**LibraryHub App - Functionality Overview**

**Team Number**: 03  
**Project Milestone**: 02  
**App Name**: LibraryHub

**Team Members**:

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**Overview of the LibraryHub App**

The **LibraryHub App** is designed to help users check out and return books, browse the library's entire collection, and find new books. The app provides a simple user interface where users can easily search for all the books available in a library, borrow the books by reserving them and returning the books by updating through the app to avoid additional processes at the library.

**Connections and Functionality**

We have connected different views in the app to allow users to interact with the various features. Below is a breakdown of the views and their respective connections:

**1. View Controller (Ashwith Sai)**

**View Components:**

* **Image view**: This outlet is used to display an image on the home screen.
* **User Label**: This label is used to greet the user before and after login.
* **Buttons**:
  + **All Books Button**: Navigates to the ‘Category' view to allow users to browse through the different categories available.
  + **Login Button**: Navigates to the 'Login' view to take the user details as input.
  + **Borrow a Book Button**: Navigates to the ‘Borrow’ view where users can enter the book id and reserve a book earlier.
  + **Return a Book Button**: Navigates to the ‘Return’ view where users can enter the book details to return it.

**Connections:**

* The main **View** is connected to **Category View**, **Login View, Borrow View and Return View** through UIButton actions using **segue navigation**. When the user taps the buttons, it triggers the corresponding transitions.

**2. Category View Controller (Ashwith Sai)**

**View Components:**

* **Select Category Label**: Indicates the user to select one of the categories from the given options.
* **Buttons**:
  + **Fiction Button**: Navigates to the ‘Fiction’ View to show the available fiction books.
  + **Non Fiction Button**: Navigates to the ‘Non-Fiction’ View to show the available non-fiction books.
  + **Sci-Fi Button**: Navigates to the ‘Sci Fi’ View to show the available SciFi books.

**Connections:**

* The **Category** **View** **Controller** is connected to **Fiction View Controller**, **Non Fiction View Controller and Sci Fi View Controller** through UIButton actions using **segue navigation**. When the user taps the buttons, it triggers the corresponding transitions.

**3. Login View Controller (Sai Rama Raju)**

**View Components:**

* **Name Text field**: This outlet is used to take the user’s name as input from the user.
* **Phone Text field**: This outlet is used to take the user’s phone number as input from the user.
* **Email Text field**: This outlet is used to take the user’s Email as input from the user.
* **Login Status Label**: This outlet is used to display whether the login was successful or not.
* **Buttons**:
  + **Login Button**: This button is used to trigger the loginBtnClicked function which takes the values from the outlets and updates the user label in main view.
  + **Reset Button**: This button is used to trigger the resetBtnClicked function which resets all the values entered by the user.

**4. Fiction View Controller (Sravya Geethika)**

**View Components:**

* **Book ID Label**: This outlet is used to display the specific fiction book id to the users.
* **Book Name Label**: This outlet is used to display the specific fiction book name to the users.
* **Author Label**: This outlet is used to display the specific fiction book’s Author name id to the users.
* **Available Label**: This outlet is used to display whether the specific fiction book is currently available or not to borrow.
* **Fiction Image View**: This outlet is used to display the fiction book image so that users can easily recognize the book.
* **Buttons**:
  + **Previous Button**: This button triggers the fPrevBtnClicked function which is used to go to the previous book while going through the available fiction book options.
  + **Next Button**: This button triggers the fNextBtnClicked function which is used to go to the next book while going through the available fiction book options.

**5. Non Fiction View Controller (Sravya Geethika)**

**View Components:**

* **Book ID Label**: This outlet is used to display the specific non-fiction book id to the users.
* **Book Name Label**: This outlet is used to display the specific non-fiction book name to the users.
* **Author Label**: This outlet is used to display the specific non-fiction book’s Author name id to the users.
* **Available Label**: This outlet is used to display whether the specific non-fiction book is currently available or not to borrow.
* **Non-Fiction Image View**: This outlet is used to display the non-fiction book image so that users can easily recognize the book.
* **Buttons**:
  + **Previous Button**: This button triggers the nPrevBtnClicked function which is used to go to the previous book while going through the available non-fiction book options.
  + **Next Button**: This button triggers the nNextBtnClicked function which is used to go to the next book while going through the available non-fiction book options.

**6. Sci Fi View Controller (Sravya Geethika)**

**View Components:**

* **Book ID Label**: This outlet is used to display the specific Sci-Fi book id to the users.
* **Book Name Label**: This outlet is used to display the specific Sci-Fi book name to the users.
* **Author Label**: This outlet is used to display the specific Sci-Fi book’s Author name id to the users.
* **Available Label**: This outlet is used to display whether the specific Sci-Fi book is currently available or not to borrow.
* **Sci-Fi Image View**: This outlet is used to display the Sci-Fi book image so that users can easily recognize the book.
* **Buttons**:
  + **Previous Button**: This button triggers the sPrevBtnClicked function which is used to go to the previous book while going through the available Sci-Fi book options.
  + **Next Button**: This button triggers the sNextBtnClicked function which is used to go to the next book while going through the available Sci-Fi book options.

**7. Borrow View Controller (Shreyesh)**

**View Components:**

* **Book ID Text field**: This outlet is used to take the book id as an input form the users to find the specific book they are looking to borrow.
* **Book Details Label**: This outlet is used to display all the details of the specific book that the users are looking to borrow.
* **Borrow Image View**: This outlet is used to display the book image that the users are looking to borrow which helps to easily recognize the book.
* **Borrow Status Label**: This outlet is used to display whether the book can be borrowed or not based on its availability.
* **Buttons**:
  + **Search Button**: This button triggers the bSearchBtnClicked function which is used to search the book from the available options by using the unique book ID and display the details on Book Details Label.
  + **Borrow Button**: This button triggers the borrowBtnClicked function which is used to check whether the book is available or not and if the book is available then it changes the availability of the book to false after borrowing.

**8. Return View Controller (Shreyesh)**

**View Components:**

* **Book ID Text field**: This outlet is used to take the book id as an input form the users to find the specific book they are looking to return.
* **Book Details Label**: This outlet is used to display all the details of the specific book that the users are looking to return.
* **Return Image View**: This outlet is used to display the book image that the users are looking to return which helps to easily recognize the book.
* **Return Status Label**: This outlet is used to display whether the book is successfully returned or not.
* **Buttons**:
  + **Search Button**: This button triggers the rSearchBtnClicked function which is used to search the book from the available options by using the unique book ID and display the details on Book Details Label.
  + **Return Button**: This button triggers the returnBtnClicked function which is used to return the book to library and change the availability of the book to true after returning.

**Navigation Flow**

* The app uses a **UINavigationController** to manage the flow between views. The user starts at the **View Controller**, can browse the books available through **Category View Controller** which then takes to **Fiction View Controller, Non Fiction View Controller** and **Sci Fi View Controller** to browse the options, **Login View Controller** is used to take the details of the users and the books can be borrowed and returned using the **Borrow View Controller** and **Return View Controller.**
* The **View Controller** serves as the main hub, allowing users to easily navigate to the other sections of the app.

**Conclusion**

The app’s design ensures smooth navigation and functionality across different views. By keeping the interface simple and intuitive, the app is user-friendly and efficient for tracking financial transactions. With features like browsing , borrowing and returning the books, the LibraryHub App provides an easy access to the available books in the nearby library with a user friendly experience.