

UE21CS351A: Database Management System

MINI PROJECT USER REQUIREMENT SPECIFICATION

OneStopPes

Aayush Mishra : PES1UG21CS013

Abhay Joshi : PES1UG21CS016

1.Introduction

The **purpose of this college app** is to provide students and other stakeholders with a single platform for managing all aspects of their college experience. It will provide students with the ability to:

- Enroll in courses and view their course schedules
- Schedule exams and view their results
- Select elective courses and check prerequisites
- View timetables with allotted rooms and teachers
- View scholarships and check deadlines for account information

The Database Administrators can :

- Manage course enrollment and sections
- Schedule and view stats for exams
- Manage elective courses and prerequisites
- Generate timetables and view teachers
- Assign rooms to courses
- Manage scholarship accounts and payment status

The scope of this college app is to provide a **comprehensive solution for managing all aspects of the college experience for students and other stakeholders**. It will be designed to be easy to use and navigate, and it will be accessible from any device.

- Real-time notifications for important events, such as important announcements from college , exam dates, and scholarship deadlines
- The ability to access course materials and resources on the go
- The ability to provide feedback on courses and instructors in a feedback area

2. Project Description

Project Goal: The project aims to develop an easy-to-use and comprehensive solution for managing all aspects of the college experience. It is **expected to improve communication and collaboration between students, faculty, and staff**, and to make the college experience more **efficient and productive** for everyone involved.

Major project functionalities :

- **User management:** Users should be able to create an account, log in, and update their profile information.
- **Course management:** Users should be able to browse courses, view course details, and enroll in courses.
- **Exam management:** Users should be able to view upcoming exams, take exams, and view their scores.
- **Elective course selection:** Users should be able to browse elective courses and select electives to take.
- **Prerequisite course checking:** The app should check whether users have met the prerequisites for the courses they are trying to enroll in.
- **Timetable generation:** The app should generate a timetable for each user based on their enrolled courses and elective courses.
- **Room allotment:** The app should allot rooms for each course section based on the number of enrolled students and the capacity of the rooms.
- **Scholarship registration:** Users should be able to edit/input details for availing scholarships.
- **Notifications:** Users should receive notifications about upcoming deadlines, exams, and other important announcements.
- **Feedback and Tickets:** Users should be able to post feedback and raise Tickets for any discrepancies.
- **Grade tracker:** Users should be able to track their grades for all of their courses and overall stats.

3. System Features and Functional Requirements

System Feature 1: User Management :

Functional Requirements:

- Users should be able to create an account, log in, and update their profile information.
- Users should be able to view their enrolled courses, grades, and other important information.
- Users should be able to receive notifications about upcoming assignments, exams, and other important events.

System Feature 2: Course Management :

Functional Requirements:

- Users should be able to browse courses by department, course code, or course name.
- Users should be able to view detailed information about each course, including the course description, prerequisites, instructor, and meeting times.
- Users should be able to enroll in and withdraw from courses.
- The system should check whether users have met the prerequisites for the courses they are trying to enroll in.
- The system should generate a timetable for each user based on their enrolled courses.

System Feature 4: Exam Management :

Functional Requirements:

- Instructors should be able to create exams and specify the date, time, room number, and format for each exam.
- Students should be able to view their upcoming exams.
- The system should generate an exam schedule for each student based on their registered exams.
- The system should administer exams and record student responses.
- Students should be able to view their grades and feedback for each exam.

System Feature 5: Elective Course Selection:

Functional Requirements:

- Students should be able to browse elective courses.
- The system should check whether students have met the prerequisites for the elective courses they are trying to select.
- Students should be able to select elective courses.

System Feature 6: Timetable Generation:

Functional Requirements:

- The system should generate a timetable for each user based on their enrolled courses and elective courses.
- The timetable should take into account the meeting times of the courses and the student's preferences.
- Students should be able to view their timetable.

System Feature 7: Room Allotment:

Functional Requirements:

- The system should allot rooms for each course section based on the number of enrolled students and the capacity of the rooms.
- The system should consider the instructor's preferences when allocating rooms.
- Instructors should be able to view the rooms that have been allotted to their course sections.

System Feature 8: Scholarship Information:

Functional Requirements:

- Students should be able to see their obtained scholarships according to their grades.
- Students should be able to edit and input their bank account details required for the scholarship.
- Scholarship committees should be able to view and review scholarship account information and check which students are remaining to fill their details.



