

# LIBRARY MANAGEMENT SYSTEM

## Backend Recruitment Task for SUTT

### Go through the whole document.

There are three stages of this task. You are advised to proceed in a systematic manner as they are in an order of increasing difficulty i.e., complete the first stage before moving on to the next.

Also, the estimated time required for completing a task is given.

### Notify us as soon as you are done with each stage.

Push your code on Github regularly and provide me with the link as soon as you push your code (for reference follow the link provided).

## TASK:-

You need to implement a library management system and develop a web-app for it. This system will allow students to get information about the books present in the library. The information on the system will be maintained by the librarian.

### Stage 1 (Estimated Time - 5.5 Days)

1. There will be three kinds of accounts with different roles and levels of access: admin, librarian and Student.

You are supposed to implement a Google login for Students where only BITS email can be used to access the portal. Librarian and Admin login should be using Django Login and Logout system

2. Each book should have its own page, where a student can view a book's details like title, author, publisher, genre, summary, ISBN, location, availability, etc.

3. Each student should have details such as name, BITS ID, Hostel, Room no, Mobile number etc.

4. Librarians should be able to add new books and edit their information.

5. Admins should be able to assign the role of a librarian to accounts. They should be able to revoke it as well.

6. Only registered students should be allowed to request to borrow a book. The borrowing system should have the following features-

- (a) A student can request to borrow an available book for a certain period.
- (b) There should be a page for librarians where they can view all requests and choose to accept or reject them.
- (c) Book should be marked “issued” automatically as soon as the librarian accepts the request. The librarian must provide the reason to reject.

7. Registered students should have a profile page where they can view their basic Info, profile picture(provided by google), recent activity, the books they have borrowed, upcoming due dates, etc.

### **Stage 2 (Estimated Time - 3.5 days)**

1. You can add a rating and review system, where students can add reviews for a book they have read and rate them on some scale
2. On the front page, you can add a section that shows the newest arrivals and a section for trending or popular books. The trending section could be based on a suitable metric, for example, the number of times a book has been borrowed in a year.
3. A student can also request to renew the period for a book they have borrowed.
4. You can add more features to searching and browsing like fuzzy search, sorting and filtering by fields, etc. This may involve filtering through genre, author, publisher etc
5. Every student should have some merit score which is how well the student is with the deadlines and how good the conditioned book he has provided, after returning each book, the librarian is supposed to give a score out of 100. The average of these scores should be displayed.
6. The system should facilitate quick searching of any book that a student may want to view.

### **Stage 3( Estimated Time - 2 Days)**

1. You may implement email notifications, to notify the student of events like upcoming due dates, book availability etc.
2. Librarian can upload an excel sheet of details of books in it. It should be able to populate the database with the given info or should be able to update the book information.
3. Host your web application on Heroku.

### **NOTES:-**

UI can be a Basic one but we would recommend if you can use CSS along with bootstrap for building up the UI for the application.

You should be able to explain everything written in the code, so even if you copy something from anywhere, try to understand that part before applying it.

Any other features you want to add / anything you want to do in a different way, feel free to do it. But the basic structure should remain the same.

### **FOR YOUR REFERENCE:-**

Corey Schafer Python and OOP playlist:-

<https://www.youtube.com/playlist?list=PL-osiE80TeTt2d9bfVyTiXJA-UTHn6WwU>

Corey Schafer Django Playlist:-

<https://www.youtube.com/playlist?list=PL-osiE80TeTtoQCKZ03TU5fNfx2UY6U4p>

Django Official Documentation:-

<https://docs.djangoproject.com/en/4.0/>

For Setting up Google Authentication:-

<https://learndjango.com/tutorials/django-allauth-tutorial>

You can use templates for frontend:-

<https://html5up.net/>

Bootstrap for UI designing:-

<https://getbootstrap.com/docs/5.0/getting-started/introduction/>

This site for learning basic git commands:-

<https://guides.github.com/introduction/git-handbook/>

Learning is the main thing, the end result is just a by-product if you are dedicated to your work. So work hard and put in all your efforts.

Feel free to contact us for any one of us for your queries

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**ALL THE BEST!!**