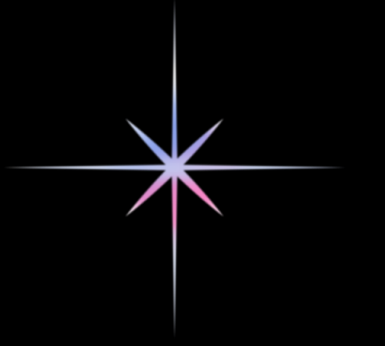


SMART CURRICULUM ACTIVITY & ATTENDANCE APP

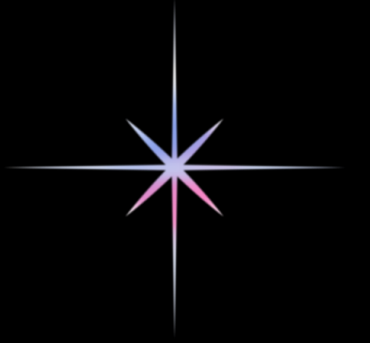
P R E S E N T A T I O N B Y : -

PARAPATHI MANIKANTA REDDY
KASIREDDY SANDEEP REDDY
TADI LOKESWARA REDDY
AVALA BHARATH KUMAR
JANA SAI RAHUL
BATTINI NAVEEN



Introduction

- The Smart Curriculum Activity & Attendance App is a QR-based attendance management system.
- Replaces old manual attendance methods.
- Fast, accurate, reliable, and fully digital.
- Teachers can easily view, analyze, and manage student attendance.
- Students benefit from activity suggestions based on interests and free time.



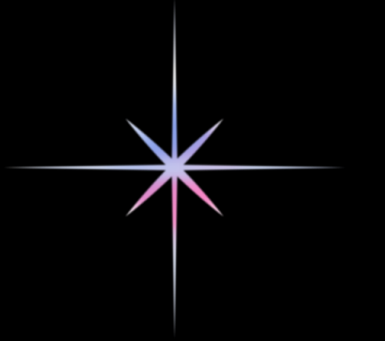
QR-Based Systems Literature Summary

Advantages

- Simple, fast, low-cost
- Accurate and efficient
- Easy export (CSV/XLS)
- Works on any Android/iOS device

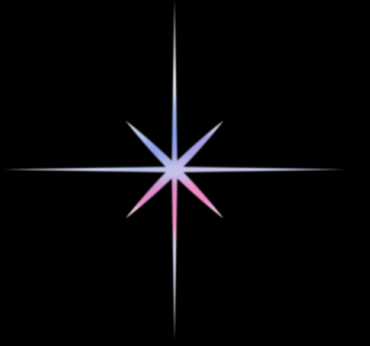
Challenges

- Students can misuse QR by sharing it
- Requires stable lighting
- Real-time performance depends on phone camera
- Manual scanning may be slow for large classes



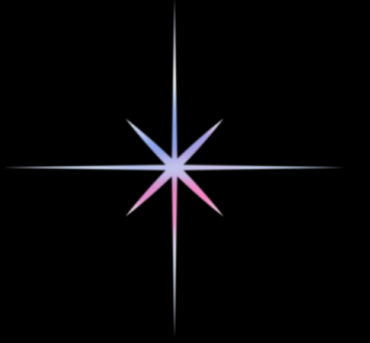
Research Gaps

- Low accuracy in face recognition under poor lighting
- Training datasets are small
- QR systems lack identity verification
- Real-time performance degradation
- No automatic proxy prevention
- Limited security & privacy handling



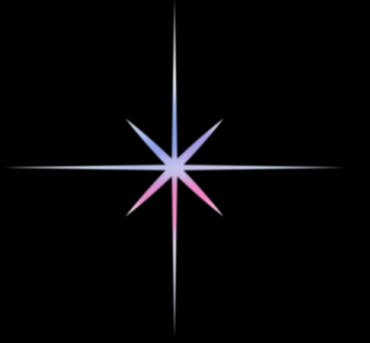
Detailed Objectives

- Automate attendance using dynamic QR codes
- Provide personalized activity tasks
- Help students use free time productively
- Generate daily routines combining classes + long-term goals
- Easy tracking for students and teachers
- Replace paper-based attendance.
- Ensure fast, accurate, secure attendance marking.
- Provide students with academic/curriculum activities during free periods



Project Description

- Many institutions still use manual paper-based attendance.
- This system solves:
 - Time wastage
 - Human errors
 - Proxy attendance
 - Lack of productive use of free time
- Teachers generate QR codes that refresh every 5 seconds.
- Students scan using their phones → attendance stored in database.
- Students can track attendance per subject.
- App suggests useful curriculum activities based on interests.



