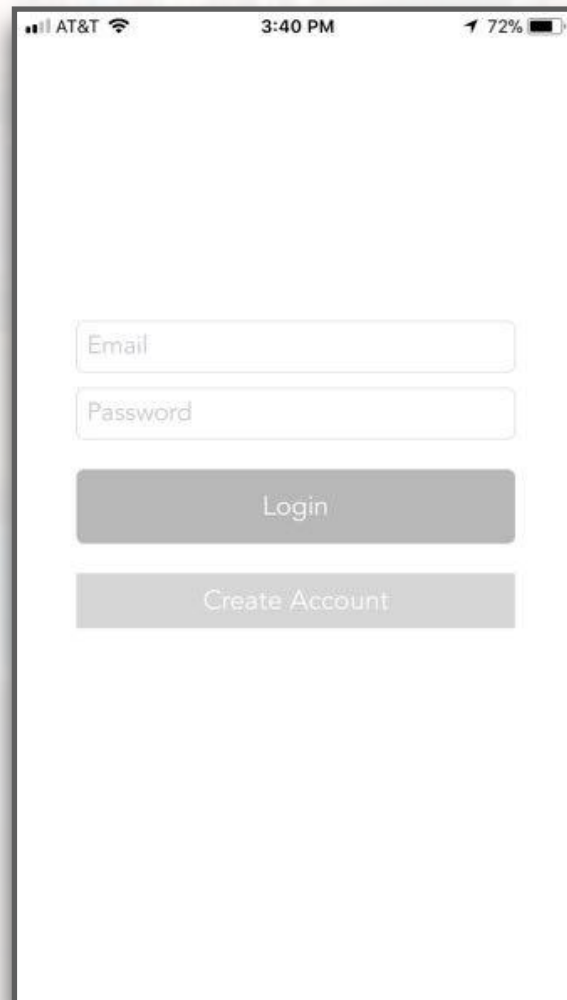


App provides:

- Information about the library
- Map of the library
- Ability to check out/reserve books
- View book due date



