Technical Design Document

The main goal of this book catalog is to be able to create a list of books that can be sorted based upon different characteristics. One of the main characteristics is that a book can be either checked out or in stock. Essentially the book catalog will have a field which is a list of books, and the list of books will be filled with books which have a wide variety of fields. Another minor tasks in this project is to create an API, to allow users to be able to use what we have created.

One technology that our team needs to learn is first and foremost how to code in python. Python is an easy to learn language so there should be little to no trouble there. Another thing to learn is the concept of an API and how to deliver our project into a usable API. In our project we will most likely use something called flask API. In addition we will need to learn how to use a web interface and how to build one. We will most likely need a server that can continuously run with multiple threads so that more than one user can utilize the book catalog, but the book catalog must be updated in real time so that no book can be checked out twice. We also need to learn what JSON is. Brian has a rough understanding of GEO-JSON but not JSON.

We will most likely not use a set for the data structure of the books because in many cases there will be a repeat of books. Since the number of books on a book catalog may change it would probably be better to keep it as a linked list. A linked list is better than an array because the memory is dynamically allocated and the number of books in the catalog can grow. We might consider two list of books in the catalog where there is a list of available and non-available books.

One area that might be ambiguous is whether or not there are be duplicates of books. We are going to assume that there will be duplicates, because a book catalog can have multiple copies of the same book. We might consider a different list for available and non available books.

One question that we have about the project is about all the new technologies and how to learn about them.