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Smart-timetable

ER Diagram

| TimeTable | |
|------------|---------|
| code | string |
| courseCode | string |
| courseName | string |
| roomName | string |
| day | string |
| period | string |
| yearGroup | string |
| program | string |
| scheduled | boolean |

| StudentCourse | |
|---------------|----|
| id | |
| studentId | pk |
| courseId | pk |

| Student | |
|-------------|--------|
| id | pk |
| indexNo | string |
| email | string |
| programId | fk |
| name | string |
| yearGroupId | fk |

| Program | |
|-------------|--------|
| id | pk |
| programName | string |

| Course | |
|-----------------|--------|
| id | pk |
| programId | fk |
| yearGroupId | fk |
| courseCode | string |
| courseName | string |
| maxHoursPerDay | number |
| numMeetingTimes | number |

| YearGroup | |
|-----------|--------|
| id | pk |
| name | string |

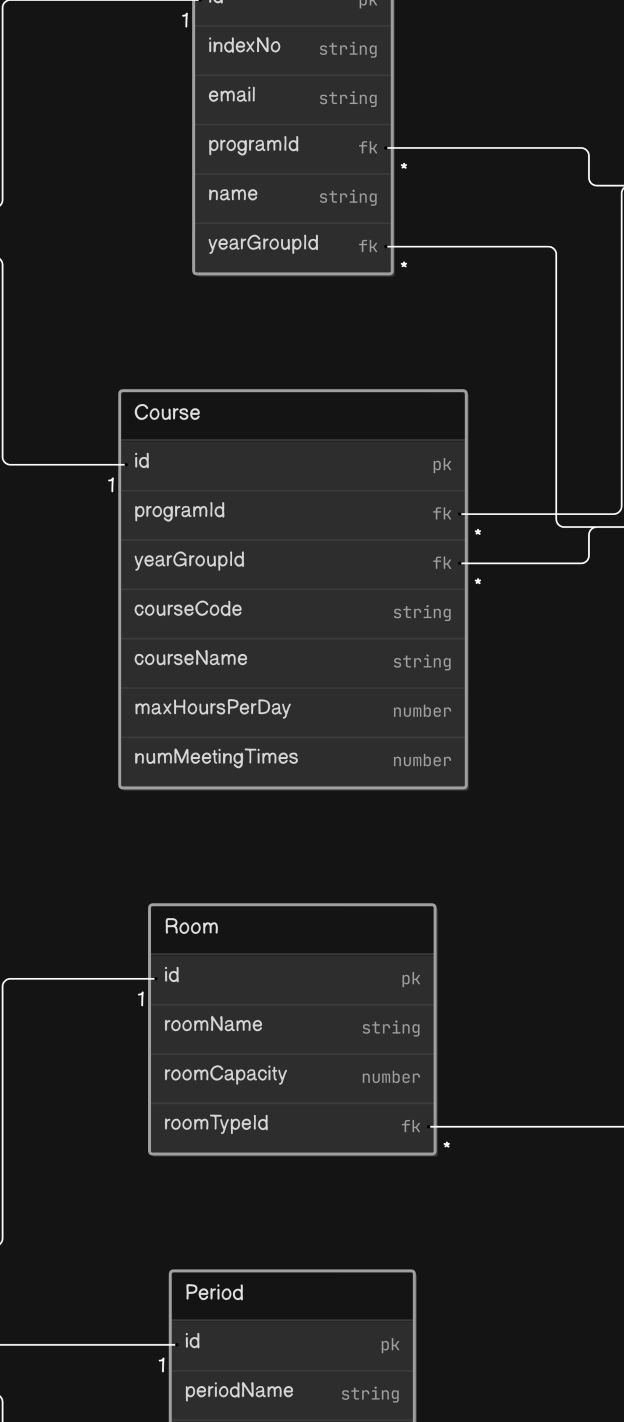
| Room | |
|--------------|--------|
| id | pk |
| roomName | string |
| roomCapacity | number |
| roomTypeId | fk |

| RoomType | |
|--------------|--------|
| id | pk |
| roomTypeName | string |
| description | string |

| roomAvailability | |
|------------------|---------|
| id | pk |
| roomId | fk |
| isAvailable | boolean |
| periodId | fk |
| dayId | fk |

| Period | |
|-------------|--------|
| id | pk |
| periodName | string |
| periodRange | string |

| Day | |
|-----|--|
| | |



| | |
|---------|--------|
| id | pk |
| 1 | |
| dayName | string |

Technologies

- Nodejs - Run time for javascript for building server-side applications
- ExpressJs - Framework for building apis
- MongoDB - Nosql database
- Mongoose - object modeling tool for javascript and nodejs

Api Endpoints

| Endpoint | Method | Description |
|-----------------------|--------|--|
| /api/courses | GET | Get all courses with the total students appended |
| /api/roomAvailability | GET | Get all rooms available for scheduling(ie exluding Offices) |
| /api/rooms | GET | Get all rooms |
| /api/students | GET | Get all students |
| /api/students | POST | Add a student to the database |
| /api/schedule/:code | GET | Get timetable based on the code for uniqueness |
| /api/schedule/:code | POST | Generate timetable for with code for uniqueness |