

API testing

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HTTP status

The response contains one of the following statuses:

- **200**: Get data from the server successfully
- **201**: Successfully created and pushed data to the server
- **400(bad request)**: The server cannot process the request from the user who likes inputting invalid data.
- **404(not found)**: The server cannot find the requested resource. For example, the URL is incorrect or the resource does not exist.
- **500**: The error occurred from the server side

Use Postman

Manage multiple API and run test

- [Postman](#) app is a powerful feature that allows you to organize, share, and automate your API requests.
- Postman supports all methods including:
 1. GET: get data from a server
 2. POST: send data to a server
 3. PUT: update data to a server
 4. PATCH: update data to a server
 5. DELETE: delete data to a server

What is URL ?

`https://reqres.in/api/users?page=2`

domain name

path to the file

parameters

Create a new URL object



```
1 const url = new URL('https://reqres.in/api/users?page=2');  
2 console.log(url);
```

Result:

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS C:\Users\Admin\Documents\Learning24\web\nodejs> node index.js
URL {
  href: 'https://reqres.in/api/users?page=2',
  origin: 'https://reqres.in',
  protocol: 'https:',
  username: '',
  password: '',
  host: 'reqres.in',
  hostname: 'reqres.in',
  port: '',
  pathname: '/api/users',
  search: '?page=2',
  searchParams: URLSearchParams { 'page' => '2' },
  hash: ''
}
```


Methods API

Student APIs

Method	Resource	Has payload	Desc
GET	/students	NO	Get all students
GET	/students/:studentId	NO	Get one student by id
POST	/students	YES	Add new student
PUT	/students/:studentId	YES	Full update of a student
PATCH	/students/:studentId	YES	Paritial update of a student
