# University Timetable Manager - Project Documentation

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## 1. Introduction

The University Timetable Manager is a modern web-based scheduling system designed to help students and administrators efficiently organize and manage class timetables. The system features a interface with light and dark mode options, ensuring usability and accessibility across devices.

## 2. Objectives

- Simplify timetable management for university students and administrators.  
- Provide secure access through a login system distinguishing between students and admins.  
- Enable students to add, view, and delete their own classes.  
- Allow administrators to view all student timetables for management purposes.

## 3. System Features

• User authentication (login and role-based access).  
• Class addition, deletion, and timetable viewing for students.  
• Admin control to view all student schedules.  
• Responsive design with both light and dark mode.  
• Modern iOS-style interface with glassmorphism effects.

## 4. Technologies Used

• HTML5 and CSS3 for layout and styling.  
• JavaScript (ES6) for interactivity and logic.  
• LocalStorage for browser-based data persistence.  
• Google Fonts and gradient effects for modern UI aesthetics.

## 5. System Architecture

The system follows a client-side architecture built entirely in the browser. User credentials and timetable data are stored using localStorage, ensuring that each user's data remains private. Admin access is protected via predefined credentials.

## 6. User Roles

• Student: Can log in, view, add, and delete their timetable entries.  
• Admin: Can log in and view all student timetables for monitoring purposes.

## 7. Future Improvements

• Integration with a backend database for permanent data storage.  
• Improved authentication using hashed passwords.  
• Real-time timetable synchronization between multiple devices.  
• Option for students to export their timetables as PDF or calendar files.

## 8. Conclusion

The University Timetable Manager project demonstrates the power of modern front-end web development tools in creating intuitive and efficient academic management systems. The inclusion of dark mode, responsive design, and role-based access highlights the project's attention to both usability and practicality.