

## SP Chatbot

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### Abstract –

The new Android app enhances academic and campus accessibility, offering features like faculty information (contact, office hours, specialization), real-time class schedules, event notifications, and a campus map for freshers. It includes an AI chatbot, a girls' safety page, and an admin backend for real-time updates on timetables, events, and staff details. The app serves as a one-stop platform for students' academic and campus needs.

**Key words:** Faculty information, timetable management, extra lectures, academic visits, events and competitions, seminars, guest lectures, campus navigation, AI Chabot, girls' safety, admin panel, student support.

### 1. INTRODUCTION

Most students find it hard to cope with academic and campus information since it tends to be scattered on different systems, websites, and applications. This can result in confusion, forgotten deadlines, and missed updates, and hence make it hard for students to keep up with their schedules and tasks. Consequently, students become disengaged from campus life, which can contribute to poor academic performance and a poor overall experience.

The suggested Android app solves this problem through the integration of all relevant information into a single user-friendly platform. Students will find class timetables, faculty contact information, campus events, and learning resources in one. The app will also enhance communication through timely reminders sent straight to students' phones, ensuring they never miss out on class, event, or assignment notices.

In addition, the app will assist students in finding their way around campus, including a map of the campus, and give reminders for class trips or activities. On the administrative end, faculty and staff can make changes in real-time, so that students have access to the most up-to-date information.

Eventually, the app will provide a better-organized, more connected, and more effective campus experience for students, making them better informed, better at time management, and more actively involved in campus life, thus resulting in improved academic performance and greater community involvement.

### 2. LITERATURE SURVEY

Academic information systems help streamline educational data, improving communication and resource management. According to Zhang et al. (2019), these systems centralize faculty details, timetables, and event notifications, which enhances both student engagement and administrative efficiency. They often feature modules for faculty contact information, scheduling, and notifications, improving academic interactions.

Mobile apps in education are essential tools for communication and information access. Weng et al. (2020) found that mobile apps improve student engagement by offering features like real-time notifications, interactive timetables, and personalized content, helping students stay updated on campus events and schedules.

AI-powered chatbots are also becoming integral to educational apps, offering support, and answering queries. Ahmed et al. (2021) show that chatbots significantly enhance the student experience by providing instant responses and personalized assistance, creating a more interactive and responsive support system.

#### Objectives-

**1. Centralize Information:** Provide easy access to faculty details, real-time class schedules, event notifications, and campus navigation for students and staff.

**2. Enhance Communication:** Improve communication between students, faculty, and staff with timely updates on academic visits, seminars, guest lectures, and events.

**3. Promote Campus Safety:** Provide a dedicated page for girls' safety, offering relevant security information to ensure a safer campus environment.

**4. Admin Panel:** Enable real-time updates and management of timetables, events, and staff information through an easy-to-use admin backend.

**5. Support Student Engagement:** Serve as a one-stop platform for managing academic schedules, campus resources, and providing comprehensive student support.

## 2. SYSTEM ARCHITECTURE AND METHODOLOGY

### System Development

The SP Chatbot is built using an application-based approach:

- **Frontend:** XML (Android Studio UI Design)
- **Backend:** java
- **MySQL Other Tools:** Google Maps API for navigation, AI-based chatbot integration. The project was structured to be accessible across various devices.

### Workflow

#### 1. Enhanced Accessibility

Students can easily access faculty contact details, office hours, and areas of specialization, ensuring better communication and guidance.

#### 2. Efficient Timetable Management

Real-time updates on class schedules, extra lectures, and academic visits help students stay informed and plan their day effectively.

#### 3. Seamless Event Coordination

Notifications for events, competitions, seminars, and guest lectures ensure that students never miss important academic and extracurricular activities.

#### 4. User-Friendly Campus Navigation

The interactive campus map assists new students in finding classrooms, offices, and key campus locations with ease.