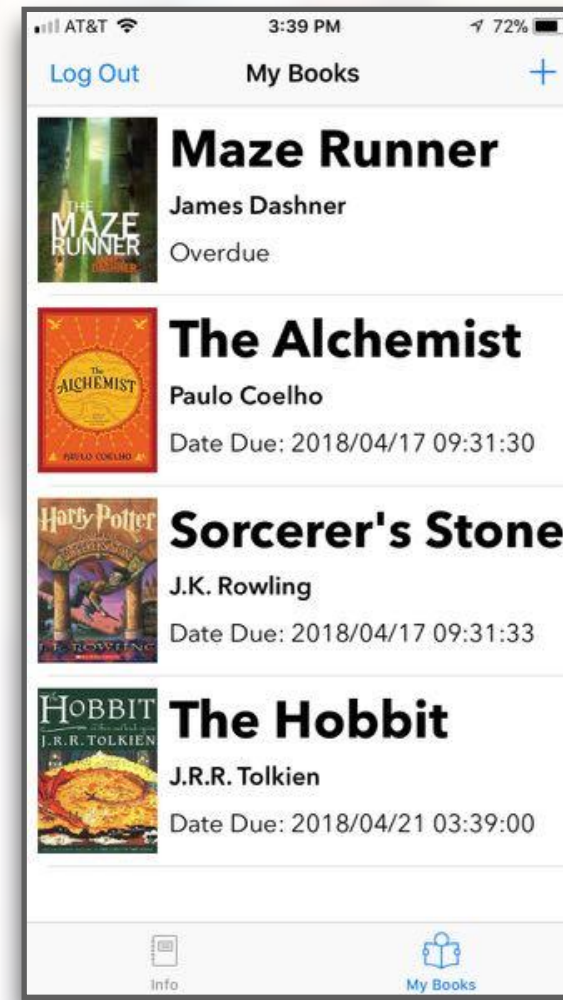
Screenshots



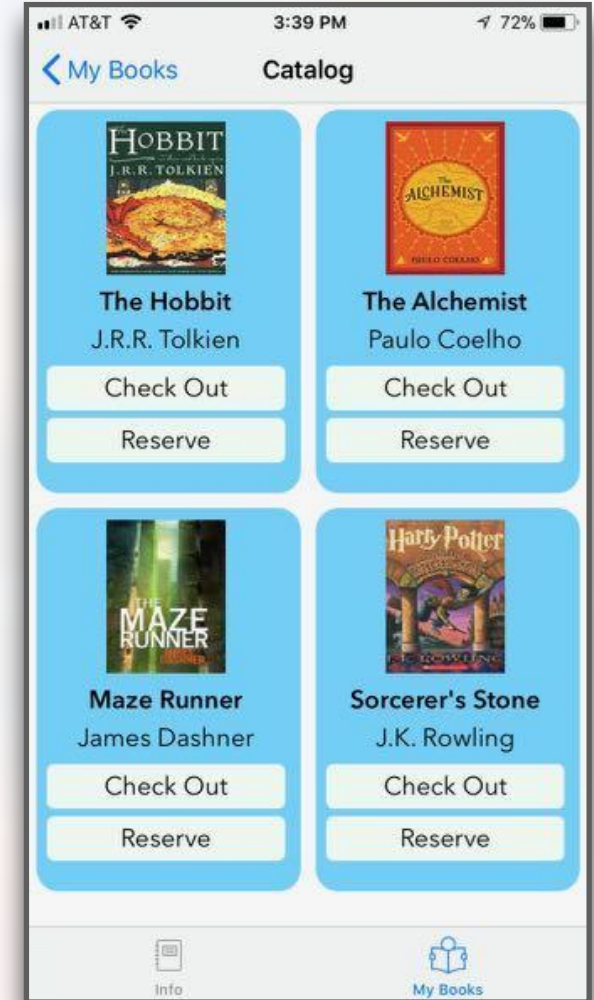
Login



Library Information



User Book List

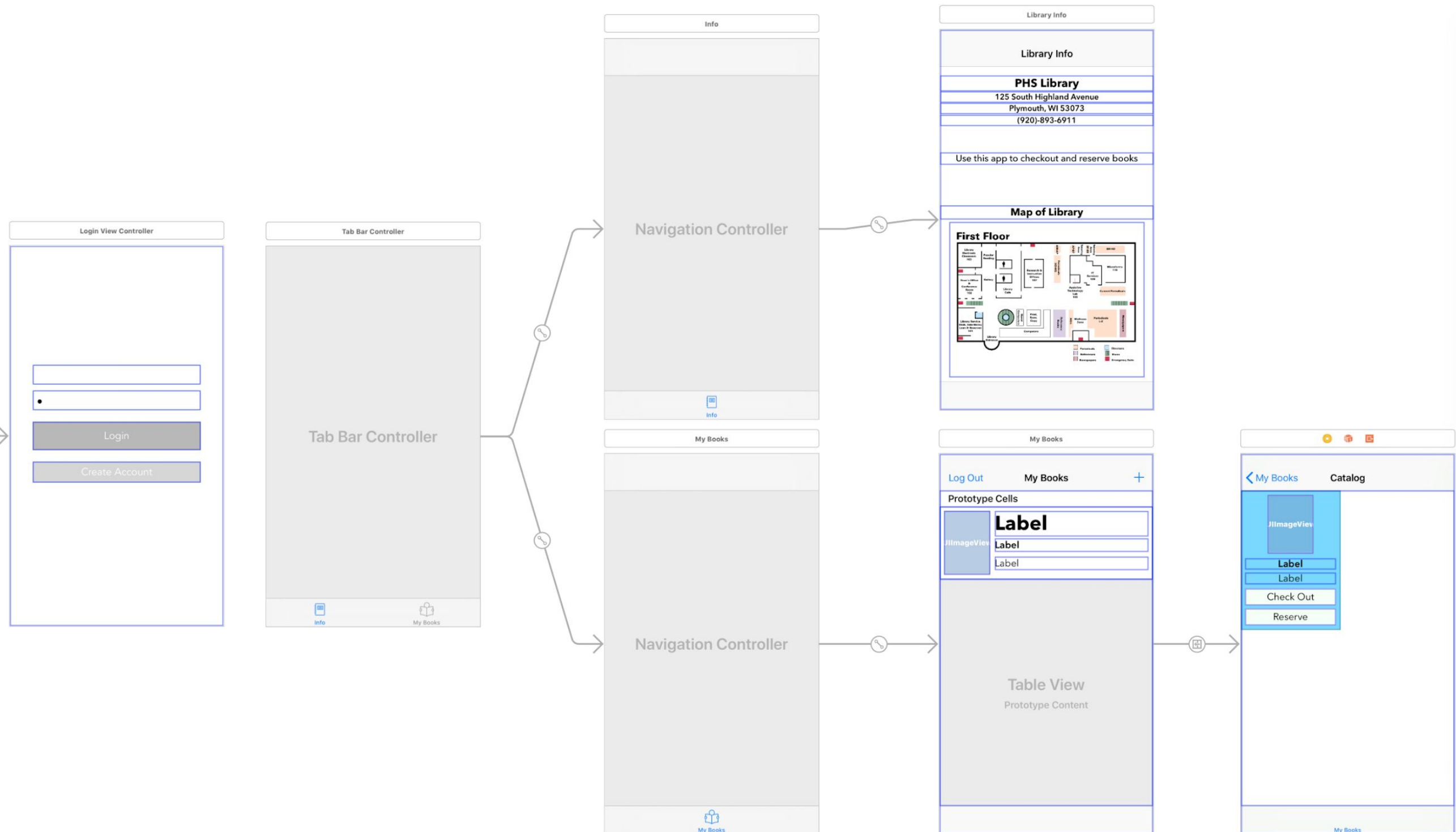


Check Out



Planning

App Storyboard



Storyboard - Editing VC's

The screenshot displays the Xcode storyboard editor interface. On the left, a vertical view controller contains a header bar with three icons (a yellow circle, a red square, and a blue square), two text input fields (the second with a bullet point), a 'Login' button, and a 'Create Account' button. An arrow points to this view controller. In the center, a 'Tab Bar Controller' contains a large gray rectangle labeled 'Tab Bar Controller' and a tab bar at the bottom with two items: 'Info' (represented by a document icon) and 'My Books' (represented by a book icon). On the right, the 'View' properties panel is open, showing settings for the selected view controller. The 'Content Mode' is set to 'Scale To Fill', 'Semantic' is 'Unspecified', and 'Tag' is '0'. The 'Interaction' section has 'User Interaction Enabled' checked and 'Multiple Touch' unchecked. The 'Alpha' is set to '1'. The 'Background' is 'White Color' and the 'Tint' is 'Default'. The 'Drawing' section has 'Opaque' checked, 'Hidden' unchecked, 'Clears Graphics Context' checked, 'Clip to Bounds' unchecked, and 'Autosize Subviews' checked. The 'Stretching' section shows 'X' and 'Y' both set to '0', and 'Width' and 'Height' both set to '1'. Below the properties panel, a legend defines three symbols: a yellow square with a white square inside for 'View Controller', a yellow square with a dashed white square inside for 'Storyboard Reference', and a yellow circle with a blue arrow for 'Navigation Controller'.

View

Content Mode: Scale To Fill

Semantic: Unspecified

Tag: 0

Interaction: ☒ User Interaction Enabled
☐ Multiple Touch

Alpha: 1

+ Background: White Color

+ Tint: Default

Drawing: ☒ Opaque
☐ Hidden
☒ Clears Graphics Context
☐ Clip to Bounds
☒ Autosize Subviews

Stretching: X: 0, Y: 0, Width: 1, Height: 1

View Controller - A controller that manages a view.

Storyboard Reference - Provides a placeholder for a view controller in an external storyboard.

Navigation Controller - A controller that manages navigation through a hierarchy of views.



