

API Testing: Application Program Interface

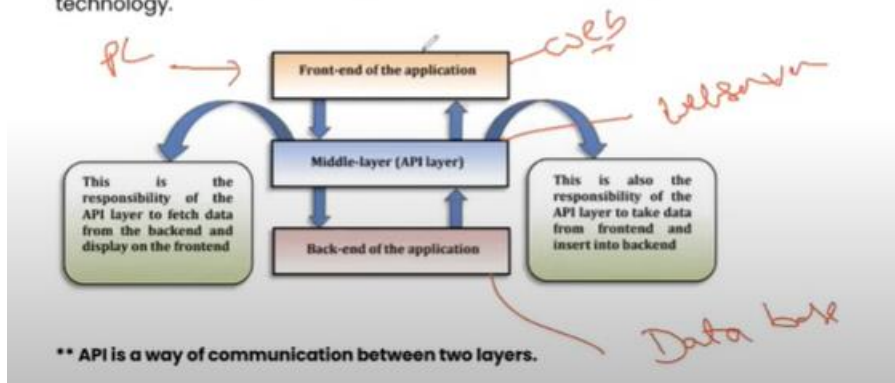
It is way of communication between 2 applications where application may differ in their platforms or in terms of technology.

Client/Server Architecture

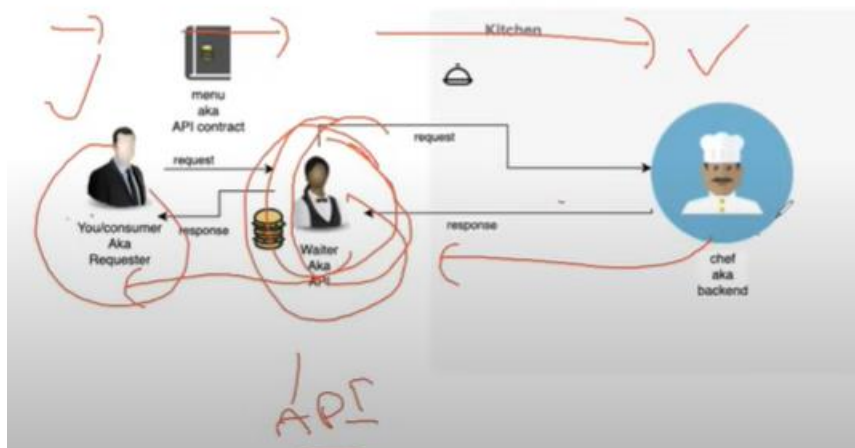


What is an API?

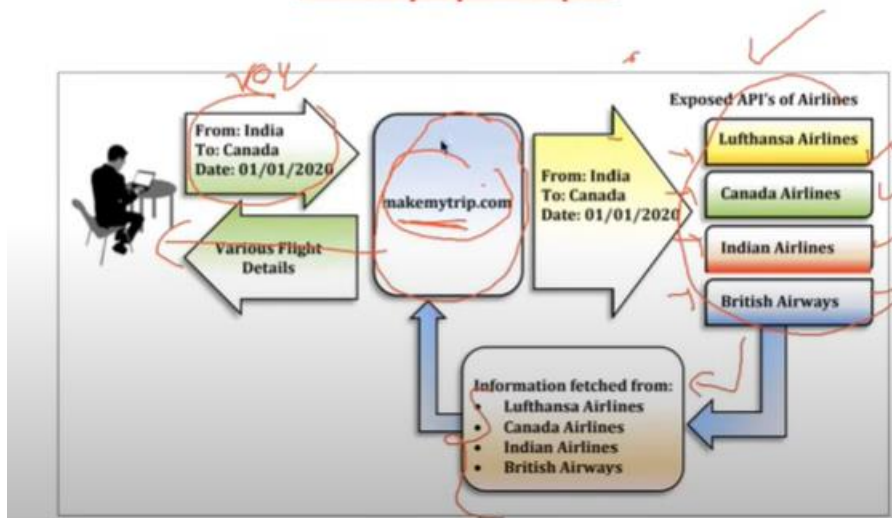
Application Program Interface (API): Is the way of communication between two applications where applications may differ in their platforms or in terms of technology.



