Software Systems Lab
CSP203
Design Document

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March 7, 2018

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1 Objective

The main objective of this Project is to provide a web platform where any student can do following things

- Issue and return Books.

- See activities going inside college.

- Post Something Important or write your own blog.

This will provide a overall web page portal for the college students to see anything of their importance.

1.1 Motivation

The main motivation for building this project are listed below.

- The library system excludes the use of paper work by managing all the records electronically.

- It help user to issue books and see the available books in library directly from their mobile phone.

- A student can directly pay fine via net banking in the college account. So it saves both user and librarian time to manually pay and take fine respectively.

- The Student activities block of the webpage help user to see the upcoming events easily. They do not need to scroll down through 100 of mails to see the details of a particular event.

- Blogging part of the webpage help to develop writing skills in the Students of college. Also it will help student to raise some of the important issue directly.

2 Functional Description

2.1 System Overview

The complete Project is divided into the Three major blocks which are further divided into several sub-blocks. These three blocks are Library management System, Student Activity and Student Blogs. A Block diagram is shown below.

2.1.1 Library Management System

USER PART: This is the main part of our project. It will let any student to issue books from his/her room and later they can take the book from the library. After Issuing the book user will get notification to return book after 15 days. User may also issue books from the special section which can be issued till end of the semester. When there will be less number of days remaining to return book then user will again get notification. To return book user need to go to library and return it manually. User can renew books also. Moreover user can pay fine online directly in library account. If user fine amount is above 200 then he/she cannot issue new books till they pay the previous fine.

 ADMIN PART: Admin can add books in the database. They can see what are the books issued by the Students and the last date to return it. They can also see the amount of fine to be paid by any user and can insert/remove any user from the database. Basically they have all the privileges on database.

2.1.2 Student Activities

In this block of our project any student of college can view activities, and a brief detail of that activity which are presently going in college or going to happen in near future. It may include major events like Cultural-fest, Tech-fest etc. or small activities like seminars or any SAC events. User can also see the past events which will display list of events in the last months.

2.1.3 Student Blog

In this block any student or faculty can post something important. It may include any important announcement related to college, Lost and Found items etc. Students may also use it to share notes or write their own blog. It will help people to enhance their Writing Skills.
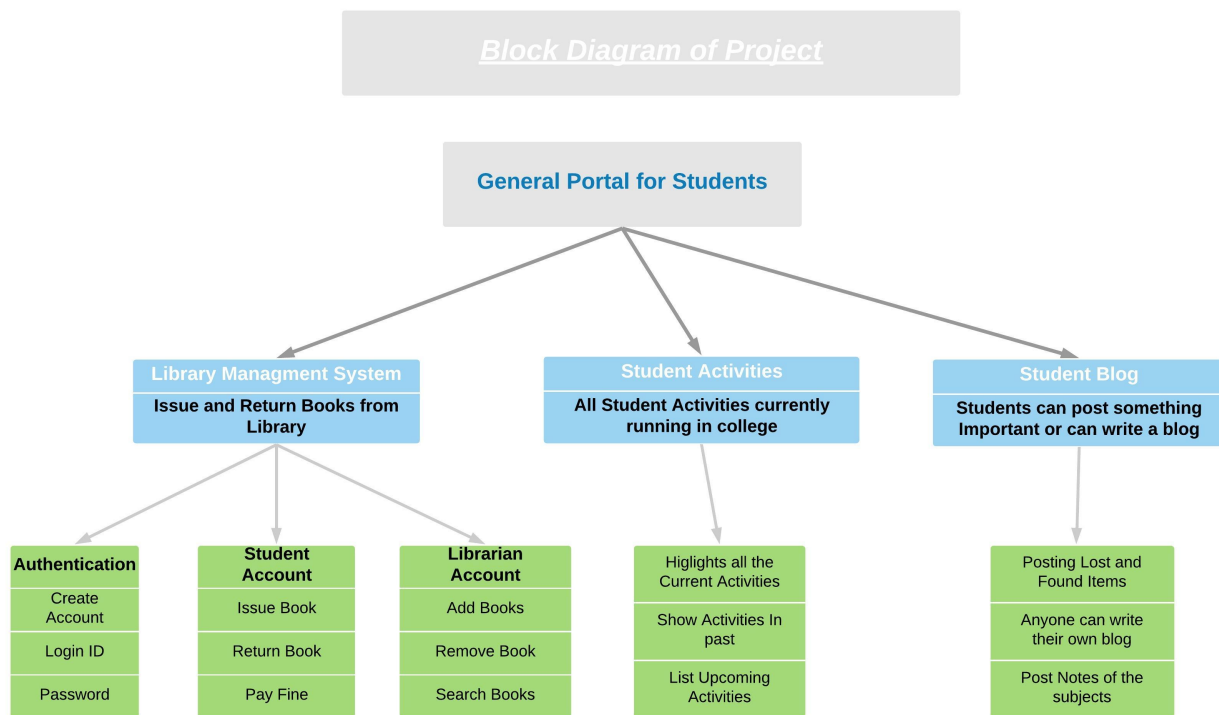
Figure 1: Block Diagram for overall Web page

