Design Document

First from the StartPage,

It goes to Main page. It has 4 options as follow:

- **Search and Check out**
  This is for search and check out of a selected book. This takes to search menu as google from where we can search for the given text.
  This takes us to the search result page, which shows all results' table in which each book will be having detail option.
  To show all the results for the page, book and authors both tables get involved from them the query on title, author name is fired by using "like".
  After clicking on that link, it will take us to that book's detail page. To display it, details from book and authors are got by using isbn and author_id values.
  When you click on issue button, it will first check book availability. To check for the availability, it checks in loan table where if date_in value is null then it is not available as it is not returned. Otherwise, it is available.
  If it is available,
    - It will take to the next page to enter borrower's id.
    - Then, it will check that if borrower has issued more than 3 books.
      To check this in the loan table it is checked that borrower.card_id has more than 3 books which has date_in value is null. If he has issued, then the system will show error message.

  Else,

    - It will show error message about not availability of the book.

- **Check In**
  This will take to a page where we need to enter 3 values, if the user will give any one of Isbn or card no, then it will direct to a page where in two tables issued books will be listed. These tables are got by comparing them with fine table which have paid== 0 and other will be in the second table.
  If only name is provided, then it will take to a page which has list of borrowers and then from that after clicking on one of their getid link card_id will be get and it will redirect to the checkin page again. This value is get by accessing borrowers table on comparing name with like.
    - In the first table, books which are fined will be there, each will be having link to pay fine. This will take to the pay fine page, so after paying the fine, it will allow to checkin.
    - In the second table, books which do not have ant fine will be shown and they directly will be checked out.

  There will be one button also to refresh fine values, so before checking for the list of books, fine values will be counted by clicking on it. This will take to refresh page which will compare today's date with due date and it is more and if date_in is null than an entry in fines table will be done. And if an entry is already there and paid is false then the amount will be increased by 0.25.

- **Borrower_management**

  This will allow to insert value for new borrower. This is done by running insertion query on borrowers table.

  It will take to a page where we need to give all details about the new borrower as all fields are mandatory.

  As we add button, it check for ssn, if it already exists, It shows message, if it is not then It will allow to enter details about new borrower.

  It is done by comparing ssn with given ssn.

- **Fine**

  This will take to a page where a table will be shown having values like card_id, name and total fine amount of that card holder.

  This is done by joing loan and fine table and summing total value of the fines for the card_id.