API - Restaurant analogy



Makemytrip example:



Types of API:

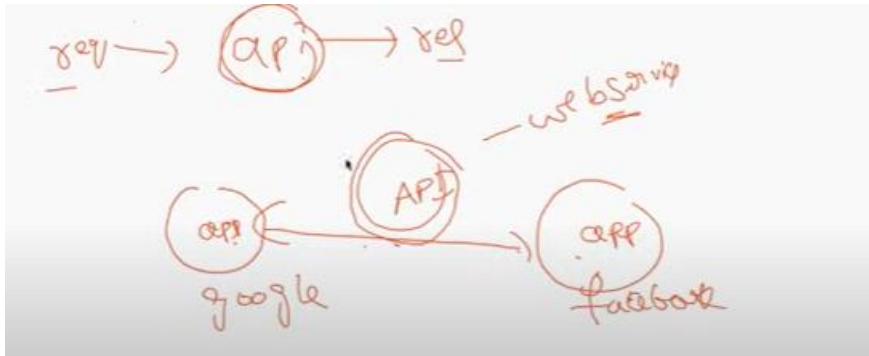
There are 2 types of API's.

- 1) Simple Object Access Protocol (SOAP).
- 2) REST (Representation State Transfer).

Both are the web services.

SOAP => used by old applications.

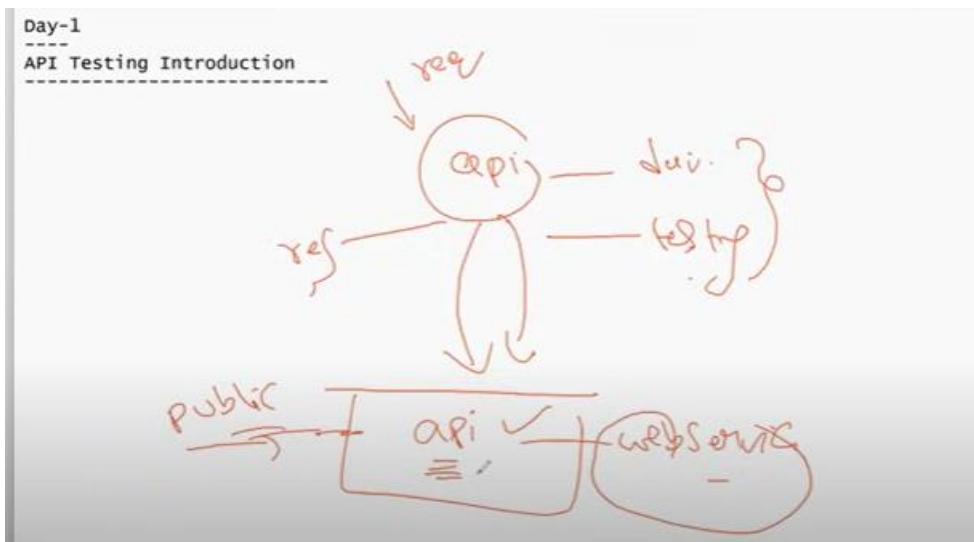
REST => used by new/current applications.



All Web Services are API. But all API are not Web Service.

When API is put in internet then it is called as Web Service.

For development & testing we use Api. And once its available to public over internet its called Webservice.



Important: API Vs Webservice

Types Of API

There are two types of API's,

1. Simple Object Access Protocol (SOAP)
2. REST (Representational State Transfer).

Both are the web services.

API Vs Webservice

- Web Service is an API wrapped in HTTP.
- All Web Services are API but APIs are not Web Services.
- A Web Service needs a network while an API doesn't need a network for its operation.

