



Class Scheduling System

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Introduction

- ✓ A web-based system to manage class schedules.
- ✓ Allows adding classes, subjects, teachers, and scheduling them.
 - ✓ Built using Python, oracleand HTML CSS
- ✓ Focuses on simplicity, user-friendly UI, and CRUD operations.

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Tools & Technologies Used

- ✓ Frontend:
 - - HTML
 - - CSS (with Bootstrap 5)
 - - JavaScript (Basic for validation)
- ✓ Backend:
 - - Python
- ✓ Database:
 - - Oracle
- ✓ Other Tools:
 - - Visual Studio Code
 - - Flask

Key Features

- ✓ Add, View, Update, Delete classes, teachers, subjects.
- ✓ Create and manage schedules.
- ✓ Schedule conflict checking (time overlaps avoided).
- ✓ User login & logout system (admin user).
- ✓ User-friendly Bootstrap-based UI.
- ✓ Simple navigation dashboard.



Database Schema Overview

✓ Tables:

- users (id, username, password)
- classes (id, class_name)
- teachers (id, teacher_name)
- subjects (id, subject_name)
- schedule (id, class_id, teacher_id, subject_id, day, start_time, end_time)

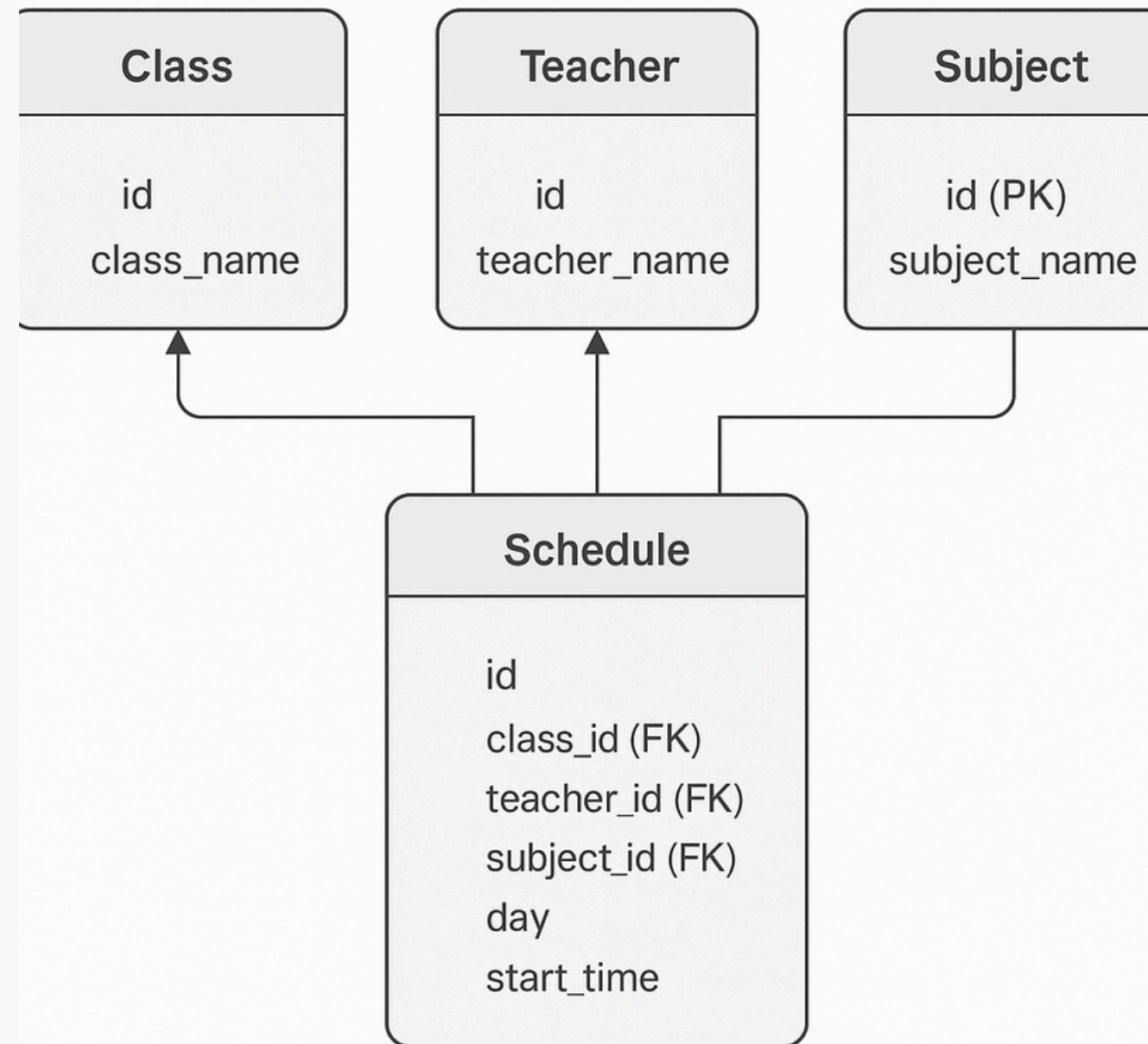
✓ Relationships:

- schedule table links classes, teachers, and subjects.
- users table for admin login.

Technology Stack

- Frontend: HTML, CSS, Bootstrap
- Backend: Flask (Python)
- Database: Oracle (Lightweight)
- Tools: Git, VS Code

ER Diagram



Project Flow

- ✓ User Login -> Dashboard
- ✓ Manage classes, subjects, teachers
- ✓ Create schedules (conflict check)
- ✓ View/Edit/Delete schedules
- ✓ Logout

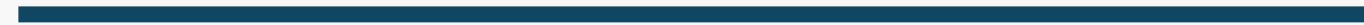
UI Screenshots

- ✓ Login Page
- ✓ Dashboard Page
- ✓ Create Schedule Page
- ✓ View Schedule Page

Security Features

- ✓ Basic session-based login system.
- ✓ Prevents access to pages without login.
- ✓ Secure password checking (plain password or hashed depending on setup).
- ✓ SQL prepared statements to avoid SQL injection.

Conclusion



- ✓ Successfully implemented basic class scheduling system.
- ✓ Easy to use by admin users.
- ✓ Can be enhanced with:
 - Role-based users (Admin, Teacher)
 - Real-time notifications
 - Reports and exports
- ✓ Scalable to institution level with further improvements.





Thank you

