Student Database

Student Database is an API developed to manipulate data of university students. It is created with SpringBoot and tested with Postman.

This is a platform agnostic API, meaning it doesn't require any specific frontend, backend or database to work. It can work with any configuration that uses the REST standard of API. The API is able to perform four operations to the database.

API Requests

Request Name	Requests Description	Type	Endpoint
Get Student	Get information of all students	GET	`/getStudent`
Put Student	Update information of one student	PUT	`/updateStudent`
Post Student	Add information of new student	POST	`/registerStudent`
Delete Student	Delete information of one student	DELETE	`deleteStudent`

Before You Start

The further part is detailed documentation about every request that is supported by the API. Terms used in the documentation might defer from what you use in your language / tool. So here's a brief description of terminologies used in the document.

Terminology	Description
Request	When a server is called from the frontend with some endpoint and optional parameters.

Endpoint	The point of interaction between API and other systems.
Payload	Information sent along with the request. It could be anything that is useful for API as well as the backend server to process the request.
Response	When the request is processed, information sent back to the frontend educating it about the result of the request. It consists of HTTP status code and error and/or data.

Meet the Creators

The API is developed as a project for API Fest organized by Postman in the span of 26th Jan 2022 and 29th Jan 2022.

Here are the developers:

1. Saptak Chakraborty - Team Lead
2. Shaon Dhar - API Developer
3. Kaushal Joshi - API Documentation Creator

Mock Application

To demonstrate workings of this API, we created a full stack application. It is built with Angular JS in the front end, Java Springboot in the backend and MySQL as a database. It follows REST standard of APIs.

You can see the GitHub repo of the project here.

GET Student

`localhost:9090/getStudents`

This request is used to get information of all the students available in the database. The response is usually an array of objects, where each object is information about an individual student.

Request Type	Endpoint	Payload	Response
GET	`/getStudent`	NIL	JSON Array of objects

Body

Raw JSON

```
{
  "name": "Shaon Dhar",
  "fathersName": "XYZ",
  "phone": "8556975124",
  "percentage": 98,
  "grade": "A",
  "course": "MCA",
  "address": "Kolkata",
  "email": "shaonnw@gmail.com"
}
```

POST Student

`localhost:9090/registerStudent`

This request stores information of new students in the database.

Request Type	Endpoint	Payload	Response
POST	`/registerStudent`	Information about new student	JSON Object of newly added information

Payload:
This endpoint is used for adding a new entry to the database. Hence we need to provide all the information which is required to store new values in the database.

Here's the list data with its data type that you need to provide in the payload.

Key	Data type	Example
name	String	"Kaushal Joshi"
fatherName	String	"Sharad Joshi"
phone	String	"8082498523"
percentage	Number	76
grade	String	"A"
course	String	"Engineering"

address	String	“Mumbai”
email	String	"7joshikaushal@gmail.com"

Things to Know

ID is supposed to be created by the database itself and it is expected to be a Number data type value.

When the request is successful, ID will be returned along with other newly added information.

Body

Raw JSON

```
{
  "name": "Shaon Dhar",
  "fathersName": "XYZ",
  "phone": "8556975124",
  "percentage": 98,
  "grade": "A",
  "course": "MCA",
  "address": "Kolkata",
  "email": "shaonnw@gmail.com"
}
```

PUT Student

`localhost:9090/updateStudent`

This request modifies existing information in the database. It takes student ID as a payload and forwards it to the database. After a successful updation, API sends

Request Type	Endpoint	Payload	Response
POST	`/updateStudent`	ID (Number) Informationto be updated (Object)	JSON object of updated information

Payload

The autogenerated ID of student along with the information that needs to be updated is expected as a payload. ID must be of a numeric data type whereas new information must be an object.

Body

Raw JSON

```
{
  "rollNumber": 5,
  "name": "Shaon Dhar",
  "fathersName": "XYZ",
  "phone": "8556975124",
  "percentage": 100,
  "grade": "A",
  "course": "MCA",
  "address": "Kolkata",
  "email": "shaonnw@gmail.com"
}
```

DELETE Student

`localhost:9090/deleteStudent?id=5`

This request deletes information of individual student from the database. It takes student ID as a payload and passes it to the database. When a request is successful i.e. student is deleted, we get an empty array in return.

Request Type	Endpoint	Payload	Response
DELETE	`/deleteStudent`	ID (Number)	Empty Array

Payload

The autogenerated ID of student that needs to be deleted from the database is sent along with the request. It is expected to be of a Number data type.