Interface I/O

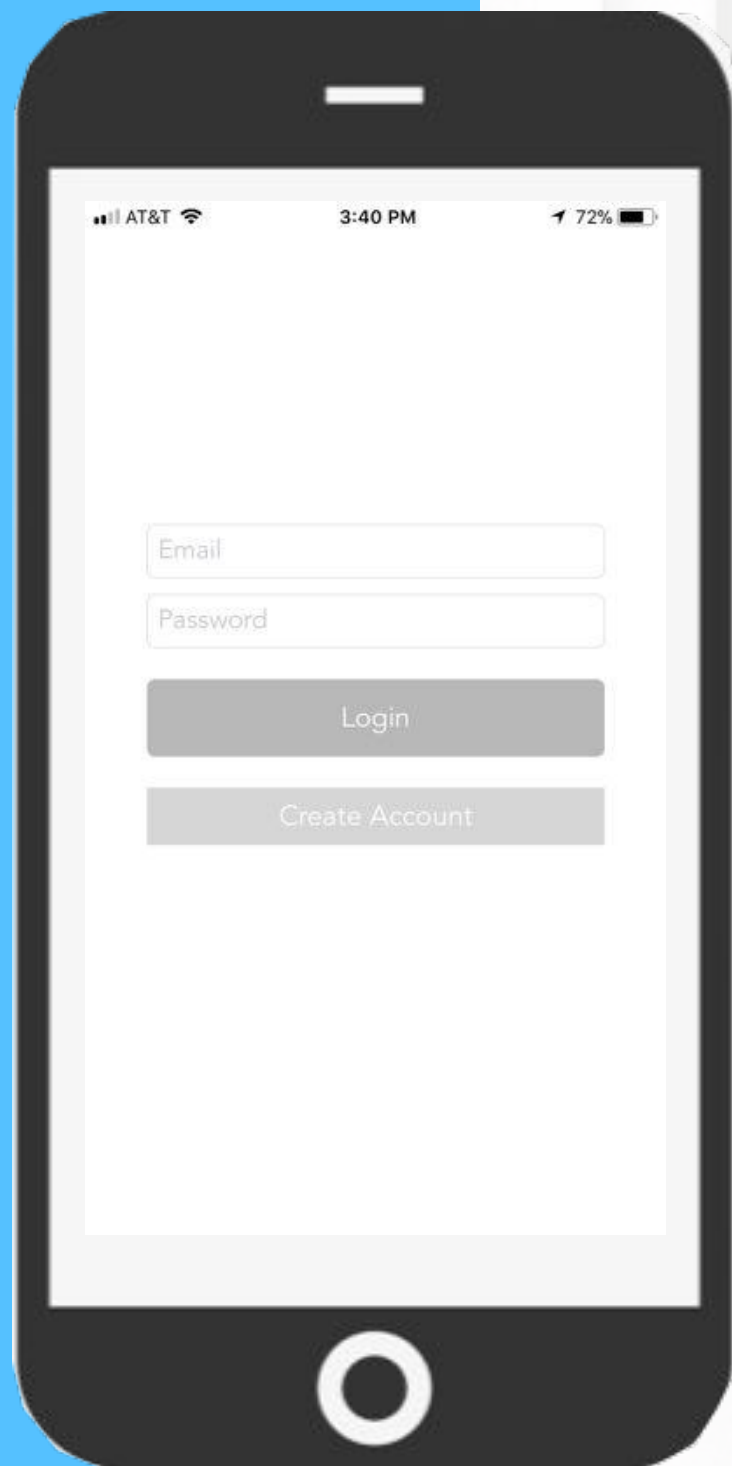
Interface I/O

Data was stored and handled
using

Google's
Firebase



Interface I/O



User inputs email/password for account login or creation



With fields filled, either button will bring user into app

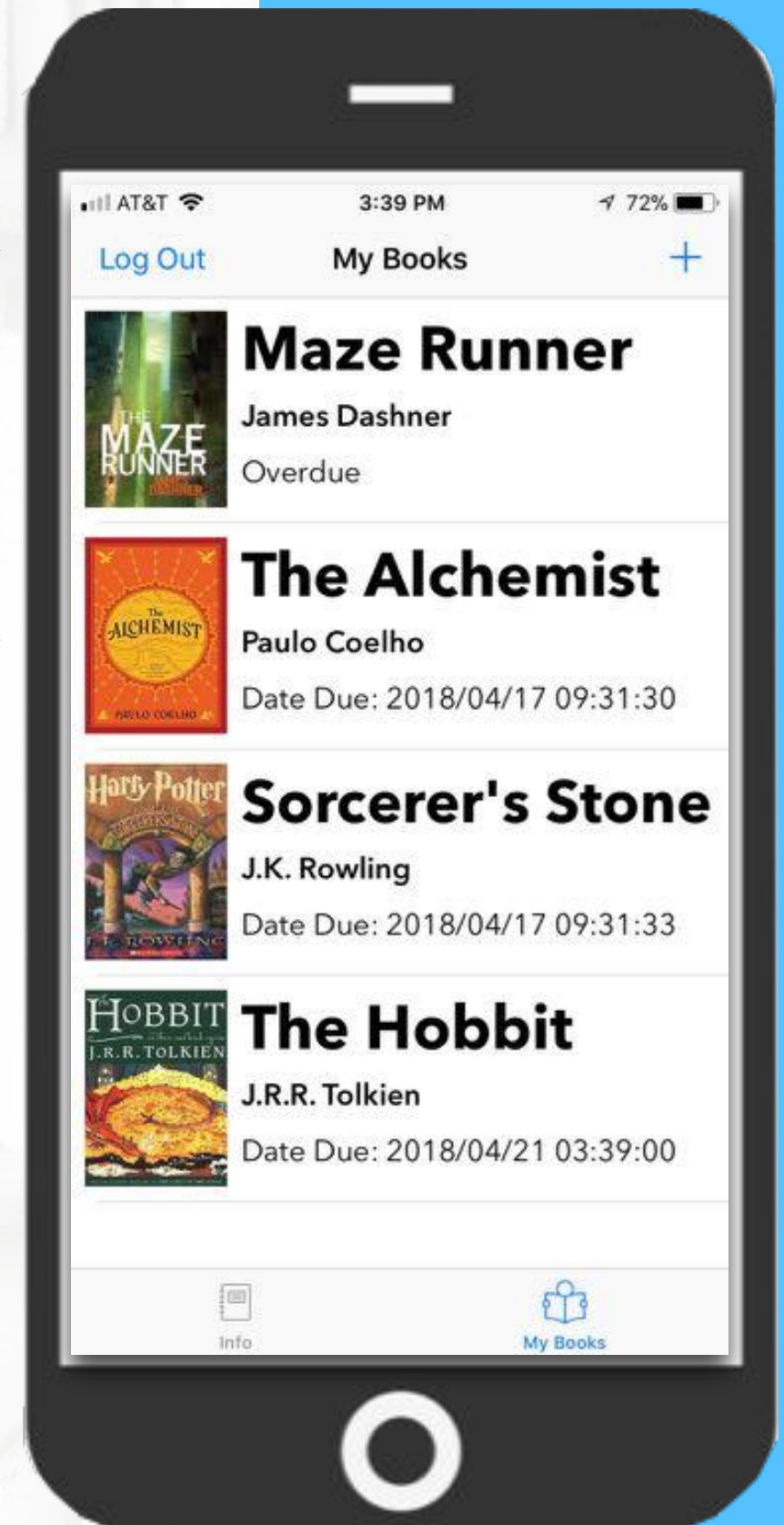
Interface I/O

Tab Bar Controller allows users to swap between pages



Interface I/O

- User logout button
- Database Output
- User may scroll on this page
- "+" button at top-right brings user to library catalog