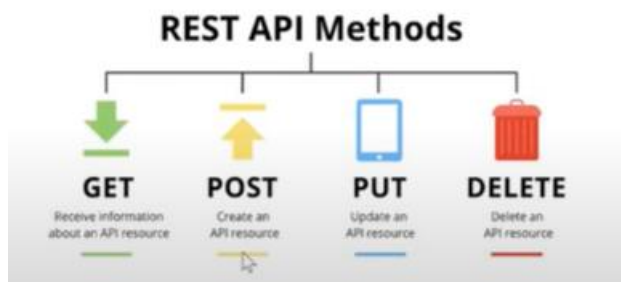
Rest API methods: http request

Get: we get data from the server.

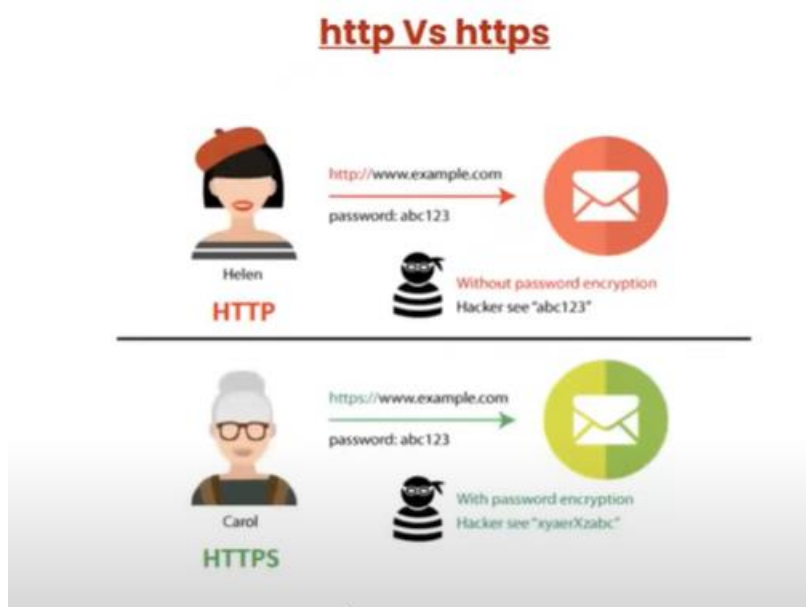
Post: we are sending data to server to store.

Put: we can create/edit/update data in the server.

Delete: we delete the data from server.



HTTP Vs HTTPS



Terminology:

Terminologies

URI – Uniform Resource Identifier

URL – Uniform Resource Locator

URN – Uniform Resource Name



Payload:

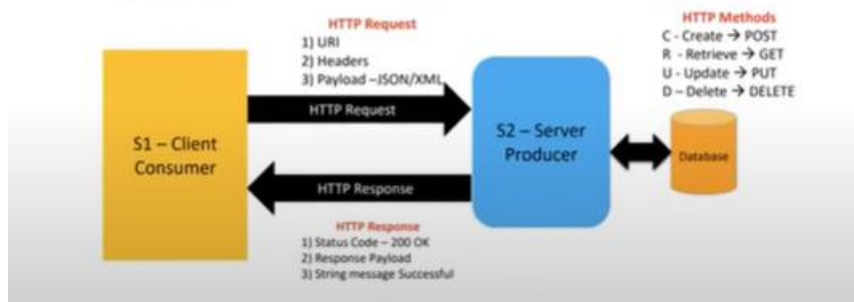
Feature & Resource

'Feature' is the term used in manual testing to test some functionality and similarly 'Resource' is the term used in API Automation testing referring some functionality.