3 Use Model and Design Detail

The first page user will see when he/she open the website will be our home page which will have three menu which are the three main block of our project. User may choose any block and then work accordingly.

3.1 Library Management System

When user chooses this block then they will get a log in page where they can enter there lo gin credentials. Once user logs into his/her account, they can interact with the database of the Library System according to their privileges. If there is new user he/she can sign up providing the required details and then they can log in into their account. This log in page ensures Authenticity and Privacy of user. It also allows new user to go through the sign up process. The library page after logging into account will automatically detect if the person is user or admin and thus load page accordingly.

The database of this part is shown in the ER-diagram (fig2). It clearly list all the tables and the entities in the table. For database part we will use SQL. All the search/update/insert part in database is done through SQL queries. The database is once initialized with all the books and then we only need to insert new books or delete some rows or alter tables.

3.2 Students Activities

As mentioned above user have three broad options on the web page, So when user choose this option then he /she will be directed to student Activities web page where he/she can see the list of ongoing activities and the upcoming events. He/she may search the previous activities and get details of the events. Only few people of IIT-Ropar will be given permission to add/remove an event. Those people who have permission can be a batch representative, a Professor, cultural and general secretary etc. There will be a separate database for this part. This database schema is shown below.

3.3 Students Blog

This part of our web page contains a blogging part where anyone can post a blog. Everyone have right to post blog. Each blog will have a rating option which will provide rating to a blog. User can see the blogs and can search a particular blog and also can give them rating. These rating can be used to order the blogs on the
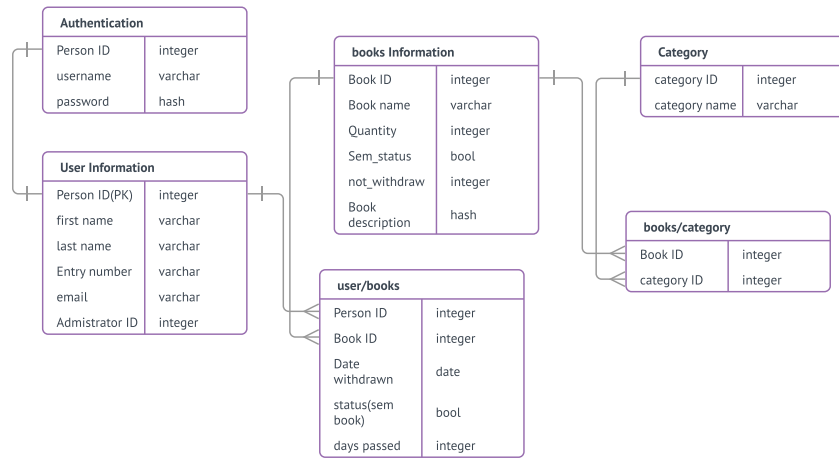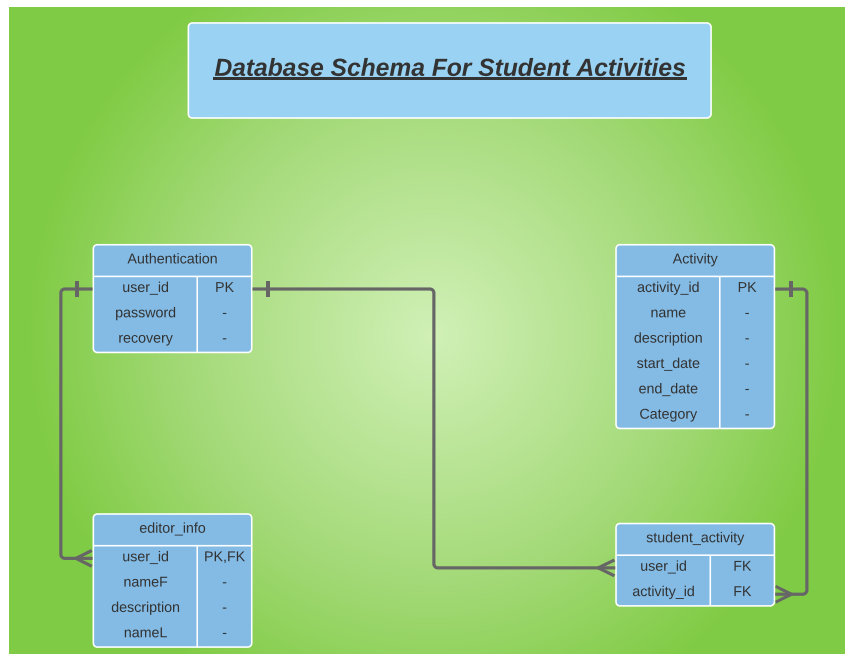
Figure 2: Database Schema for Library