Interface I/O

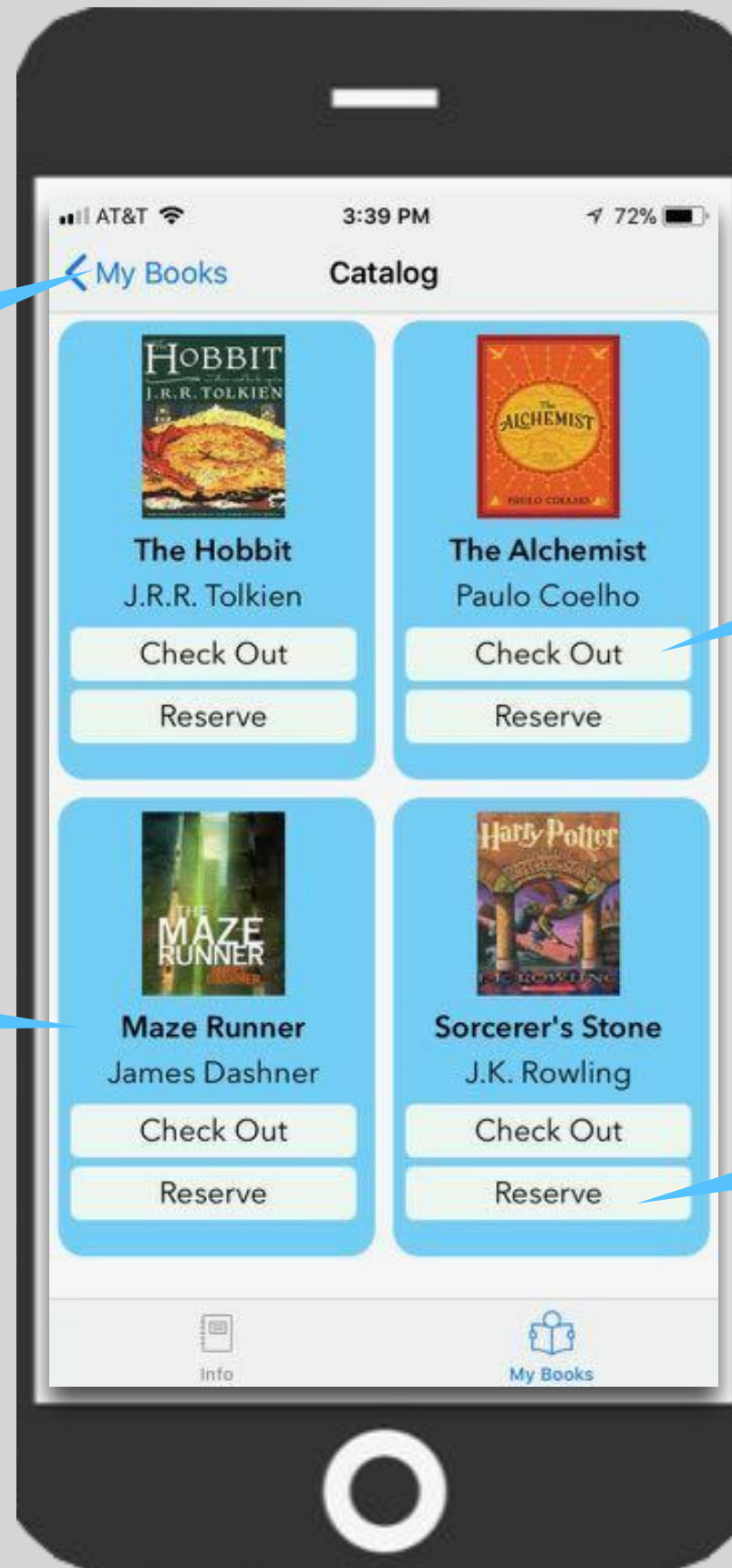
Navigation controller button
brings user back to My Books
page