Payload

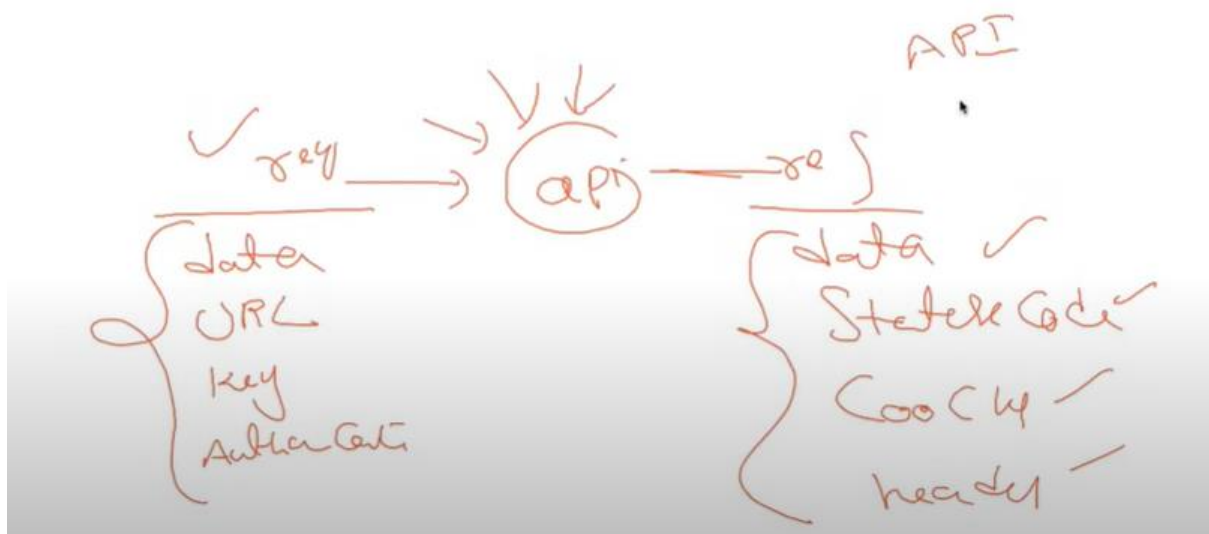
payload means **body in the HTTP request and response message**.

- Request Payload
- Response Payload



Ex: <https://reqres.in/>

Ex Get: <https://reqres.in/api/users?page=2> => <https://reqres.in/api/users?page=2>



Postman – API testing

Desktop/web

Workspace: area where we maintain files and saved.

Workspace – create workspace, rename, delete.

Creating collection = contains number of folders and http requests. Create, rename, delete, run the collection.

We can create any number of collections under workspace.

Request ----→ API -----→ Response

http Request:

Get => retrieve the resource from database.

Post => create resource on database.

Put => update existing resource on database.

Patch => update partial details of resource.

Delete => delete existing resource from database.

Sample APIs: <https://reqres.in/>

Request Type	URI	Request Payload	Response Payload	Status Code
GET	https://reqres.in/api/users?page=2	NA	Returns list of users in a page	200
POST	https://reqres.in/api/users	{ "name": "pavan", "job": "trainer" }	{ "id": "599", "createdAt": "2018-07-07T05:43:53.310Z" }	201
PUT	https://reqres.in/api/users/599	{ "name": "pavan", "job": "engineer" }	{ "updatedAt": "2022-07-16T05:08:14.041Z" }	200
DELETE	https://reqres.in/api/users/599	na	na	204



Validations:

- 1) Status code
- 2) Time
- 3) Size data
- 4) Response body(json/xml)
- 5) Cookies
- 6) Headers

HTTP Status code:

