**Assumptions – Student Module**

1. Student login and register functionality.
   * The document doesn’t mention anything about student’s login and register functionality so I assumed that every student should always present their SID before logging in to the library system. For that reason, this module manages the Login and Register functionality for itself. The preconditions for SID are such that the SID must be 9 digits in length, must contain only numeric digits while registering as a student and must be unique from the already existing SIDs in the system.
2. Student asks librarian to borrow a book and librarian issues the book.
   * Rather than issuing a book functionality to librarian it seemed feasible as per our group’s discussions that when student clicks on the borrow button for any item that is in the catalogue, it should make a call to the librarian module’s method which would then check whether the stock is available for that book, if it does than the book is issued to the student otherwise the student is put on a waiting list for that specific book. This helps us combine the borrowing a book and put the student on waiting list functionality together. The Librarian module keeps track of which students have borrowed which specific book and at the same time it also tracks the students that are waiting for that specific book. Whenever a book is returned to a certain stock where the Librarian can issue a book to a student, the module checks if there are SIDs in the waiting list, if there are, then the book is assigned to the first student in line. The same information is managed at the Student module as well where it keeps track of borrowed and waiting books for every student. The moment a student logs into the system, it makes a call to the Librarian module’s method to check and see if any books were made available for that student who was put on a waiting list, and this way we can efficiently manage the switch from waiting list to borrowed books.
3. Search a book
   * As for searching of books for students my understanding for this functionality was such that I should show the whole catalogue of the library to the student and then the student picks whichever books they’d want to borrow. This makes it easier for the students to see the whole catalogue of the books that the library currently holds.
4. Should be able to view how many books are borrowed.
   * My understanding for this requirement was such that I should keep a track of every student’s credential, borrow books and waiting books, which are persisted into a json file. The contents of the file are read and stored into a JSONArray. Later, when a functionality needs to persist the data, I simply write the data to the same json file. The files contain detailed information about each book so that the user can see all details instead of just showing the user, currently borrowed books
5. Student can only borrow a book
   * Currently a student can only borrow a book since the requirements say so, but if need arises, the module can scale easily to the point where different types of items can be added to the library and the student and librarian can manage those items with ease of use.