**Student Document**

**{**

**"email": "string", // Student's email**

**"name": "string", // Student's name**

**"avatar": "string", // URL or path to the student's avatar**

**"studentID": "number", // Unique ID for the student**

**"grade": "number", // Current grade of the student**

**"class": "string", // Class or section the student belongs to**

**"subject": ["string"], // Array of subject IDs the student is enrolled in**

**"teacherID": ["string"], // Array of teacher IDs associated with the student**

**"parentsname": "string", // Name of the student's parents**

**"address": { // Address object**

**"homeNo": "string",**

**"street": "string",**

**"city": "string"**

**},**

**"phoneNumber": "number" // Student's phone number**

**}**

**User (Teacher/Admin/Super Admin) Document**

**{**

**"username": "string", // Username of the user**

**"name": "string", // Name of the user**

**"email": "string", // Email of the user**

**"password": "string", // Password for the user's account**

**"phoneNumber": "number", // Phone number of the user**

**"grade": "number", // Grade associated with the user (if applicable)**

**"class": "string", // Class or section associated with the user (if applicable)**

**"role": "string", // Role of the user (teacher/admin/super admin)**

**"avatar": "string" // URL or path to the user's avatar**

**}**

**Student Grade Document**

**{**

**"studentID": "string", // Reference to Student document**

**"semester": "number", // Semester number (1, 2, or 3)**

**"grades": [**

**{**

**"subjectID": "string", // Reference to Subject document**

**"grade": "string" // Grade (e.g., A, B, C, etc.)**

**}**

**],**

**"year": "number" // Academic year**

**}**

**Student Attendance Document**

**{**

**"studentID": "string", // Reference to Student document**

**"date": "date", // Date of attendance**

**"status": "string", // Status (e.g., Present, Absent, Late)**

**"subjectID": "string", // Reference to Subject document (if attendance is per subject)**

**"semester": "number" // Semester number (1, 2, or 3)**

**}**

**Subject Document**

**{**

**"subjectID": "string", // Unique ID for the subject**

**"name": "string", // Name of the subject**

**"teacherID": "string" // Reference to User (Teacher) document**

**}**

**Relationships**

**1. Student Document Relationships**

* Subjects: A student can be enrolled in multiple subjects, referenced by an array of subjectIDs.
* Teachers: A student can have multiple teachers, referenced by an array of teacherIDs.
* Grades: A student can have multiple grades, which will reference the student by studentID.
* Attendance: A student can have multiple attendance records, which will reference the student by studentID.

**2. User (Teacher/Admin/Super Admin) Document Relationships**

* Subjects: A teacher can teach multiple subjects, referenced by the teacherID in the Subject document.
* Students: Indirect relationship through the subjects they teach and the student grades/attendance they manage.

**3. Student Grade Document Relationships**

* Student: Each grade document references a specific student by studentID.
* Subject: Each grade entry within the grade document references a specific subject by subjectID.

**4. Student Attendance Document Relationships**

* Student: Each attendance document references a specific student by studentID.

**5. Subject Document Relationships**

* Teacher: Each subject is taught by a specific teacher, referenced by teacherID.
* Students: Each subject can have multiple students enrolled, referenced indirectly through the student documents.