3 levels

- 1) 200
- 2) 400
- 3) 500

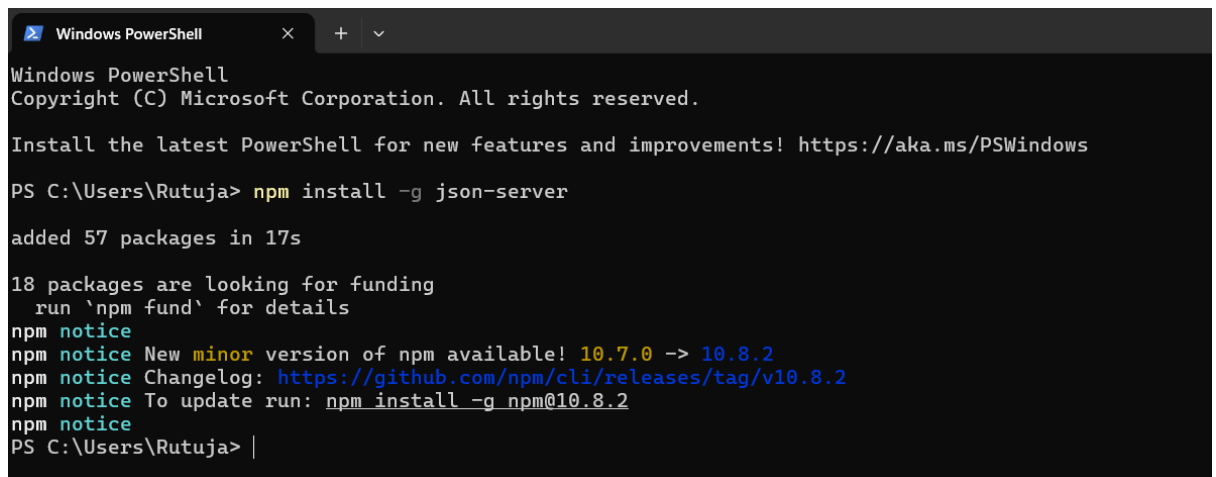
HTTP Status Codes		
Level 200	Level 400	Level 500
200: OK 201: Created 202: Accepted 203: Non-Authoritative Information 204: No content	400: Bad Request 401: Unauthorized 403: Forbidden 404: Not Found 409: Conflict	500: Internal Server Error 501: Not Implemented 502: Bad Gateway 503: Service Unavailable 504: Gateway Timeout 599: Network Timeout

How to create own API: JSON

Create our own API's

Steps:

- 1) NodeJS
- 2) Npm-node package manager
node --version
npm --version
- 3) Json-server
- 4) Install json-server:
Run below command in cmd/terminal
npm install -g json-server



```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

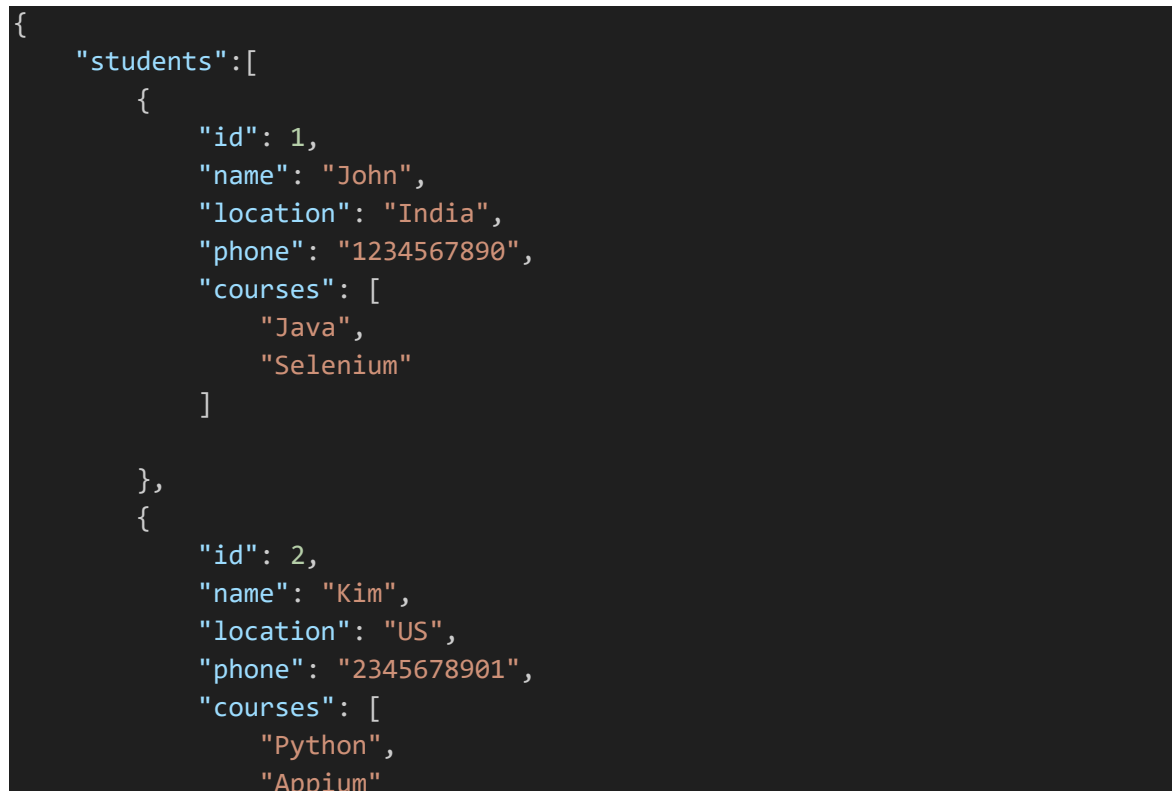
Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\Rutuja> npm install -g json-server

added 57 packages in 17s

18 packages are looking for funding
  run `npm fund` for details
npm notice
npm notice New minor version of npm available! 10.7.0 -> 10.8.2
npm notice Changelog: https://github.com/npm/cli/releases/tag/v10.8.2
npm notice To update run: npm install -g npm@10.8.2
npm notice
PS C:\Users\Rutuja> |
```

