**Student Management System**

## Goal:

To build a role-based system where **Admins**, **Teachers**, and **Students** can perform specific operations like registering, verifying users, marking/viewing attendance, requesting changes, and managing classes.

1. **User Roles & Functionalities:**

2.1. **Admin**

1. Can verify and update any user
2. Can assign teachers to classrooms
3. Can view system-wide attendance reports

2.2. **Teacher**

1. Can view students in their assigned classroom
2. Can mark attendance
3. Can view attendance history
4. Can handover class to another teacher
5. Can promote students to the next academic year

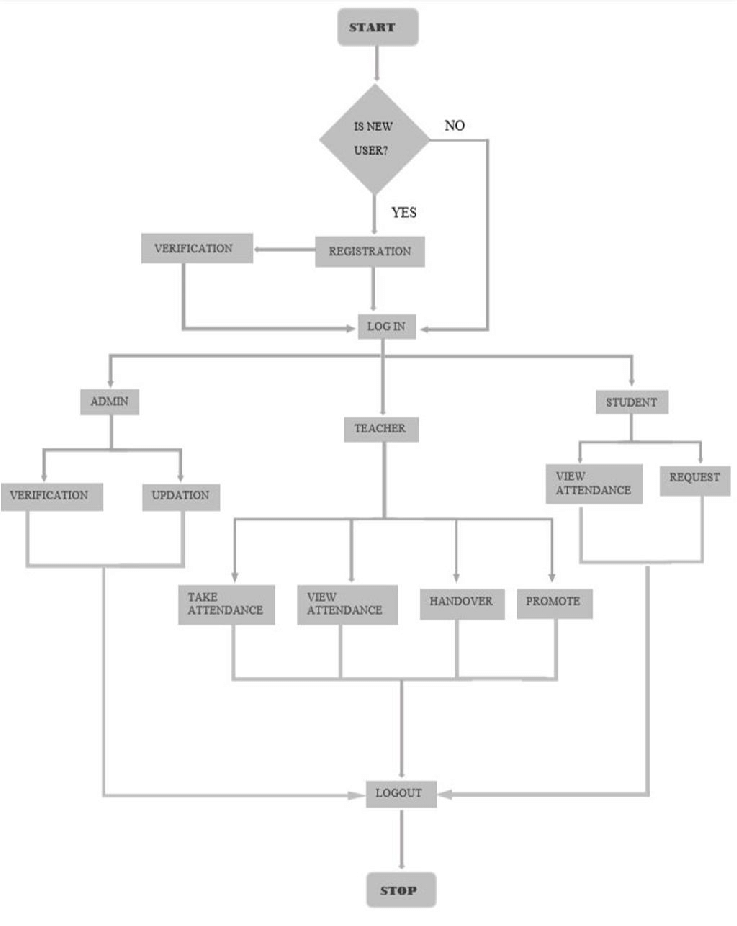
2.3 . **Student**

1. Can view own attendance
2. Can request corrections if attendance is incorrect

## 3.Tech Stack Overview

| **Layer** | **Tool** |
| --- | --- |
| Frontend | React.js, Axios, React Router |
| Backend | Django, Django REST Framework |
| Auth | JWT (SimpleJWT) |
| Database | MySQL |

**4.FLOWCHART**



## 5.Database Models (Conceptual)

| **Entity** | **Attributes** |
| --- | --- |
| **User** | id, name, email, password, role (admin/teacher/student), is\_verified |
| **Classroom** | id, name, assigned\_teacher |
| **StudentProfile** | user (FK), classroom (FK) |
| **Attendance** | student (FK), date, status, recorded\_by (FK) |
| **AttendanceRequest** | student (FK), date, reason, status (pending/approved/rejected) |
| **Handover** | classroom, from\_teacher, to\_teacher, date |
| **Promotion** | student, from\_class, to\_class, date |

1. **Users api endpoints ( http://127.0.0.1:8000/api/ )**

| **Endpoint** | **Method** | **Description** | **Request Body (JSON)** | **Response (JSON)** |
| --- | --- | --- | --- | --- |
| /register/ | POST | Register a new user | { "email": "user@example.com", "name": "John", "password": "password123", "role": "teacher" } | { "id": 1, "email": "user@example.com", "name": "John", "role": "teacher" } |
| /login/ | POST | Login an existing user | { "email": "user@example.com", "password": "password123" } | { "user": { "id": 1, "email": "user@example.com", "name": "John", "role": "teacher" }, "tokens": { "refresh": "refresh\_token\_here", "access": "access\_token\_here" } } |
| /teacher-profile/ | GET | Get all teacher profiles | None | [{ "teacher\_id": "T123", "name": "John", "email": "teacher@example.com" }] |
| /teacher-profile/ | POST | Create a new teacher profile | { "teacher\_id": "T125", "name": "Emily", "email": "emily@example.com", "password": "password123" } | { "teacher\_id": "T125", "name": "Emily", "email": "emily@example.com" } |
| /student-profile/ | GET | Get all student profiles | None | [{ "enrollment\_number": "S1234", "name": "Alice", "email": "alice@example.com" }] |
| /student-profile/ | POST | Create a new student profile | { "enrollment\_number": "S1236", "name": "Charlie", "email": "charlie@example.com", "password": "password123" } | { "enrollment\_number": "S1236", "name": "Charlie", "email": "charlie@example.com" } |