Check Out button input
adds book object to
user's My Books page
and database

Database Output

User may scroll on this page

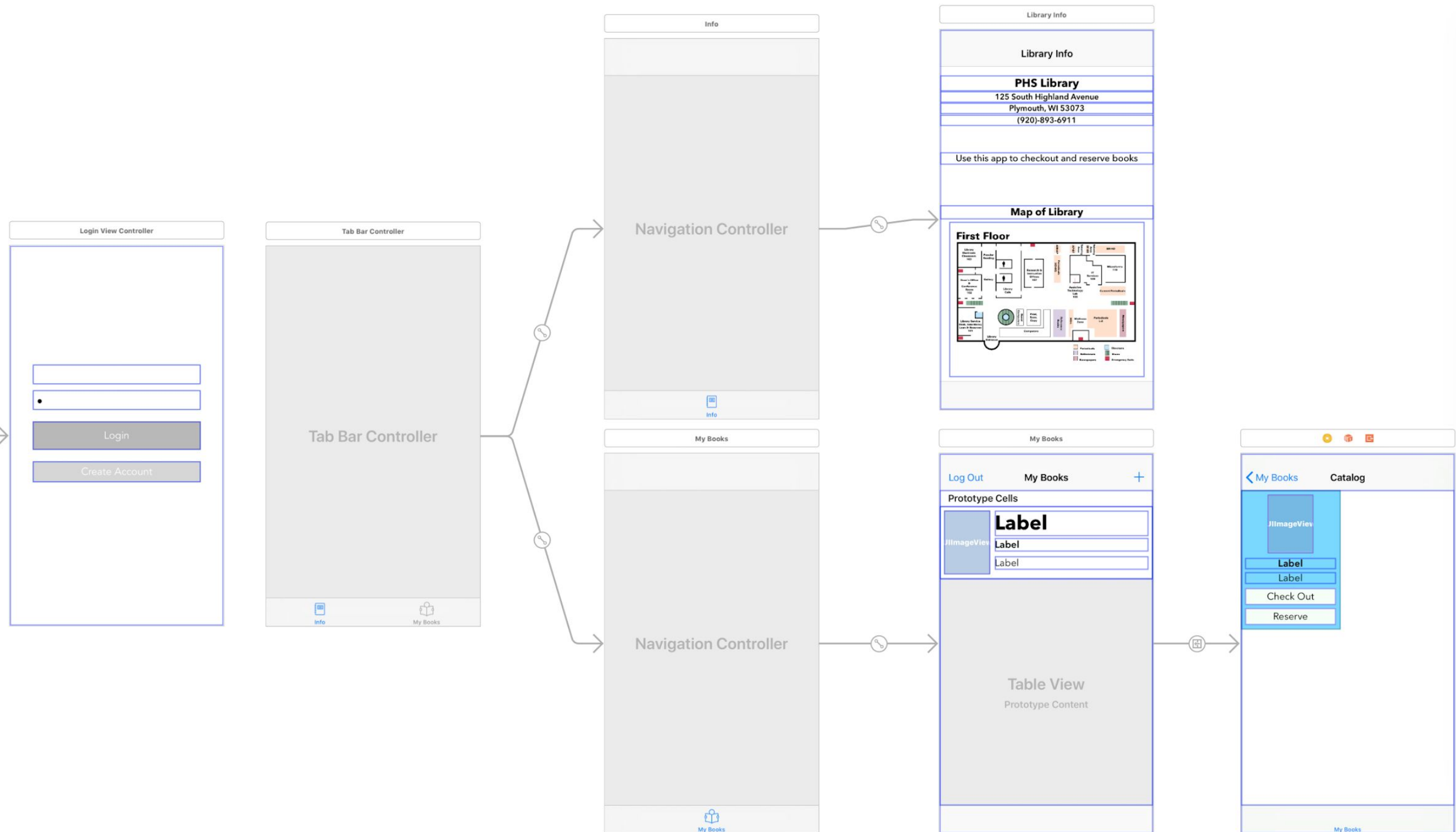
Same as Check Out button,
but the book's status is
Reserved