- 5) Create students.json file with following data.



```
{
  "students": [
    {
      "id": 1,
      "name": "John",
      "location": "India",
      "phone": "1234567890",
      "courses": [
        "Java",
        "Selenium"
      ]
    },
    {
      "id": 2,
      "name": "Kim",
      "location": "US",
      "phone": "2345678901",
      "courses": [
        "Python",
        "Appium"
      ]
    }
  ]
}
```



```

    ]
  },
  {
    "id": 3,
    "name": "Smith",
    "location": "Canada",
    "phone": "3456789012",
    "courses": [
      "C#",
      "RestAPI"
    ]
  }
]
}

```

6) Run using command 'json-server students.json'

```

D:\Automation\API Testing\API_Testing>json-server students.json
JSON Server started on PORT :3000
Press CTRL-C to stop
Watching students.json...

( ~^ 0 ^~ )

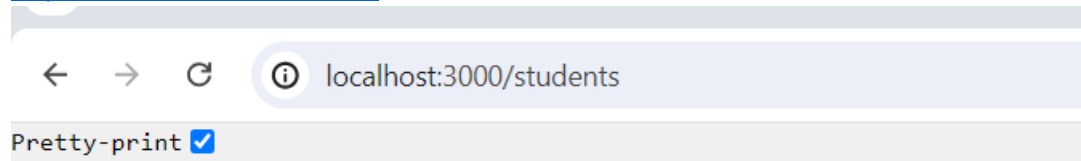
Index:
http://localhost:3000/

Static files:
Serving ./public directory if it exists

Endpoints:
http://localhost:3000/students

```

7) <http://localhost:3000/students>



```
[
  {
    "id": "1",
    "name": "John",
    "location": "India",
    "phone": "1234567890",
    "courses": [
      "Java",
      "Selenium"
    ]
  },
  {
    "id": "2",
    "name": "Kim",
    "location": "US",
    "phone": "2345678901",
    "courses": [
      "Python",
      "Appium"
    ]
  },
  {
    "id": "3",
    "name": "Smith",
    "location": "Canada",
    "phone": "3456789012",
    "courses": [
      "C#",
      "RestAPI"
    ]
  }
]
```

