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 Angular Material, PrimeNG or any other base UI libraries.
    - Pages should follow W3C web standards, SEO & WCAG 2.0 Level A for accessibility
    - Usage of Angular components, routing, directives, pipes & reactive forms
    - 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, TSLint, CSSLint, HTMLLint.
        - Negative scoring applied depending on the no. of such defects.
    - Ensure Angular standard folder structure and Angular Style guide 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 Jasmine/Karma
    - At least 50% test coverage using Selenium/Protractor
    - Bonus points are awarded if the following are implemented,
        - Usage of Angular Reactive Forms
        - Customize Webpack config
        - AOT compilation
        - 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

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

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

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

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

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

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

Popular base UI libraries:

https://material.angular.io/

http://primefaces.org/primeng

More…. https://angular.io/resources (check UI Components section)