COLLEGE CODE: 9528

COLLEGE NAME: SCAD College of Engineering and Technology

DEPARTMENT: CSE

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Completed the project named as phase ___ TECHNOLOGY

PROJECT NAME: SINGLE PAGE APPLICATION

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Single Page Application – Phase 5 Project Demonstration & Documentation

1. Final Demo Walkthrough

The Single Page Application (SPA) designed for student information management enables seamless navigation and content updates without reloading pages. The demo highlights the user journey from login to dashboard interaction. Students can access their profile, timetable, marks, and notices from a single interface. Dynamic JavaScript components ensure real-time content switching, making the interface responsive and user-friendly.

The main modules demonstrated include:
- Login Page: Secure student authentication.
- Dashboard: Displays profile, marks, timetable, and notifications.
- Notices: Real-time updates for important announcements.
- Logout: Redirects users safely to the home screen.

2. Project Report

This project aims to provide an efficient and interactive platform for students to access academic information through a single-page design. The system minimizes page reloads, ensuring fast and smooth navigation.

Users & Stakeholders

The success of this project depends on identifying the main users and stakeholders who will interact with the system:
- Primary Users: Students who will log in and view their profile, timetable, marks, and notices.
- Secondary Users: Faculty and administrative staff who will update data, add notices, and ensure data accuracy.
- Stakeholders: College management, IT support team, and examination cell who are indirectly connected with the system's efficiency.

User Stories

User stories define the functional requirements of the system based on users' needs:
1. As a student, I want to log in securely so that I can access my personal academic data.
2. As a student, I want to view my timetable and attendance without navigating multiple pages.
3. As a student, I want to see my marks and progress report in one place so I can evaluate my performance.
4. As an admin/faculty, I want to update announcements and notices quickly so that students are informed on time.
5. As management, I want a reliable system that reduces dependency on manual processes.

Technology Used

The SPA is developed using the following technologies:
- HTML
- CSS
- JavaScript

3. Screenshots / API Documentation

This section provides visual representation of the key modules of the project. Screenshots can include:
- Login Page
- Dashboard View
- Timetable Section
- Marks and Notices Section

The application relies on front-end scripting with JavaScript for dynamic updates, and no external APIs are used. The script manipulates the Document Object Model (DOM) to simulate real-time content loading.

4. Challenges & Solutions

During the development process, several challenges were encountered and resolved as follows:
- Challenge 1: Managing content transitions without page reloads.
  Solution: Used JavaScript event listeners and dynamic content rendering.

- Challenge 2: Maintaining responsive design across devices.
  Solution: Implemented flexible CSS grid layouts and media queries.

- Challenge 3: Organizing modular JavaScript code.
  Solution: Separated logic into reusable functions for maintainability.

5. GitHub README & Setup Guide

The GitHub repository includes structured files and documentation to set up the project locally.

Repository Structure:
- index.html
- style.css
- script.js
- assets/ (images, icons)

Setup Instructions:
1. Clone the repository using: https://github.com/roselinnisha20-cmyk/student_dashboard.git

2. Open index.html in a browser.
3. Ensure all files are in the same directory for smooth execution.

Future Enhancements:
- Add backend integration with a database.
- Implement role-based authentication.
- Use a REST API for marks and notice updates.

6. Final Submission (Repo + Deployed Link)

The final submission includes the project repository and the deployed web link. Students can provide the GitHub Pages or Netlify link upon submission.

This Single Page Application demonstrates efficient use of front-end technologies to create a compact, user-friendly academic information system.