API TestCases.xlsx - Excel

TCID	Title/Description	URI	HTTP Request	Authentication	Request PayLoad	Response PayLoad	Status Code	Validations
1	Get Single Student Data	http://localhost:3000/students/1	Get	NA	NA	{ "id": 1, "name": "John", "location": "India", "phone": "1234567890", "courses": ["Java", "Selenium"] }	200	
2	Get all students data	http://localhost:3000/students	Get	NA	NA	{ "id": 1, "name": "John", "location": "India", "phone": "1234567890", "courses": ["Java", "Selenium"] }, { "id": 2, "name": "Kiran", "location": "US", "phone": "9887654321", "courses": ["Python", "Angular"] }, { "id": 3, "name": "Sandeep", "location": "Canada", "phone": "165498765", "courses": ["C#", "ReactJS"] } }	200	
3	Create new student	http://localhost:3000/students	Post	NA	{ "name": "Scott", "location": "France", "phone": "123456", "courses": ["C++"] }	{ "name": "Scott", "location": "France", "phone": "123456", "courses": ["C++"] }	201	

8)

JSON: Java Script Object Notation

Key value pair

Key: value

JSON Data Types:

- 1) Number
- 2) String
- 3) Boolean
- 4) Null
- 5) Object
- 6) Array

```
{
  "name": "John"
}
```

Data Types:

JSON - Syntax

- Data should be in name/value pairs
- Data should be separated by commas
- Curly braces should hold objects
- Square brackets hold arrays

```
{
  "student": [
    {
      "id": "01",
      "name": "Tom",
      "lastname": "Price"
    },
    {
      "id": "02",
      "name": "Nick",
      "lastname": "Thameson"
    }
  ]
}
```

Data Types

- **String**

- Strings in JSON must be written in double quotes.

- Example:

```
{ "name": "John" }
```

- **Numbers**

- Numbers in JSON must be an integer or a floating point.

- Example:

```
{ "age": 30 }
```

- **Object**

- Values in JSON can be objects.

- Example:

```
{
  "employee": { "name": "John", "age": 30, "city": "New York" }
}
```

Key is always included in “ ” quotations.

```
{
  "firstname": "John",
  "secondname": null,
  "age": 30,
  "phone": [12345, 67890],
  "status": true
}
```

Eg: Student data

Student – sid, sname, grad

```
{
  "students": [
    {
```

```

    "sid"=101,
    "sname"="John",
    "grad"="A"
  },
  {
    "sid"=102,
    "sname"="Mark",
    "grad"="B"
  }
]
}

```

JSON Path:

students[0].sname --→ John

students[1].sid ---→102

Examples

JSON Example	XML Example
<pre> { "employees": [{ "name": "Vimal", "email": "v.jaiswal1987@gmail.com" }, { "name": "Rahul", "email": "rahul12@gmail.com" }, { "name": "Jai", "email": "jai87@gmail.com" }] } </pre>	<pre> <employees> <employee> <name>Vimal</name> <email>v.jaiswal1987@gmail.com</email> </employee> <employee> <name>Rahul</name> <email>rahul12@gmail.com</email> </employee> <employee> <name>Jai</name> <email>jai87@gmail.com</email> </employee> </employees> </pre>

JSON Object & JSON Array:

JSON Object:

<ul style="list-style-type: none">• JSON Object with Strings <pre>{ "name": "Scott", "email": "Scottjaiswal1987@gmail.com" }</pre>	<ul style="list-style-type: none">• JSON Object with Numbers <pre>{ "integer": 34, "fraction": .2145, "exponent": 6.61789e+0 }</pre>
<ul style="list-style-type: none">• JSON Object with Booleans <pre>{ "first": true, "second": false }</pre>	<ul style="list-style-type: none">• JSON Nested Object <pre>{ "firstName": "Scott", "lastName": "Jaiswal", "age": 22, "address": { "streetAddress": "Plot-6, Mohan Nagar", "city": "Hyderabad", "state": "TL", "postalCode": "500090" } }</pre>

JSON Array

- JSON array represents ordered list of values.
- JSON array can store multiple values. It can store string, number, boolean or object in JSON array.
- In JSON array, values must be separated by comma.
- The `[]` (square bracket) represents JSON array.