DELETE	/students/:studentId	NO	Remove a student by id



Use Postman

Students		
GET	get all student	...
GET	get a student by id	
GET	filter students	
GET	get students on a page	
POST	create a new student	
PUT	update a student	
PATCH	update a student	
DEL	delete a student	

Get all students

Method GET

Header

 Students / get all student 

 Save   Share

GET 


https://js-post-api.herokuapp.com/api/students

Send 

Params Authorization Headers (7) Body Scripts Settings

[Cookies](#)

Headers  6 hidden

	Key	Value	Description	⋮ Bulk Edit Presets 
<input checked="" type="checkbox"/>	Content-Type	application/json		
	Key	Value	Description	

Params

 Students / get all student

 Save



Share


GET



https://js-post-api.herokuapp.com/api/students?_page=1

Send



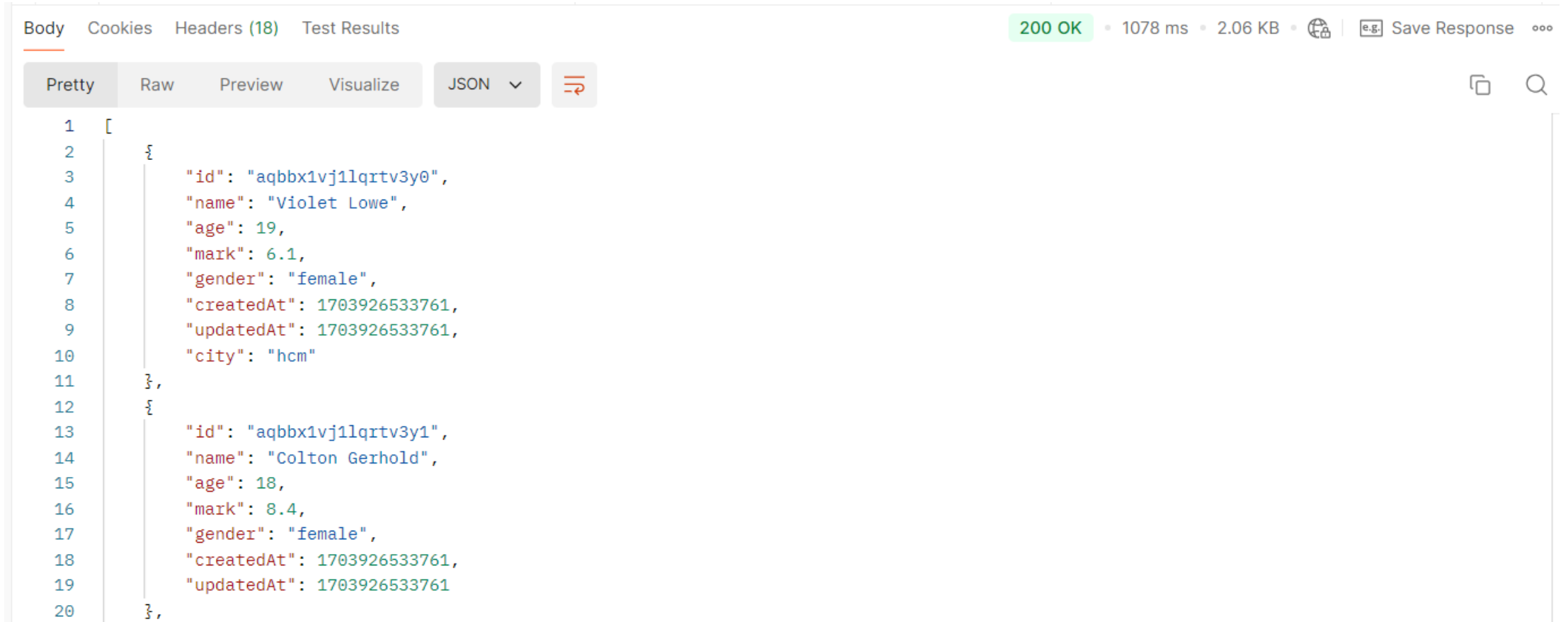
Params  Authorization Headers (7) Body Scripts Settings

Cookies

Query Params



<input checked="" type="checkbox"/>	Key	Value	Description	⋮ Bulk Edit
<input checked="" type="checkbox"/>	_page	1		
	Key	Value	Description	


Show all data



The screenshot shows a web browser's developer tools interface, specifically the REST client tab. The response status is 200 OK, with a response time of 1078 ms and a size of 2.06 KB. The response body is displayed in a JSON format, showing two objects in an array. The first object represents a user with ID "aqbbx1vj1lqrtv3y0", name "Violet Lowe", age 19, mark 6.1, gender "female", createdAt 1703926533761, updatedAt 1703926533761, and city "hcm". The second object represents a user with ID "aqbbx1vj1lqrtv3y1", name "Colton Gerhold", age 18, mark 8.4, gender "female", createdAt 1703926533761, and updatedAt 1703926533761.

Body Cookies Headers (18) Test Results

200 OK • 1078 ms • 2.06 KB •  |  Save Response ...

Pretty Raw Preview Visualize JSON 