Scope of the Project

Suitable for:

- Universities
- Colleges
- Schools

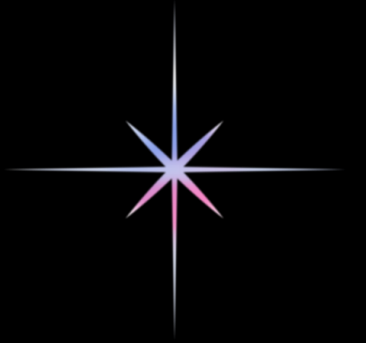
Key Features

- Real-time QR attendance
- Auto-verification
- Student attendance dashboard
- Teacher analytics
- Activity suggestions

Future Scope

- Absence alerts to parents
- University-level ERP integration
- Biometric + QR hybrid system

Use Case Model



USERS:-

- Teacher
- Student
- Admin

ACTIONS

- Login
- Generate QR
- Scan QR
- Validate attendance
- View reports
- Manage activities

User Profiles

Teachers

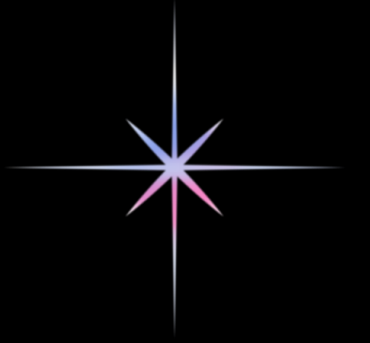
- Generate & display QR
- Monitor attendance
- Send messages
- Track student progress

Students

- Scan QR
- View attendance
- Receive messages
- Access personalized tasks

Administrator

- Create/manage users
- Maintain system
- Monitor overall analytics



Functional Requirements

User Authentication

- Student/Teacher/Admin login
- JWT token-based

QR Code Generation

- Session-based
- Auto-refresh every 5–10 seconds

QR Scanning

- Mobile scanning to mark attendance

Attendance Management

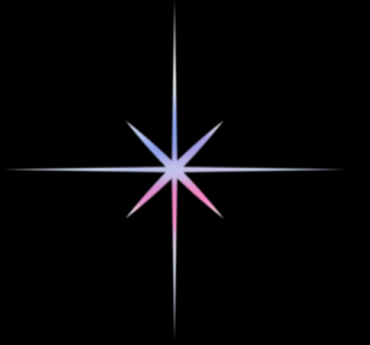
- Store attendance
- Subject-wise and overall view

