

We are building a University Management System where we will be having **3** types of **roles**: Student, Faculty and Admin.

### **Functional Requirements**

#### **1. Student**

- Students can login and logout from the system.
- Students can manage and update their profile.
- Students can update certain fields.
- Students can enrol in a semester.
- Students can enrol in offered courses for a specific semester.
- Students can pay their tuition fees through online/offline. (Partial/Full Payment)
- Students can see their transaction histories.
- Students can see their class schedules.
- Students can see their notice board and events.
- Students can see their results/grades (Full/Semester Wise).
- Students can participate in surveys to evaluate courses and faculties.

#### **2. Admin**

- Admins can login and logout from the system.
- Admins can manage and update their profile.
- Admins can only update certain fields.
- Admins can manage user accounts:
  - Block/Unblock
  - Change Password
  - Forcefully Logout someone from the system
- Admins can manage multiple process:
  - Semester
  - Offered Courses
  - Class Sections
  - Faculty
  - Students
  - Buildings
  - Rooms
  - Payments
  - Permissions (Super admins will give permissions to regular admins)
  - Activities

#### **3. Faculty**

- Faculties can login and logout from the system.
- Faculties can manage and update their profile.
- Faculties can only update certain fields.
- Faculties can manage student grades.
- Access to Academic and Personal Information.
- Faculties can manage their lecture resources.

We will have 3 services -

1. Authentication
2. Management
3. Payment

## **Models**

### ☐ Permission

1. title

### ☐ UserPermission

1. permissionId
2. userId

### ☐ User

1. id
2. role
3. password
4. createdAt
5. updatedAt
6. studentId || adminId || facultyId

### ☐ Student

2. id
3. name
  - firstName
  - middleName
  - lastName
4. gender
5. dateOfBirth
6. guardian
7. email
8. contactNo
9. emergencyContactNo
10. presentAddress
11. permanentAddress
12. department
13. subject

### ☐ Admin

1. id
2. name
  - firstName
  - middleName
  - lastName
3. gender
4. dateOfBirth

5. email
6. contactNo
7. emergencyContactNo
8. department
9. designation

☐ Faculty

1. Id
2. name
  - firstName
  - middleName
  - lastName
3. gender
4. dateOfBirth
5. email
6. contactNo
7. emergencyContactNo
8. department
9. faculty
10. designation

## **API Endpoints**

### 1. User

- ❖ users/create-student (POST)
- ❖ users/create-faculty (POST)
- ❖ users/create-admin (POST)
- ❖ users/my-profile (GET)
- ❖ users/:id (GET)
- ❖ users/:id (PATCH)
- ❖ users/:id (DELETE)
- ❖ users/:id/force-logged-out
- ❖ users?page=1&limit=10 (GET)
- ❖ users/:id/available-permissions?page=1&limit=10 (GET)
- ❖ users/:id/assigned-permissions?page=1&limit=10 (GET)
- ❖ users/:id/assign-permissions (POST)
- ❖ users/:id/remove-permissions (POST)

### 2. Student

- ❖ students?page=1&limit=10 (GET)
- ❖ students/:id (GET)
- ❖ students/:id (PATCH)

3. Faculty

- ❖ faculties?page=1&limit=10 (GET)
- ❖ faculties/:id (GET)
- ❖ faculties/:id (PATCH)

4. Admin

- ❖ admins?page=1&limit=10 (GET)
- ❖ admins/:id (GET)
- ❖ admins/:id (PATCH)

5. Permission

- ❖ permissions?page=1&limit=10 (GET)
- ❖ permissions (POST)
- ❖ permissions/:id (GET)
- ❖ permissions/:id (PATCH)
- ❖ permissions/:id (DELETE)

6. Auth

- ❖ auth/login (POST)
- ❖ auth/refresh-token (POST)
- ❖ auth/change-password (POST)
- ❖ auth/forgot-password (POST)
- ❖ auth/reset-password (POST)