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## A literature survey on digitizing the college management ecosystem by using android mobile application

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### ABSTRACT

*Today we live in the world where communication is just one click away which is possible only by using the INTERNET and yet some choose to not take the advantage of it but things are changing with the time and from manual to digital.*

*In the development from manual to digitalization process. We have been supported by many technologies in making thing easier faster and smarter. Android is one of the major.*

*Using the android technology, we have decided to make an android application that will establish the communication between the canteen administrator and the people those who order from canteen using the android application. The library management system is also integrated into this application with the same objective of communication.*

*Both the modules are introduced into this application to save time which then was wasted because person has to stand in queue to get some information that is important but so expensive in time (Library) and to wait in canteen while is meal is being prepared.*

*This application solves this problem and save the valuable time of our users.*

**Keywords:** *User-authentication, Notification, Library management, Canteen ordering.*

### 1. INTRODUCTION

It is now possible for a person to get information which is important to that person and of use without having to stand in queues or to wait in canteen.

The communication happens in real time and is saved into the database for users to check that information whenever is required. the application uses firebase database as its database to store the information.

The application of the project is powered by Android, which is a mobile operating system developed by Google, based on the Linux kernel and designed primarily for touchscreen mobile devices such as smartphones and tablets. The application is an extended layout of the Biometric Fingerprint System used.

The application comprises features, i.e. Notification System, Library Management System and a Canteen Ordering System.

### 2. OBJECTIVES

The study was carried out in order to determine the following objectives:

a) To explore the present status of usage and applications of canteen ordering system and library management system in the college ecosystem.

b) To find out the areas in which the librarian system is being used in the college administration management system.

- c) To identify the merits and demerits of using library management and canteen ordering system with special reference to Delhi / NCR region.
- d) To check the login/out protocol for different stakeholders in the ecosystem.
- e) To make the interaction with and within the system more efficient

### 3. LIBRARY MANAGEMENT SYSTEM

It is an application which deals in managing the services of the library in the college ecosystem. It is used by librarian to manage the library services using a computerized system where he/she can record various transactions like issue of books, return of books, addition of new books, addition of new students etc. The module deals primarily with the maintenance of records of both the books and the students including a detailed description about the availability of the copies of a book available in the library and the last copy issued by any student along with the due date. This computerized system of managing the records aims at gaining a lossless database with all the records about the book and the members irrespective of the age of the record. In addition, report module is also included in Library Management System. The user accessing the system as an admin can generate different kinds of reports capturing the list of books available, the details of the students registered to the system, the issue and return, fine imposed and collected reports. All these features enable the admin along with the user of the library management system to avail and at the same time deliver the services in a more efficient and reliable manner thereby eliminating the exhaustive system of managing and maintaining the records manually in those heavy record books.

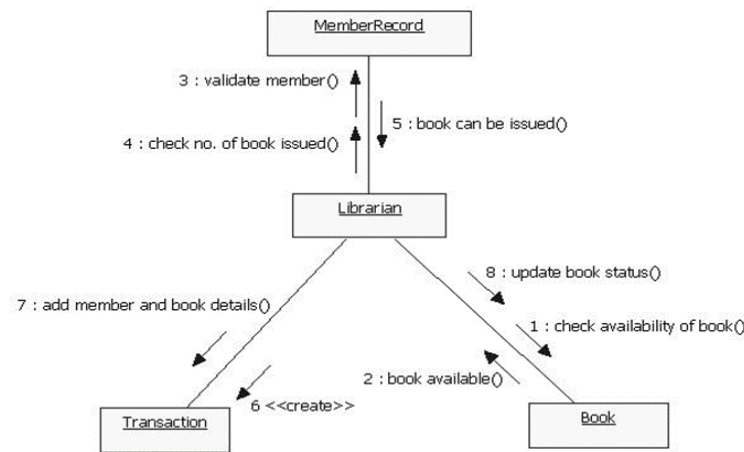


Fig-3: Electronic library management system

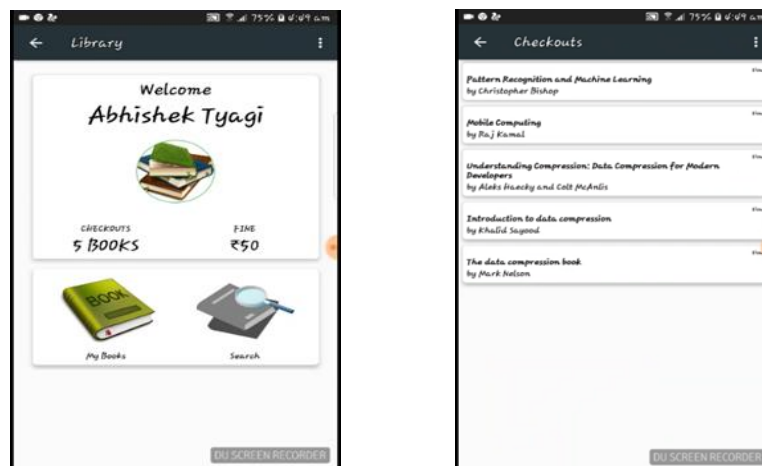


Fig-2: Screenshots of the Library Management module of the project

### 4. CANTEEN ORDERING SYSTEM

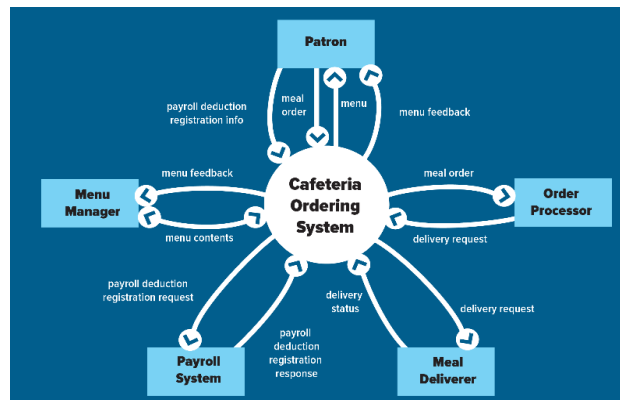
It focuses on improving the existing canteen management system and revolutionizing it by including pre-order system so that students can order their lunch way before the “lunch break” without worrying about the item available or not.

This feature will allow the canteen managers to prepare the On-list menu prior to the break hour, making it an efficient way of serving right number of snacks and food without any hustle. This system will have an online payment option and will generate a

unique order code/receipt which can be redeemed when claiming the order. This will ensure a secured transaction between the student and the canteen.

The idea is to increase a student's efficiency by solving a day-to-day crisis that one has to face in college. All these features can surely save a lot of time and provide methodical solution to manage student information in a college system. The advantages of the canteen management system are as follows:

- a) Helps in employee or guest authentication by accessing through fingerprint or passwords.
- b) It offers cashless transaction that is quite easy.
- c) Easy to select the items available on the menu.
- d) Very effective coupon printing service.
- e) Employee identification along with the time and attendance.
- f) Effective management of progressive reports.
- g) It is very easy to set the rules and regulations that can be implemented in the software itself.



**Fig-3: Canteen ordering system**

## 5. CONCLUSION

To develop and maintain a reliable personal recognition system is a critical task. This is achieved by assigning the unique key to every individual. The conventional methods of personnel recognition using ID-cards and passwords do not provide strong recognition system because of their dependency on the surrogate representations of the user.

Security is however an issue which is looked upon as a risk management strategy which covers the identification, controlling, elimination, or minimizing of uncertain events which can adversely affect the information assets and system resources. The level of a security system is dependent on the requirements and cost-benefit analysis of the application.

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