Parameters

Name	Data Type	Example
id	Number	5

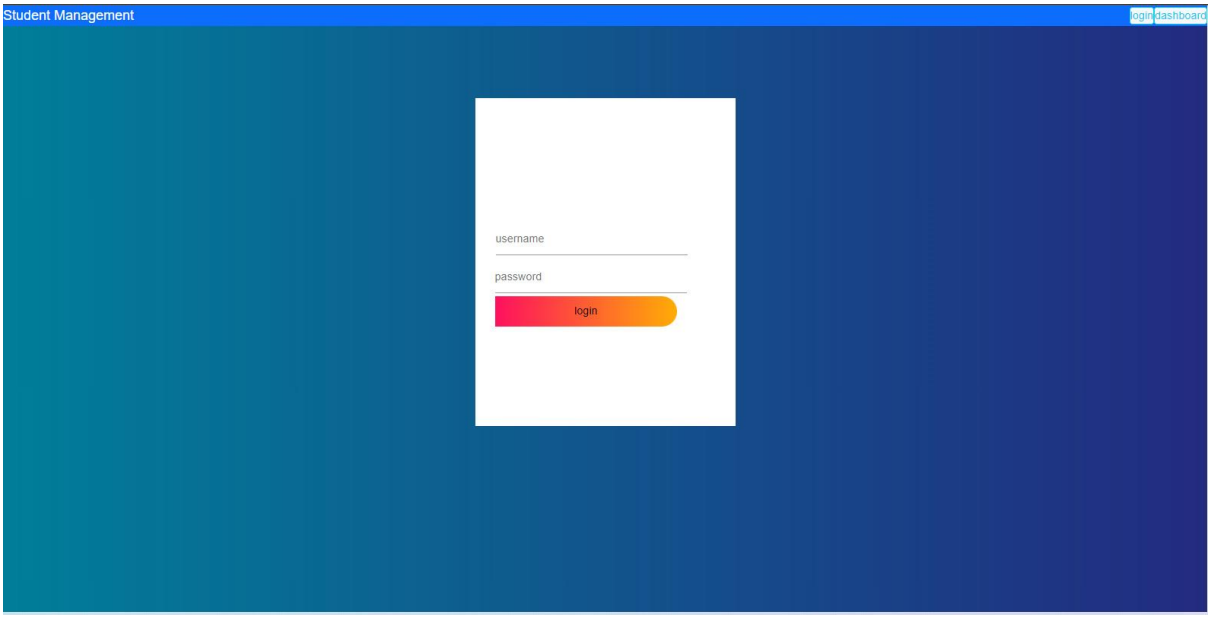
Body

Raw JSON

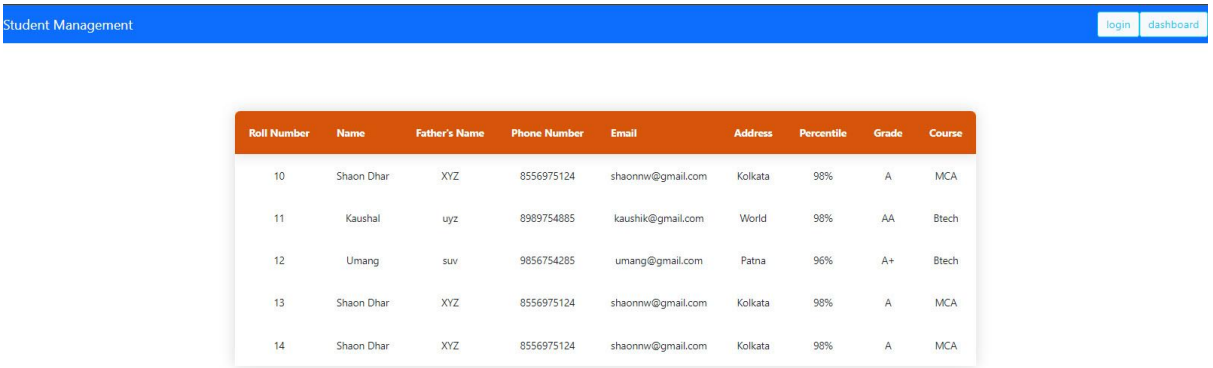
```
{
  "name": "Shaon Dhar",
  "fathersName": "XYZ",
  "phone": "8556975124",
  "percentage": 100,
  "grade": "A",
  "course": "MCA",
  "address": "Kolkata",
  "email": "shaonnw@gmail.com"
}
```