```
1  [  
2    {  
3      "id": "aqbbx1vj1lqrtv3y0",  
4      "name": "Violet Lowe",  
5      "age": 19,  
6      "mark": 6.1,  
7      "gender": "female",  
8      "createdAt": 1703926533761,  
9      "updatedAt": 1703926533761,  
10     "city": "hcm"  
11   },  
12   {  
13     "id": "aqbbx1vj1lqrtv3y1",  
14     "name": "Colton Gerhold",  
15     "age": 18,  
16     "mark": 8.4,  
17     "gender": "female",  
18     "createdAt": 1703926533761,  
19     "updatedAt": 1703926533761  
20   },  
  ]
```

Show data in a page

Body Cookies Headers (21) Test Results

200 OK

Pretty

Raw

Preview

Visualize

JSON



```
1  {
2  >  "data": [ ...
102 ],
103   "pagination": {
104     "_page": 1,
105     "_limit": 10,
106     "_totalRows": 50
107   }
108 }
```

Filler attribute

 Students / **get all student**

 Save



Share


GET



https://js-post-api.herokuapp.com/api/students?_page=1&gender=female

Send



Params  Authorization Headers (7) Body Scripts Settings


[Cookies](#)


Query Params

<input checked="" type="checkbox"/>	Key	Value	Description	...	Bulk Edit
<input checked="" type="checkbox"/>	_page	1			
<input checked="" type="checkbox"/>	gender	female			
	Key	Value	Description		

Get a student by id

Method GET /students/:studentId

 Students / get a student by id

 Save



Share

GET



https://js-post-api.herokuapp.com/api/students/aqbbx1vj1lqrtv3y0

Send



Show data

Body

Cookies

Headers (17)

Test Results

200 OK

Pretty

Raw

Preview

Visualize

JSON 

```
1  {
2    "id": "aqbbx1vj1lqrtv3y0",
3    "name": "Violet Lowe",
4    "age": 19,
5    "mark": 6.1,
6    "gender": "female",
7    "createdAt": 1703926533761,
8    "updatedAt": 1703926533761,
9    "city": "hcm"
10 }
```

Create a new student

Method POST - /students

- Choose Body --> raw --> JSON

Method POST - /students

HTTP Students / create a new student Save Share

POST https://js-post-api.herokuapp.com/api/students Send

Params Authorization Headers (9) **Body** Scripts Settings Cookies

☐ none ☐ form-data ☐ x-www-form-urlencoded ☒ raw ☐ binary ☐ GraphQL **JSON** Beautify


```
1 {
2   "name": "Kaylee Austin",
3   "age": 20,
4   "mark": 7.2,
5   "gender": "male",
6   "city": "hcm"
7 }
```

Body Cookies Headers (19) Test Results 201 Created • 1120 ms • 1.19 KB • Save Response

Pretty Raw Preview Visualize **JSON** Copy Search

```
1 {
2   "name": "Kaylee Austin",
3   "age": 20,
4   "mark": 7.2,
5   "gender": "male",
6   "city": "hcm",
7   "createdAt": 1730396114456,
8   "updatedAt": 1730396114456,
9   "id": "_svJPMM"
10 }
```

Check Result

 Students / get all student

GET


https://js-post-api.herokuapp.com/api/students


Send

Params • Authorization Headers (7) Body Scripts Settings Cookies

Query Params

<input type="checkbox"/>	Key	Value	Description	...	Bulk Edit
<input type="checkbox"/>	_page	1			
<input type="checkbox"/>	gender	female			
	Key	Value	Description		

Body Cookies Headers (18) Test Results 200 OK • 1110 ms • 2.1 KB •  Save Response ...

Pretty Raw Preview Visualize JSON 

```
490   "mark": 6,
491   "gender": "female",
492   "createdAt": 1703926533761,
493   "updatedAt": 1703926533761,
494   "city": "hn"
495 },
496 {
497   "name": "Kaylee Austin",
498   "age": 20,
499   "mark": 7.2,
500   "gender": "male",
501   "city": "hcm",
502   "createdAt": 1730396114456,
503   "updatedAt": 1730396114456,
504   "id": "_svJPMM"
505 }
506 ]
```

Update a student

Method PUT

- A full update of a student

The screenshot shows a REST client interface with the following elements:

- Top Bar:** A breadcrumb trail "Students / create a new student Copy" with a "Save" button and a "Share" button.
- Request Bar:** The method is set to "PUT" and the URL is "https://js-post-api.herokuapp.com/api/students/_svJPMM". A "Send" button is on the right.
- Tabs:** "Params", "Authorization", "Headers (9)", "Body" (selected), "Scripts", and "Settings".
- Body Format:** Radio buttons for "none", "form-data", "x-www-form-urlencoded", "raw" (selected), "binary", and "GraphQL". A "JSON" dropdown menu is also present.
- Body Content:** A JSON object is displayed in a code editor:

```
1 {  
2   "name": "Kaylee Austin",  
3   "age": 20,  
4   "mark": 7.2,  
5   "gender": "male",  
6   "city": "đà nẵng"  
7 }
```
- Actions:** "Cookies" and "Beautify" buttons are located on the right side of the interface.

Result method PUT /students/:studentId

Body Cookies Headers (17) Test Results

200 OK

Pretty

Raw

Preview

Visualize


JSON



```
1  {
2    "name": "Kaylee Austin",
3    "age": 20,
4    "mark": 7.2,
5    "gender": "male",
6    "city": "đà nẵng",
7    "id": "_svJPMM"
8  }
```

Method **PATCH** /students/:studentId

- Partial update of a student

 Students / update a student Save Share

PATCH ▼ Send ▼

Params Authorization Headers (9) **Body** ● Scripts Settings Cookies

☐ none ☐ form-data ☐ x-www-form-urlencoded ☒ raw ☐ binary ☐ GraphQL **JSON** ▼ Beautify

```
1  {
2    |  "age": 13,
3    |  "mark": 5.5
4    |  }
```

Result method PATCH

Body Cookies Headers (17) Test Results

200 OK

Pretty

Raw

Preview

Visualize

JSON





```
1  {
2    "name": "Kaylee Austin",
3    "age": 13,
4    "mark": 5.5,
5    "gender": "male",
6    "city": "đà nẵng",
7    "id": "_svJPMM",
8    "updatedAt": 1730402340430
9  }
```


Delete a student by id


Method DELETE /students/:studentId

Body → none

 Students / delete a student

Save  Share

DELETE 

Send 

Params Authorization Headers (7) Body Scripts Settings

☒ none ☐ form-data ☐ x-www-form-urlencoded ☐ raw ☐ binary ☐ GraphQL

This request does not have a body

Result method Delete /students/:studentId

Body Cookies Headers (17) Test Results

200 OK

Pretty

Raw

Preview

Visualize

JSON



1

{}

User authentication

Use Postman

▼ User		
	POST register user	...
	POST log in user	

Register user

Method POST

HTTP User / register user Save Share

POST ▼ Send ▼

Params Authorization Headers (8) **Body** ● Scripts Settings Cookies

☐ none ☐ form-data ☐ x-www-form-urlencoded ☒ raw ☐ binary ☐ GraphQL **JSON** ▼ Beautify

```
1 {  
2   "email": "eve.holt@reqres.in",  
3   "password": "pistol"  
4 }
```

Result

- Return a token (jwt)

Body Cookies Headers (14) Test Results

200 OK

Pretty

Raw

Preview

Visualize

JSON ▼



```
1  {  
2    "id": 4,  
3    "token": "QpwL5tke4Pnpja7X4"  
4  }
```

Log in user

Method POST

HTTP User / log in user Save Share

POST ▼ Send ▼

Params Authorization Headers (8) Body ● Scripts Settings Cookies

☐ none ☐ form-data ☐ x-www-form-urlencoded ☒ raw ☐ binary ☐ GraphQL **JSON** ▼ Beautify

```
1 {  
2   "email": "eve.holt@reqres.in",  
3   "password": "cityslicka"  
4 }
```

Result

- Return a token(jwt)

Body Cookies Headers (14) Test Results 200 OK

Pretty Raw Preview Visualize JSON ↕

```
1 {  
2   "token": "QpwL5tke4Pnpja7X4"  
3 }
```

Blog

Get all articles

 Blog / **Get all articles**

GET

▼

https://jsonplaceholder.typicode.com/posts

Send

▼

Params Authorization Headers (7) Body Scripts Settings

Headers

👁 6 hidden

	Key	Value	Description	⋮ Bulk Edit Presets ▼
<input checked="" type="checkbox"/>	Content-Type	application/json		

Result

Body Cookies Headers (26) Test Results


200 OK • 49 ms • 8.19 KB •  |  Save Response ...

Pretty

Raw

Preview



Visualize



JSON 