### Existing System - Problem Definition

Academic institutions often rely on multiple platforms and manual processes, leading to inefficiencies. Faculty contact details, class schedules, and extracurricular announcements are shared through scattered channels like emails, notice boards, and social media. Navigation for new students is limited, and student support resources are fragmented. Additionally, AI-driven tools for FAQs are lacking, while administrative tasks rely on dispersed systems, making data management inefficient. A centralized, dynamic platform is needed to streamline academic and campus-related information.

### Proposed System

- **Faculty Information Module:** Provides detailed information about professors, including contact details, office hours, and areas of expertise.
- **Centralizes faculty-related information** to facilitate smoother communication between students and faculty.
- **Dynamic Timetable System:** Allows students to view department-specific class schedules.
- **Event and Notification System:** Notifies students about upcoming events, competitions, seminars, guest lectures, and special sessions.
- **Integrated Visit Information Module:** Centralizes information about academic trips, including timing, location, and faculty supervisors.
- **Campus Navigation:** Provides a route map to help new students navigate key campus locations like classrooms, canteens, and administrative offices.
- **AI-Powered Chatbot:** Assists students with queries related to campus life,

academic concerns, and general questions.

- **Girls' Safety Section:**

Offers information on campus security measures, emergency contacts, and support services for female students.

- **Admin Backend System:**

Allows staff to manage and update information regarding timetables, events, and faculty details.

- **Personalized Student Information:**

Provides customized access to information based on students' department, class, and academic requirements.

- **User-Friendly Interface:**

Designs a user-friendly interface for easy navigation and use.

### System Design –

This system has 2 panels and 12 modules:

System panels:

1. User panel
2. Admin panel

System module:

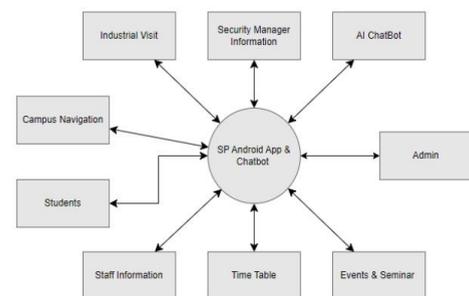
1. Security management information
2. AI chatbot
3. Admin
4. Events and Seminars
5. Time Table
6. Staff Information
7. Students
8. Campus navigation
9. Industrial visit
10. Facebook
11. Instagram
12. Twitter

### DFD Diagram:

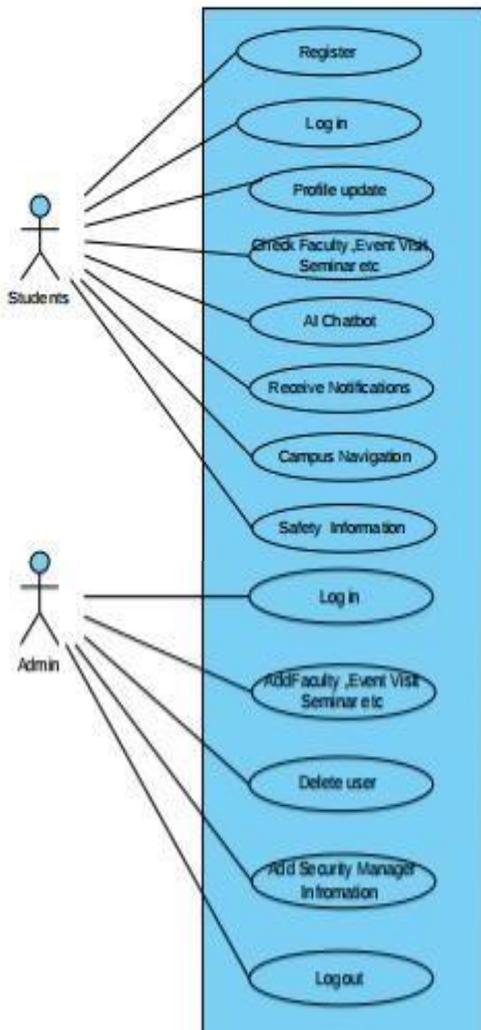
#### 1.DFD – level 0



#### 2. DFD - level 1



**Use Case Diagram:**



**Result and discussion**

Let us assume the following data for analysis

year	1st	2nd	3rd	4th
new login	30%	55%	69%	
current login	50%	89%	94%	
truncate	20%	30%	40%	