Messaging

- Important announcements

Curriculum Activities

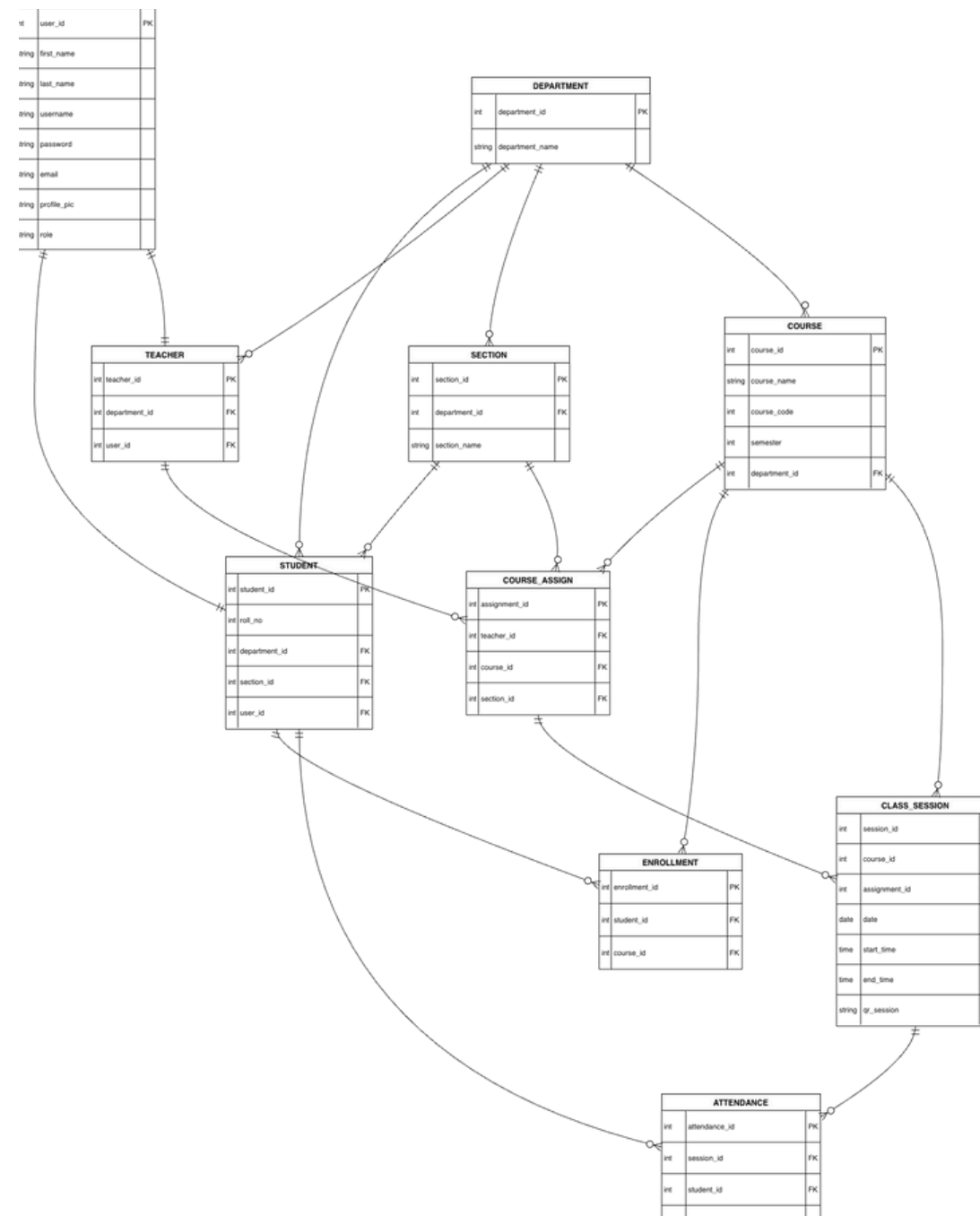
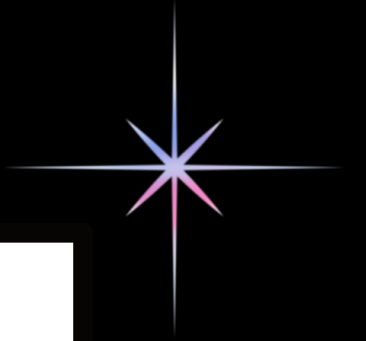
- Interest-based tasks



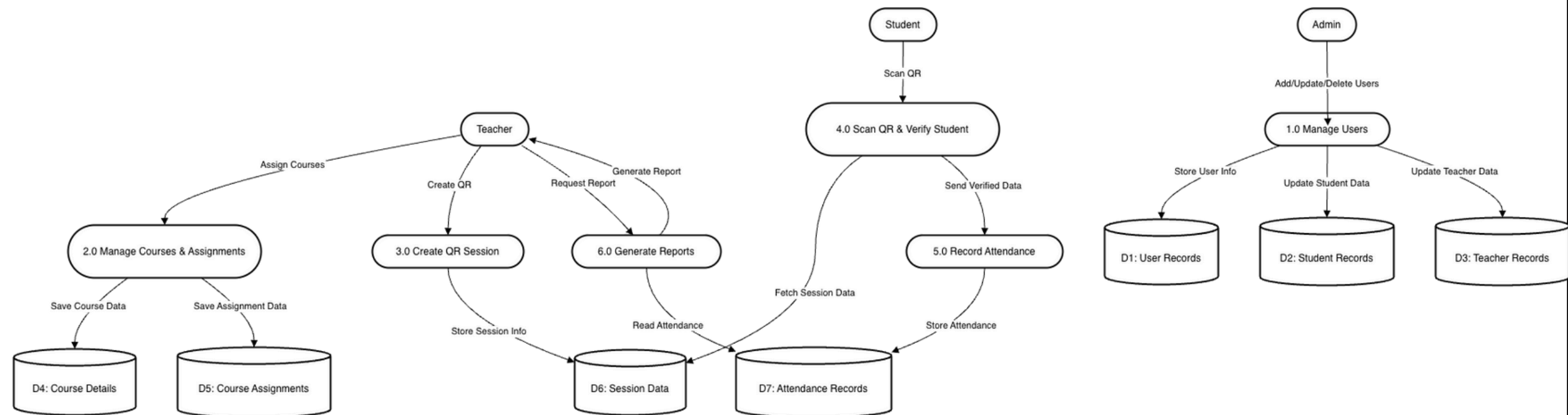
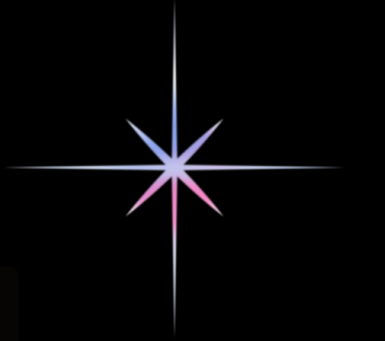
System Architecture