```
1  [
2    {
3      "userId": 1,
4      "id": 1,
5      "title": "sunt aut facere repellat provident occaecati excepturi optio reprehenderit",
6      "body": "quia et suscipit\nsuscipit recusandae consequuntur expedita et cum\nreprehenderit molestiae ut ut quas totam\nnostrum rerum
       est autem sunt rem eveniet architecto"
7    },
8    {
9      "userId": 1,
10     "id": 2,
11     "title": "qui est esse",
12     "body": "est rerum tempore vitae\nsequi sint nihil reprehenderit dolor beatae ea dolores neque\nfugiat blanditiis voluptate porro
       vel nihil molestiae ut reiciendis\nqui aperiam non debitis possimus qui neque nisi nulla"
13   },
14   {
15     "userId": 1,
16     "id": 3,
17     "title": "ea molestias quasi exercitationem repellat qui ipsa sit aut",
18     "body": "et iusto sed quo iure\nvoluptatem occaecati omnis eligendi aut ad\nvoluptatem doloribus vel accusantium quis
       pariatur\nmolestiae porro eius odio et labore et velit aut"
```

Get a article by id


 Blog / **get detail article** 

 Save   Share

GET 

Copy link to request

https://fakestoreapi.com/products/5

Send 

Params

Authorization

Headers (7)

Body

Scripts

Settings

Cookies

Headers

 6 hidden

	Key	Value	Description	⋮ Bulk Edit Presets ▾
<input checked="" type="checkbox"/>	Content-Type	application/json		

Result


Body Cookies Headers (15) Test Results 200 OK • 744 ms • 1.2 KB • | Save Response ...




Pretty Raw Preview Visualize JSON


```
1  {
2    "id": 5,
3    "title": "John Hardy Women's Legends Naga Gold & Silver Dragon Station Chain Bracelet",
4    "price": 695,
5    "description": "From our Legends Collection, the Naga was inspired by the mythical water dragon that protects the ocean's pearl. Wear
        facing inward to be bestowed with love and abundance, or outward for protection.",
6    "category": "jewelery",
7    "image": "https://fakestoreapi.com/img/71pWzhdJNwL._AC_UL640_QL65_ML3_.jpg",
8    "rating": {
9      "rate": 4.6,
10     "count": 400
11   }
12 }
```

Params


- Limit the number of articles


 Blog / Get some articles

 Save   Share


GET 

https://jsonplaceholder.typicode.com/posts?_limit=3

Send 

Params  Authorization Headers (7) Body Scripts Settings [Cookies](#)

Query Params

<input checked="" type="checkbox"/>	Key	Value	Description	 Bulk Edit
<input checked="" type="checkbox"/>	_limit	3		

Params


- Limit number of articles



Pretty-print ☒

```
[
  {
    "userId": 1,
    "id": 1,
    "title": "sunt aut facere repellat provident occaecati excepturi optio reprehenderit",
    "body": "quia et suscipit\nsuscipit recusandae consequuntur expedita et cum\nreprehenderit molestiae ut ut quas totam\nnostrum rerum est autem sunt rem eveniet architecto"
  },
  {
    "userId": 1,
    "id": 2,
    "title": "qui est esse",
    "body": "est rerum tempore vitae\nsequi sint nihil reprehenderit dolor beatae ea dolores neque\nfugiat blanditiis voluptate porro vel nihil molestiae ut reiciendis\nqui aperiam non debitis possimus qui neque nisi nulla"
  },
  {
    "userId": 1,
    "id": 3,
    "title": "ea molestias quasi exercitationem repellat qui ipsa sit aut",
    "body": "et iusto sed quo iure\nvoluptatem occaecati omnis eligendi aut ad\nvoluptatem doloribus vel accusantium quis pariatur\nmolestiae porro eius odio et labore et velit aut"
  }
]
```


Params


- Get all articles on a page


 Blog / get articles a page

 Save 

Share

GET  https://jsonplaceholder.typicode.com/posts?_page=1

Send 

Params  Authorization Headers (7) Body Scripts Settings

Cookies

Query Params

<input checked="" type="checkbox"/>	Key	Value	Description	...	Bulk Edit
<input checked="" type="checkbox"/>	_page	1			

Result

Pretty-print ☒