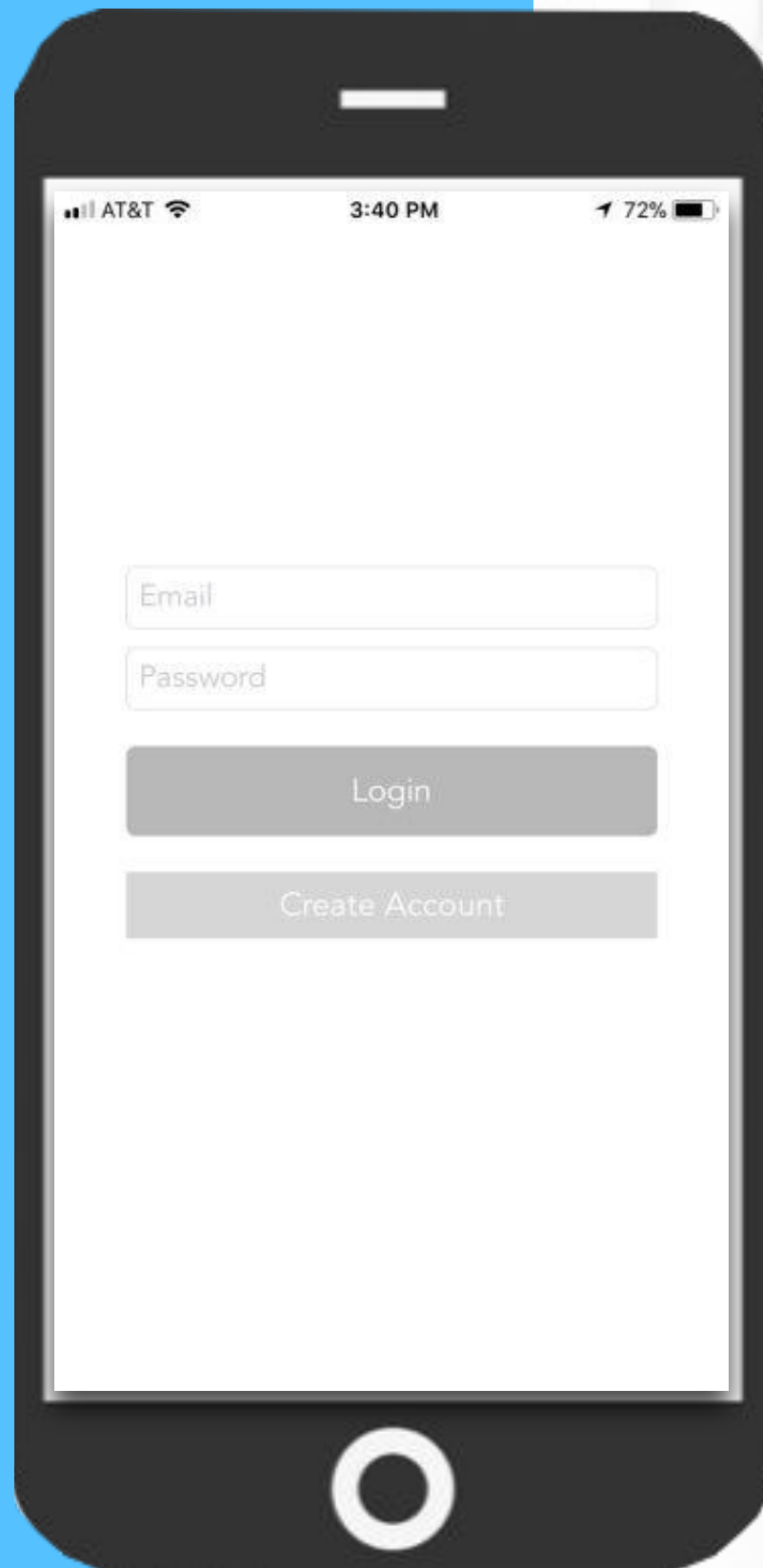


Application Flow and Structure

Application Flow/Structure



Application Flow/Structure



- Initially, user is presented this screen during first use

Once user is logged in, they can bypass login screen

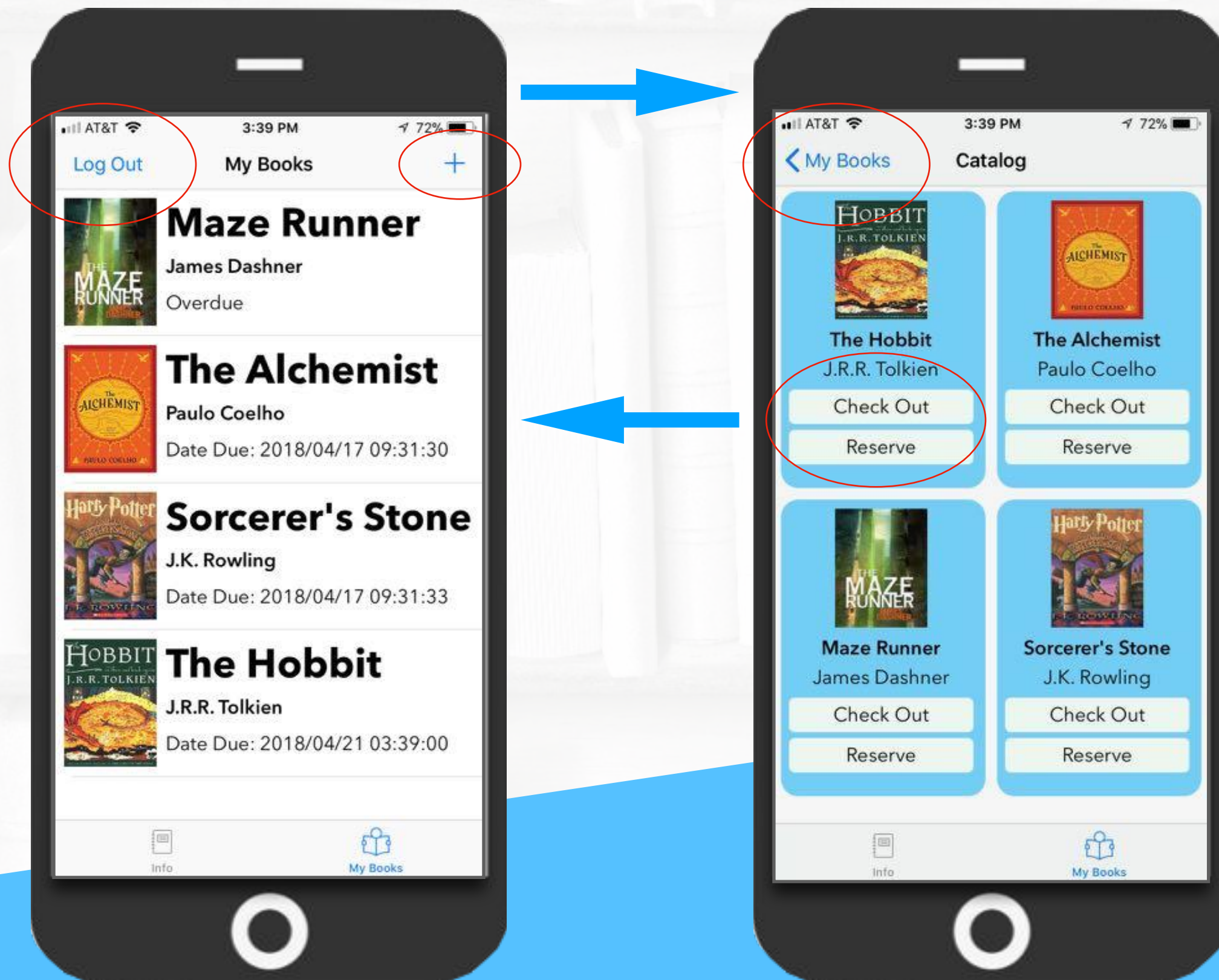
Application Flow/Structure

- Core of app structured on Tab Bar Model
- First screen presented after login



Application Flow/Structure