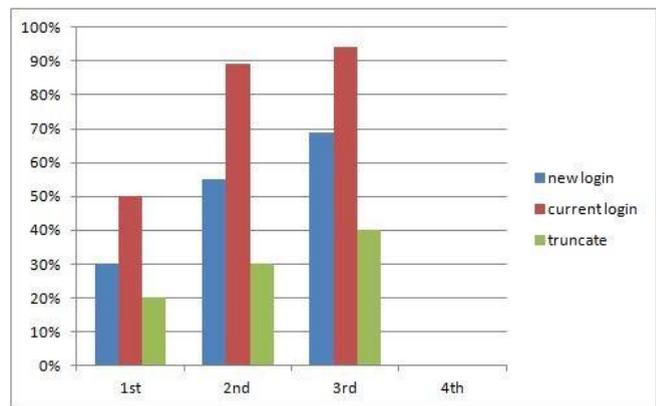
**User growth over time (bar graph)**

Graph description

- x-axis: number of user login (percentage)
- New login
- Current login
- Truncate
- y-axis: years (2019,20,21)

**Data:**

1. new login  
1st year:30%  
2nd year:55%  
3rd year: 69%
2. current login  
1st year:50%  
2nd year:89%  
3rd year: 94%
3. Truncate  
1st year:20%  
2nd year:30%  
3rd year: 40%



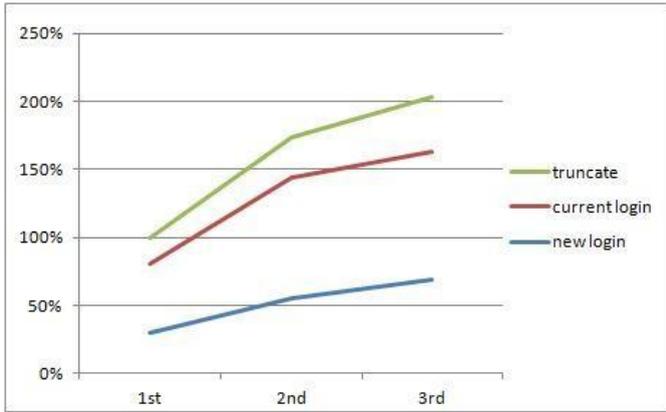
**2. User growth over time (stacked line graph)**

Graph description

- x-axis: number of user login (percentage)
- New login
- Current login
- Truncate
- y-axis: years (2019,20,21)

**Data:**

- new login  
1st year:30%  
2nd year:55%  
3rd year: 69%
- current login  
1st year:50%  
2nd year:89%  
3rd year: 94%
- Truncate  
1st year:20%  
2nd year:30%  
3rd year: 40%



## CONCLUSION-

The proposed Android app enhances academic and campus management by integrating faculty details, dynamic timetables, real-time notifications, visit info, campus maps, and an AI chatbot. It improves communication, resource management, and student experience, with a dedicated safety section for female students. Featuring an intuitive design and robust backend, the app fosters organization, engagement, and academic success, creating a more connected and efficient institution. Do not forget their scheduled slots. Moreover, business owners can track booking patterns, user engagement, and sales with the analytics and reporting features to effectively improve their services.

## Acknowledgment –

We extend our sincere gratitude to everyone who contributed to the development of this Android application. We would like to express our heartfelt thanks to **faculty members and administrative staff** for their valuable insights and continuous support in shaping the features of this app. Their guidance helped in designing an effective platform that meets academic and campus needs. A special appreciation goes to the **development team**, whose dedication and technical expertise made this project a reality. Their efforts in integrating features such as faculty information, real-time timetable updates, event notifications, AI chatbot, and safety measures have significantly enhanced student accessibility and campus engagement. We also acknowledge the **student community** for their valuable feedback and suggestions, which played a crucial role in refining the app to ensure a user-friendly and efficient experience.

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