

NAGARRO CLP 2017

PLACEMENT API

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Requirements

- Create a server application, that can be used for registering students and companies for a placement event in an institute.
- The solution should use NodeJS and MongoDB.
- The server application should expose following API's
 - Add, Remove and Edit for 'Student' in the college.
 - Register and Unregister of 'Company' for the placement event in the college.
 - Register and Unregister a 'Student' for a 'Company' in the college.
- Above API's should be completed in all respect including database.

Additional Requirements

- Implementing API Data validation.
- Implementing Error handling in application with proper **Response codes** and **Error Messages**.
- Implementing Logging in the application.

Schemas

- Student Schema

```
name : String,                //Name of Student
department : String,          //Departemnt of Student. eg CSE, IT etc
rollno : Number,              //Rollnumber of Student
cgpa : Number,                //CGPA of Student
updated : { type: Date, default: Date.now },
```

- Company Schema

```
name : String,                //Name of Company
placement_date : String,      //Date when company is coming for placement
updated : { type: Date, default: Date.now },
```

- Registration Schema

```
student_Id : mongoose.Schema.Types.ObjectId, //Mongold of Student
company_Id : mongoose.Schema.Types.ObjectId, //Mongold of Company
updated : { type: Date, default: Date.now }
```

API Methods

- Adding a Student :- POST at /api/students/add
- Editing a Student :- POST at /api/students/update
- Removing a Student :- DELETE at /api/students/remove

- Registering a Company :- POST at /api/companies/register
- Unregistering a Company :- DELETE at /api/companies/register

- Registering a Student for Company :- POST at /api/students/register
- Unregistering a Student for Company :- DELETE at /api/students/register

- Get students based on query :- GET at /api/students
- Get students registered based on query :- GET at /api/students/register
- Get companies registered based on query :- GET at /api/companies

Adding a Student

- Requirements :
 - JSON Body with fields
 - Name : String
 - Department (Valid departments : ["CSE","IT","ME","CV","BBA","BCOM","EEE","ECE"])
 - Rollno : Positive Integer
 - CGPA : Float between 0 and 10
 - Query Parameters : None
- Exceptions / Errors
 - JSON Exception : Invalid JSON Object

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- Rollno Exception : Roll number not integer
 - Department Exception : Department not a valid department.
 - CGPA Exception : CGPA not a float or out of range.

Updating a Student

- Requirements
 - JSON Body with fields (Optional)
 - Name : String
 - Department (Valid departments : ["CSE","IT","ME","CV","BBA","BCOM","EEE","ECE"])
 - Rollno : Positive Integer
 - CGPA : Float between 0 and 10
 - Query Parameters
 - Id : Mongo Id of student to update
 - Name : Name of Student to update
 - Department : Department of Student to update
 - Mincgpa : Minimum CGPA
- Exception / Errors
 - JSON Exception : Invalid JSON Object
 - Rollno Exception : Roll no not integer
 - Department Exception : Department not a valid department
 - CGPA Exception : CGPA not a float or out of range.
 - Invalid ID Exception : Invalid Mongold.

Deleting a Student

- Requirements
 - Query Parameters
 - Id : Mongo Id of student to update
 - Name : Name of Student to update
 - Department : Department of Student to update
 - Mincgpa : Minimum CGPA
- Exception / Errors
 - Rollno Exception : Roll no not integer

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- Department Exception : Department not a valid department
 - CGPA Exception : CGPA not a float or out of range.
 - Invalid ID Exception : Invalid Mongoid.

Registering a Company

- Requirements
 - JSON Body with fields
 - Name : Name of Company
 - Placement_date : Date on which company is coming for placement.
(mm-dd-yyyy)
 - Query Parameters : None
- Exceptions/ Errors
 - JSON Exception : Invalid JSON Object
 - Placement Date Exception : Date is either of wrong format or has already passed.

Unregistering a Company

- Requirements
 - Query Parameters
 - Cid : Mongo id of Company
- Exceptions / Errors
 - Invalid ID Exception : Invalid mongoid
 - Invalid query parameters : Cid not specified in query.

Registering a Student for company

- Requirements
 - Query Parameters
 - Sid : Mongo Id of Student
 - Cid : Mongo Id of Company
- Exceptions / Errors
 - Invalid ID Exception : Invalid mongoid
 - Invalid query parameters : Cid and/or Sid not specified in query.

Unregistering a Student for company

- Requirements
 - Query Parameters
 - Sid : Mongo Id of Student
 - Cid : Mongo Id of Company
- Exceptions / Errors
 - Invalid ID Exception : Invalid mongoid
 - Invalid query parameters : Sid not specified in query.

Get students

- Requirements
 - Query Parameters
 - Id : Mongo Id of student to update
 - Name : Name of Student to update
 - Department : Department of Student to update
 - Mincgpa : Minimum CGPA
- Exception / Errors
 - Rollno Exception : Roll no not integer
 - Department Exception : Department not a valid department
 - CGPA Exception : CGPA not a float or out of range.
 - Invalid ID Exception : Invalid Mongold.

Get Companies registers

- Requirements
 - Query Parameters
 - Name : Name of Company
 - Id : Mongold of Company
 - Date : Placement date for Company
- Exceptions / Errors
 - Invalid ID Exception : Invalid Mongold.

Get Students Registered

- Requirements
 - Query Parameters
 - Sid : Mongoid of Student
 - Cid : Mongoid of Company