Navigation Controller Model built into Tab Bar Model





Application Usefulness

Application Usefulness



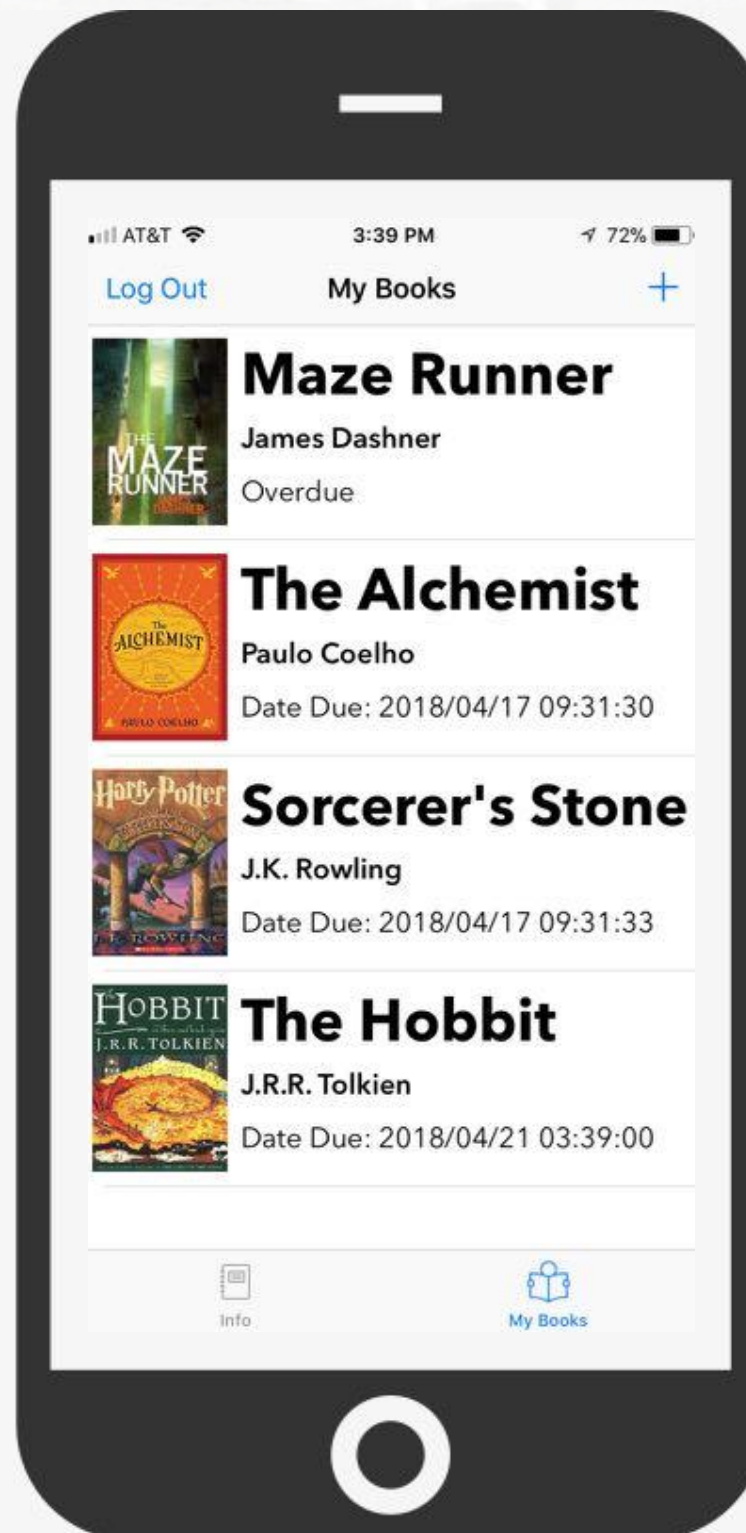
Convenient Digital Option



User Friendly



Quick and easy way to
reserve and pre-checkout
books



Applicable for all ages



Intuitive App



Saves the library time and
resources

PHS Library App

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