Demonstration

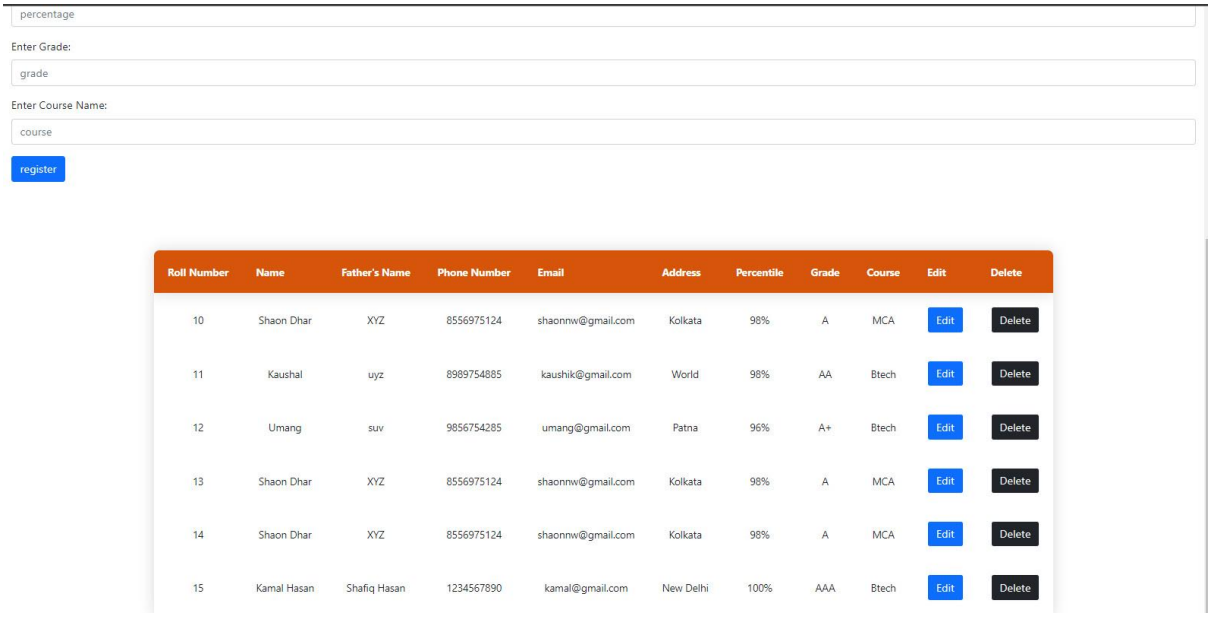
Login Page



GET Students



Roll Number	Name	Father's Name	Phone Number	Email	Address	Percentile	Grade	Course
10	Shaon Dhar	XYZ	8556975124	shaonnw@gmail.com	Kolkata	98%	A	MCA
11	Kaushal	uyz	8989754885	kaushik@gmail.com	World	98%	AA	Btech
12	Umang	suv	9856754285	umang@gmail.com	Patna	96%	A+	Btech
13	Shaon Dhar	XYZ	8556975124	shaonnw@gmail.com	Kolkata	98%	A	MCA
14	Shaon Dhar	XYZ	8556975124	shaonnw@gmail.com	Kolkata	98%	A	MCA



Roll Number	Name	Father's Name	Phone Number	Email	Address	Percentile	Grade	Course	Edit	Delete
10	Shaon Dhar	XYZ	8556975124	shaonnw@gmail.com	Kolkata	98%	A	MCA	Edit	Delete
11	Kaushal	uyz	8989754885	kaushik@gmail.com	World	98%	AA	Btech	Edit	Delete
12	Umang	suv	9856754285	umang@gmail.com	Patna	96%	A+	Btech	Edit	Delete
13	Shaon Dhar	XYZ	8556975124	shaonnw@gmail.com	Kolkata	98%	A	MCA	Edit	Delete
14	Shaon Dhar	XYZ	8556975124	shaonnw@gmail.com	Kolkata	98%	A	MCA	Edit	Delete
15	Kamal Hasan	Shafiq Hasan	1234567890	kamal@gmail.com	New Delhi	100%	AAA	Btech	Edit	Delete

POST Student

Update Student