Student Task & Attendance Management System (Using Django REST Framework)

# Tech Stack

- Backend: Django + Django REST Framework (DRF)  
- Database: PostgreSQL (or SQLite for local)  
- Authentication: TokenAuthentication (DRF)  
- Frontend: Optional (You can test via Postman)

# Modules Overview

## 1. Authentication

- User Signup/Login API (only for students and admin)  
- Token-based Authentication  
- User Roles: admin, student

## 2. Admin Functionalities

- Create/update/delete student  
- Create/update/delete task  
- Assign task to specific student(s)  
- Mark task as "Reviewed" with feedback  
- Track student progress on tasks  
- Create/view attendance record (per day)

## 3. Student Functionalities

- View assigned tasks  
- Submit task (upload file + comment)  
- View feedback and status  
- Mark daily attendance (once per day)

# Key Models to Create

User (Extend AbstractUser or use default):  
- username, email, password  
- role (admin or student)  
  
StudentProfile:  
- user (OneToOneField)  
- roll number, course, batch  
  
Task:  
- title, description, due\_date  
- created\_by (admin)  
- assigned\_to (ManyToMany to Student)  
  
TaskSubmission:  
- task, student  
- file upload  
- comment  
- status: submitted, reviewed, rejected  
- feedback (by admin)  
  
Attendance:  
- student  
- date  
- status: present, absent

# APIs to Build

## Authentication

- /api/register/ – Register student  
- /api/login/ – Get Token  
- /api/logout/ – Invalidate token (optional)

## Student APIs

- /api/my-tasks/ – View assigned tasks  
- /api/submit-task/<task\_id>/ – Submit task  
- /api/attendance/mark/ – Mark today's attendance  
- /api/attendance/me/ – View my attendance

## Admin APIs

- /api/students/ – CRUD student  
- /api/tasks/ – CRUD task  
- /api/tasks/<id>/assign/ – Assign task to student(s)  
- /api/task-submissions/<id>/review/ – Add feedback  
- /api/attendance/record/ – View/mark attendance

# Extra Hard Features (Bonus/Optional)

- Pagination in all list APIs  
- Filtering by date in attendance  
- Search by name/roll in student list  
- Export attendance/task data to CSV (via DRF)

# Final Submission Expectations (for students)

- Working API with Postman collection  
- Clean code with comment