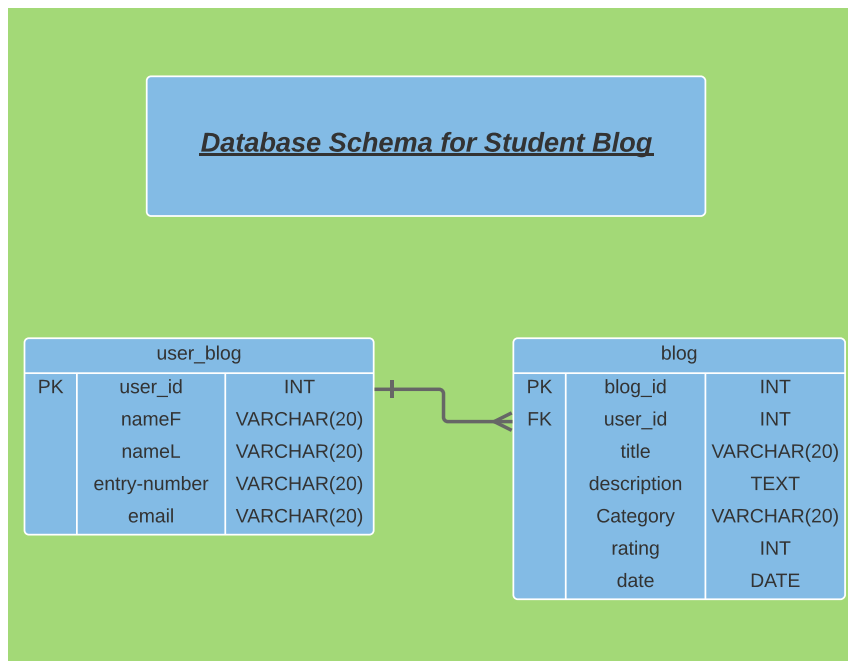Figure 3: Database Schema for Student Activities

Figure 4: Database Schema for Student Blog

webpage. The database of this part will contain the name, Description, Category of the blogs. It will also contain small description of the user.

4   Role of each members:

4.1   Vineel Raj:

He will handle the front end of our web page. It will require HTML and CSS (bootstrap) languages.

4.2   Rishabh Singh:

He will handle the library management part of the webpage. It will include creation of the database, Interaction with database and managing the permissions to a user.

4.3   Nitish:

He will handle the complete part of the Student Activity portal. It will also include creation of database, Insert/update/delete from database etc.

4.4   Jagadeesh:

He will handle the complete part of the Student Blog portal. It will also include creation of database, Insert/update/delete from database etc, managing the priorities of the blogs etc.