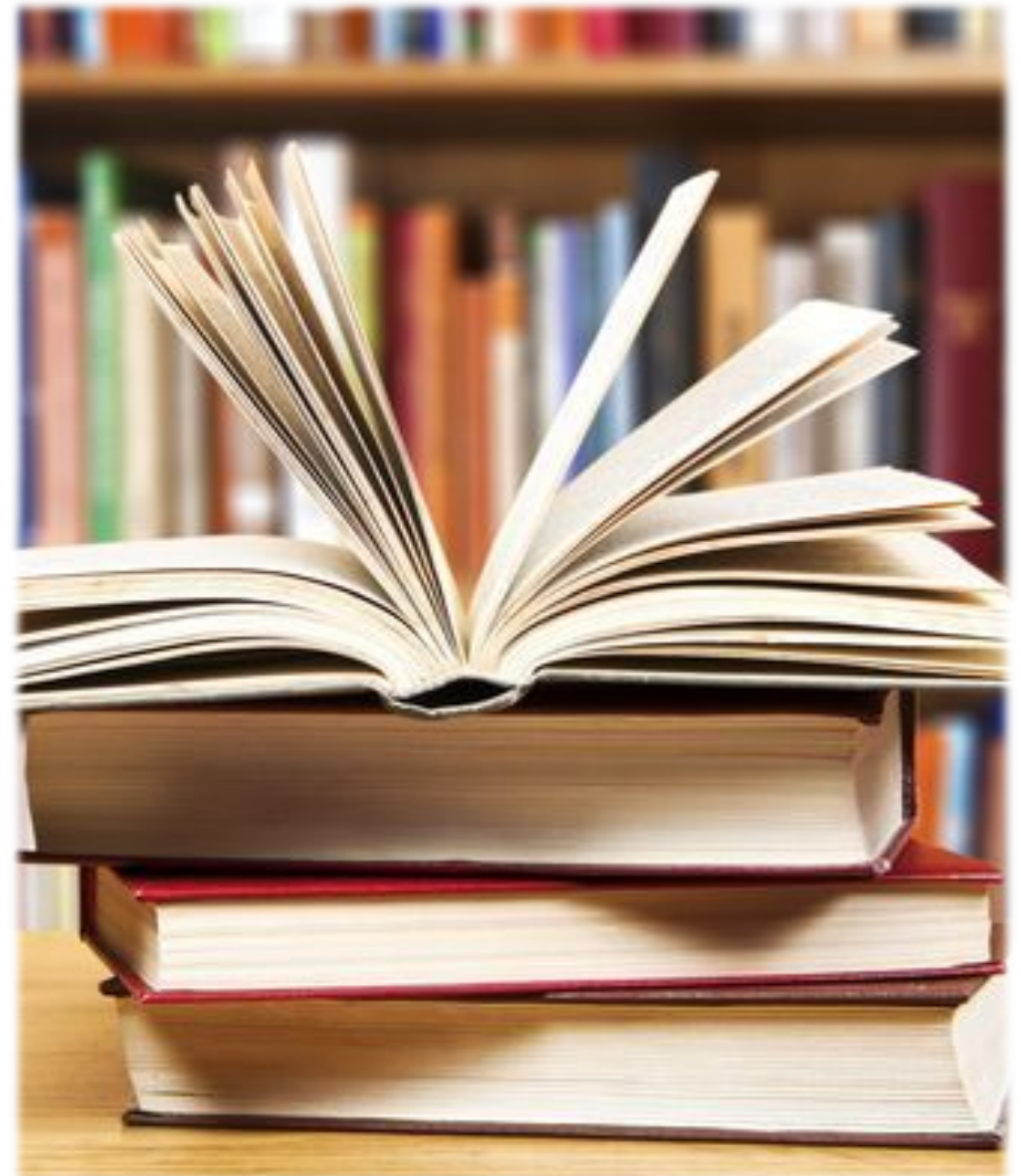


# Design Project

**Library Management System  
Using Barcode**

# Purpose

- The software is for automation of library work
- It provides following facilities to
  1. Librarian:
    - Can enter details related to a particular book
    - Can provide membership to members and update it as required
  2. Member:
    - Can request for issue , return book
    - Check for any existing fine
    - Can pay his fine



# Scope

Different areas where we can use this application are:

Any Library including education institutes can make use of it for providing information about author, content, and the availability of the books in the library

Modifications can be easily done according to requirements as and when necessary

# Working

## 1. Librarian:

- Login: Librarian can login and access required information of the library
- Dashboard: The dashboard of a librarian has features such as Add/Edit book details, change personal info of members etc

## 2. Members:

- Login: Members can login and access required information about his/her account.
- Dashboard: The dashboard of a member will be different to that of a librarian he/she can check for books and request for issue or return, also an option to pay fine online

# Barcode

- Barcodes are widely used around the world in many context
- A barcode (also spelled bar code) is a method of representing data in a visual, machine-readable form.



# Barcode

- A barcode (also spelled bar code) is a method of representing data in a visual, machine-readable form.
- Barcode can encode a books ISBN
- Barcode can also be used to keep track of objects and people
- Two types:linear and 2D
- Example : in electronic products packages, grocery item well books and even in health care and hospital settings
- ISBN: International Standard Book Number is a numeric commercial book identifier which is unique for each book

# How does it Work

- Barcode scanner consists of :
  - The illumination system
  - The sensor
  - The decoder



# How does it Work?

- The scanner scans the black and white elements of the barcode by illuminating the code with a redlight which is then converted into matching text.
- More specifically the sensor in the barcode scanner detects the reflected light from the illumination system and generates a analog signal which is then sent to the decoder which decodes it and converts it into text



# How it is implemented in the App

The the decoded text would be the ISBN no of the book which the app would use to retrieve the details of the book once the details are retrieved the data would be stored in the database corresponding to the library and the librarian can edit it manually if necessary

**Queries?**

**Thank You**