Wireless Library Algorithm Process

**Step 1: TabNavigation** we first create 2 tabs Search and Transaction Screen, when search tab was clicked we got a text of search and when transaction tab was clicked we text of issue or return. this was achieved using TabNavigation.

**File’s modified** : BookTransaction.js and App.js

**Github link** : <https://github.com/whitehatjr/tabNavigation>

**Step2: QR Code Scanner** We use the component BarCodeScanner: <https://docs.expo.dev/versions/latest/sdk/bar-code-scanner/?redirected>

BarCodeScanner is a react component which helps us use the device camera and scan a QR code as well as Bar Code .

**File modified**: BookTransaction.js

**Functions added:** getCameraPermissions and handleBarCodeScanned

**Github link** : <https://github.com/whitehatjr/BarCodeScanner/tree/master/screens>

**Step 3: AutoPopulateText** We created 2 text boxes for student id and Book id and also gave an option of scan.we also enhanced the look of the interface by adding clear logo’s and images.

**File’s modified** : BookTransaction.js and App.js

**Functions added:** Modified Render function in BookTransaction.js and added AppContainer in App.js

**Github link:** <https://github.com/whitehatjr/AutoPopulateTextInput>

**Step 4 : FireStore Database** We added the collection and id’s of users and added collection and we designed a submit Button.

**File’s modified** : BookTransaction.js

**Functions added:** InitiateBookIssue , InitiateBookReturn and HandleTransaction

**Github link:** <https://github.com/whitehatjr/databaseForWily>

**Step 5: Making The Text Box Editable** We made the text box editable to allow user’s to type the book id or student id if needed

**File’s Modified:** BooKTransaction.js

**Functions Added:** AlertMessages

**Github link:** <https://github.com/whitehatjr/ToastsWily>

**Step 6:Eligibility Check** Check For Student and Book Eligibility Before Issuing or Returning a Book Using Firebase Queries

**File’s Modified:** BooKTransaction.js

**Function Added:** Updating HandleTransaction,CheckBookEligibility,CheckStudentEligibilityForBookIssue and CheckStudentEligibilityForBookReturn.

**GitHub lInk:** <https://github.com/whitehatjr/FirestoryQuery>

**Step 7: Modifying SearchScreen and Authenticating Users** Adding function to SearchScreen and identifying users by EMAIL sign-in.

**File’s Modified:** SearchScreen.js and LoginScreen.js

**Github link:** <https://github.com/whitehatjr/Wily_Authentication>