- Frontend: ReactJS, TailwindCSS, Axios
- Backend: Django, DRF, SimpleJWT
- Database: MySQL

ER Diagram



Data Flow Diagram



Database Design



USER		
int	user_id	PK
string	first_name	
string	last_name	
string	username	
string	password	
string	email	
string	profile_pic	
string	role	

STUDENT		
int	student_id	PK
int	user_id	FK
int	roll_no	
int	department_id	FK
int	section_id	FK

TEACHER		
int	teacher_id	PK
int	user_id	FK
int	department_id	FK

DEPARTMENT		
int	department_id	PK
string	department_name	

ENROLLMENT		
int	enrollment_id	PK
int	student_id	FK
int	course_id	FK

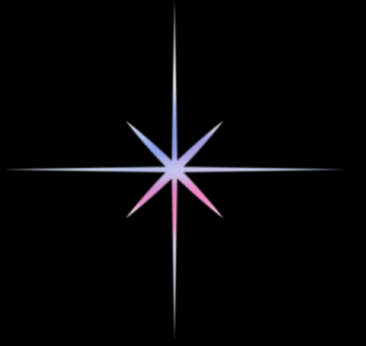
SECTION		
int	section_id	PK
string	section_name	
int	department_id	FK

COURSE		
int	course_id	PK
string	course_name	
int	course_code	
int	semester	
int	department_id	FK

COURSE_ASSIGN		
int	assignment_id	PK
int	teacher_id	FK
int	course_id	FK
int	section_id	FK

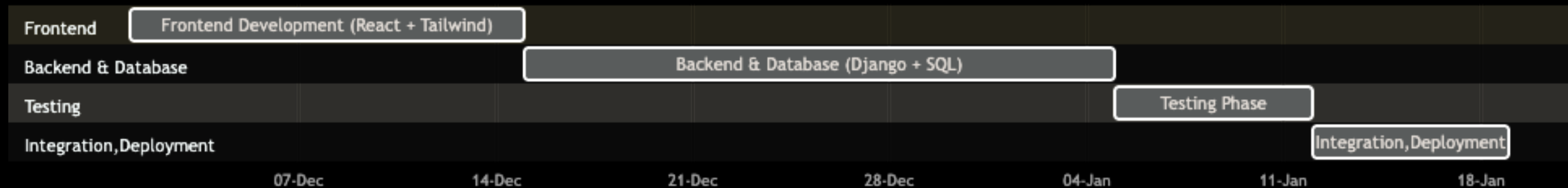
CLASS_SESSION		
int	session_id	PK
int	course_id	FK
int	assignment_id	FK
date	date	
time	start_time	
time	end_time	
string	qr_session	

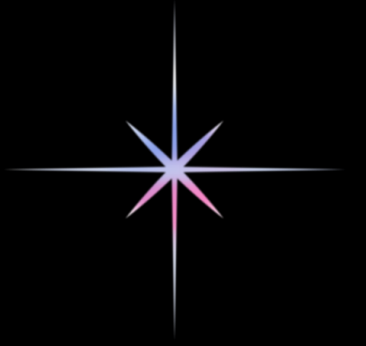
ATTENDANCE		
int	attendance_id	PK
int	session_id	FK
int	student_id	FK
string	status	



Project Timeline

Project Timeline (Dec 2025 - Jan 2026)





Conclusion

The Smart Curriculum Activity and Attendance App provides a fast, secure, and modern solution to the long-standing problems of manual attendance. By integrating dynamic QR codes, real-time verification, and personalized academic activities, the system not only improves accuracy and efficiency but also enhances student productivity. This project shows how technology can transform classroom management, reduce errors, prevent misuse, and create a more organized and intelligent learning environment.



THANK YOU!

WE ARE OPEN FOR QUESTIONS?