```
[
  {
    "userId": 1,
    "id": 1,
    "title": "sunt aut facere repellat provident occaecati excepturi optio reprehenderit",
    "body": "quia et suscipit\nsuscipit recusandae consequuntur expedita et cum\nreprehenderit molestiae ut ut quas totam\nnostrum rerum est autem sunt rem eveniet architecto"
  },
  {
    "userId": 1,
    "id": 2,
    "title": "qui est esse",
    "body": "est rerum tempore vitae\nsequi sint nihil reprehenderit dolor beatae ea dolores neque\nfugiat blanditiis voluptate porro vel nihil molestiae ut reiciendis\nqui aperiam non debitis possimus qui neque nisi nulla"
  },
  {
    "userId": 1,
    "id": 3,
    "title": "ea molestias quasi exercitationem repellat qui ipsa sit aut",
    "body": "et iusto sed quo iure\nvoluptatem occaecati omnis eligendi aut ad\nvoluptatem doloribus vel accusantium quis pariatur\nmolestiae porro eius odio et labore et velit aut"
  },
  {
    "userId": 1,
    "id": 4,
    "title": "eum et est occaecati",
    "body": "ullam et saepe reiciendis voluptatem adipisci\nsit amet autem assumenda provident rerum culpa\nquis hic commodi nesciunt rem tenetur doloremque ipsam iure\nquis sunt voluptatem rerum illo velit"
  },
  {
    "userId": 1,
    "id": 5,
    "title": "nesciunt quas odio",
    "body": "repudiandae veniam quaerat sunt sed\nnalias aut fugiat sit autem sed est\nvoluptatem omnis possimus esse voluptatibus quis\nest aut tenetur dolor neque"
  },
  {
    "userId": 1,
    "id": 6,
    "title": "dolorem eum magni eos aperiam quia",
    "body": "ut aspernatur corporis harum nihil quis provident sequi\nmollitia nobis aliquid molestiae\nperspiciatis et ea nemo ab reprehenderit accusantium quas\nvoluptate dolores velit et doloremque molestiae"
  },
  {
    "userId": 1,
    "id": 7,
    "title": "magnam facilis autem",
    "body": "dolore placeat quibusdam ea quo vitae\nmagni quis enim qui quis quo nemo aut saepe\nquidem repellat excepturi ut quia\nsunt ut sequi eos ea sed quas"
  },
  {
    "userId": 1,
    "id": 8,
    "title": "dolorem dolore est ipsam",
    "body": "dignissimos aperiam dolorem qui eum\nfacilis quibusdam animi sint suscipit qui sint possimus cum\nquaerat magni maiores excepturi\nipsam ut commodi dolor voluptatum modi aut vitae"
  },
  {
    "userId": 1,
    "id": 9,
    "title": "nesciunt iure omnis dolorem tempora et accusantium",
    "body": "consectetur animi nesciunt iure dolore\nenim quia ad\nveniam autem ut quam aut nobis\net aut quod aut provident voluptas autem voluptas"
  },
  {
    "userId": 1,
    "id": 10,
    "title": "optio molestias id quia eum",
    "body": "quo et expedita modi cum officia vel magni\ndoloribus qui repudiandae\nvero nisi sit\nquos veniam quod sed accusamus veritatis error"
  }
]
```


Reference API

- CRUD students: <https://js-post-api.herokuapp.com/api/students>
- Register and login: <https://reqres.in/>
- Blog: <https://jsonplaceholder.typicode.com/posts>