# Instructions & Non-functional requirements

* In order to get certified we follow a scoring methodology which depends on the following criteria,
  + Design & implement user interface using HTML5, SASS, RWD using either of React Material, PrimeReact or any other base UI libraries.
  + Pages should follow W3C web standards, SEO & WCAG 2.0 Level A for accessibility
  + Usage of ReactJS components, routing, state management & reactive forms
  + Usage of Redux for state management is a must
  + Application should be Responsive for Mobile, Tablet & Large displays.
  + Following performance criteria is met,
    - First meaningful paint - < 0.5 sec.
    - Time to interactive - < 1 sec.
    - Full page load - < 2 secs.
  + Ensure usage of Service Workers & Progressive Web App design. This includes using the application in offline mode
  + Use Webpack as build tool & module bundler for production ready code.
  + Zero Major, Critical, Vulnerability defects through ESLint, CSSLint, HTMLLint.
    - Negative scoring applied depending on the no. of such defects.
  + Ensure standard folder structure and ReactJS Style guide (from Airbnb) is followed
  + Authentication using OAuth using any of Azure AD, Google, Facebook, Twitter.
  + Works on IE Edge, Firefox, Chrome latest versions.
  + All data should be dynamically loaded / saved to local JSON files or any light-weight dbs like Mongo.
  + At least 50% code coverage using Jest / Enzyme
  + At least 50% test coverage using Selenium
  + Bonus points are awarded if the following are implemented,
    - Usage of Reactive Forms
    - Customize Webpack config
    - Using Higher Order Components
    - More than 80% test coverage
    - Zero minor code quality defects from all linters.
  + Capture & Measure user experience (ex: time on task, no of errors, Completion rates, page views/clicks, so on… this they can be implemented using your own code or by integrating 3rd party libraries

# Functional Requirements

## ATL – Anytime Library:

Develop a self-sustained library enabled & available through mobile, tablets & PCs with the following features,

### User Role

* Able to search for a book using Author or Title
* Able to filter book by book genre / category (ex: Technology, Business, Fiction, Management…..)
* View Book details like Author, Title, Thumbnail image, ISBN, Description
* Issue the book to self, depending on the availability
* Renew the book once for configured days
* Return read book and review & rate the same
* Notify the location of the book in the library while issued / returned
* Set favorite genres (category) for user and display personalized list of book based on favorite genre
* Display list of books with the user along with details like ‘Renew / Return by’ date-time
* There is a limit on no. of books which can be taken which is configurable
* Social features like
  + Like & rate books
  + Review & recommend books to friends
* Display user profile including picture, social ids, name, friends

### Admin Role

* Add / Update (including no. of copies) / Delete books
* Add using ISBN preferably by reading bar-code through mobile / tablet or entering the code manually
* Retrieve book details using ISBN through any public apis. Details include title, author, description, social rating through goodreads or google or any other sources
* When book details are not available through public, allow admin to enter the details manually
* Display the list of books taken by users and filter by book title, book author, user id, user name, issued date
* Sort the above list by issued date, book title, book author, user name

# References for UI design / ideas

Mobile UX Design: Key Principles: [https://uxplanet.org/mobile-ux-design-key-principles-dee1a632f9e6#.e4jmpum0o](https://uxplanet.org/mobile-ux-design-key-principles-dee1a632f9e6)

Mobile Design Best Practices: [https://uxplanet.org/mobile-design-best-practices-2d16d37ecfe#.k2skbdbch](https://uxplanet.org/mobile-design-best-practices-2d16d37ecfe)

Design for internationalization: [https://medium.com/dropbox-design/design-for-internationalization-24c12ea6b38f#.r25vlfev7](https://medium.com/dropbox-design/design-for-internationalization-24c12ea6b38f)

Popular Animation Techniques: [https://uxplanet.org/popular-web-animation-techniques-a6a467309028#.hzjsp9p5p](https://uxplanet.org/popular-web-animation-techniques-a6a467309028)

Vibrant colors for Apps & Sites: [https://uxplanet.org/vibrant-colors-for-apps-and-sites-ee488953de55#.fkh5t51vo](https://uxplanet.org/vibrant-colors-for-apps-and-sites-ee488953de55)

Top 5 UX App design of 2016: <https://uxplanet.org/the-top-5-ux-app-design-trends-of-2016-f4387a1dcd83>

Google font combinations for 2017: [https://blog.prototypr.io/google-font-combinations-for-2017-d1c21358444a#.jkylb5k5h](https://blog.prototypr.io/google-font-combinations-for-2017-d1c21358444a)

More around UX design & development: <https://uxplanet.org/?gi=a05bf6687f8b>

# Popular base UI libraries:

<https://www.primefaces.org/primereact>

<http://www.material-ui.com/>

More…. <https://reactjs.org/community/ui-components.html>