Capture & Validate JSON Path

<https://jsonpathfinder.com/>

<https://jsonpath.com/>

JSON Path Finder: <https://jsonpathfinder.com/>

JSON Path Verify: <https://jsonpath.com/>

API Response Validation | Different types of Assertions:

Response Validation:

- 1) Status code
- 2) Headers
- 3) Cookies
- 4) Response time
- 5) Response body

Assertion – validation

Postman – library

Functions: written in JavaScript

Function types/can be written in 2 ways:

- 1) Normal function: written using normal keyword i.e. function().
- 2) Arrow function: written using arrow i.e. () =>.

Library/Framework: Chai

```
Chai Assertion Library

pm.test("Test Name", function()
    {
        // assertion;
    }
);

pm.test("Test Name", () =>
    {
        // assertion;
    }
);
```

Here pm = postman.

Testing Status Code:

```
Testing status codes

Test for the response status code:

pm.test("Status code is 200", () => {
    pm.response.to.have.status(200);
});

If you want to test for the status code being one of a set, include them all in an
array and use one of

pm.test("Successful POST request", () => {
    pm.expect(pm.response.code).to.be.oneOf([201,202]);
});

Check the status code text:

pm.test("Status code name has string", () => {
    pm.response.to.have.status("Created");
});
```

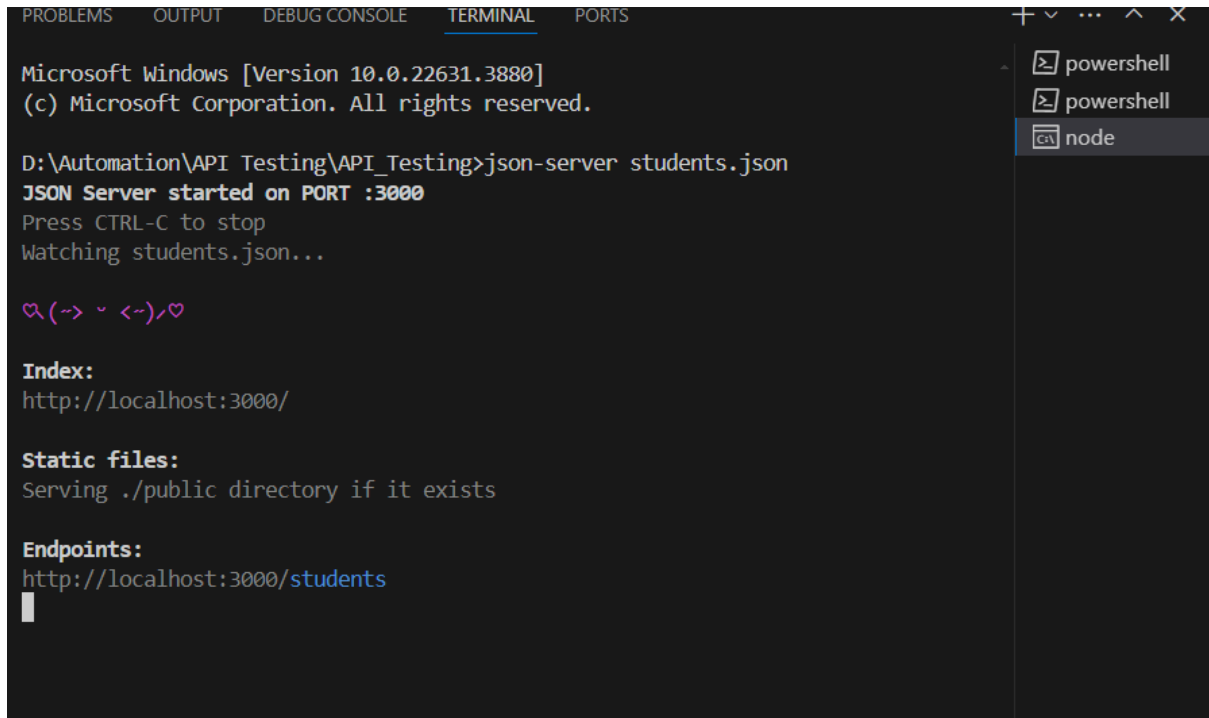
Syntax:

```
pm.test("Test Name", ()=>{
//assertion;
});
```

Ex:

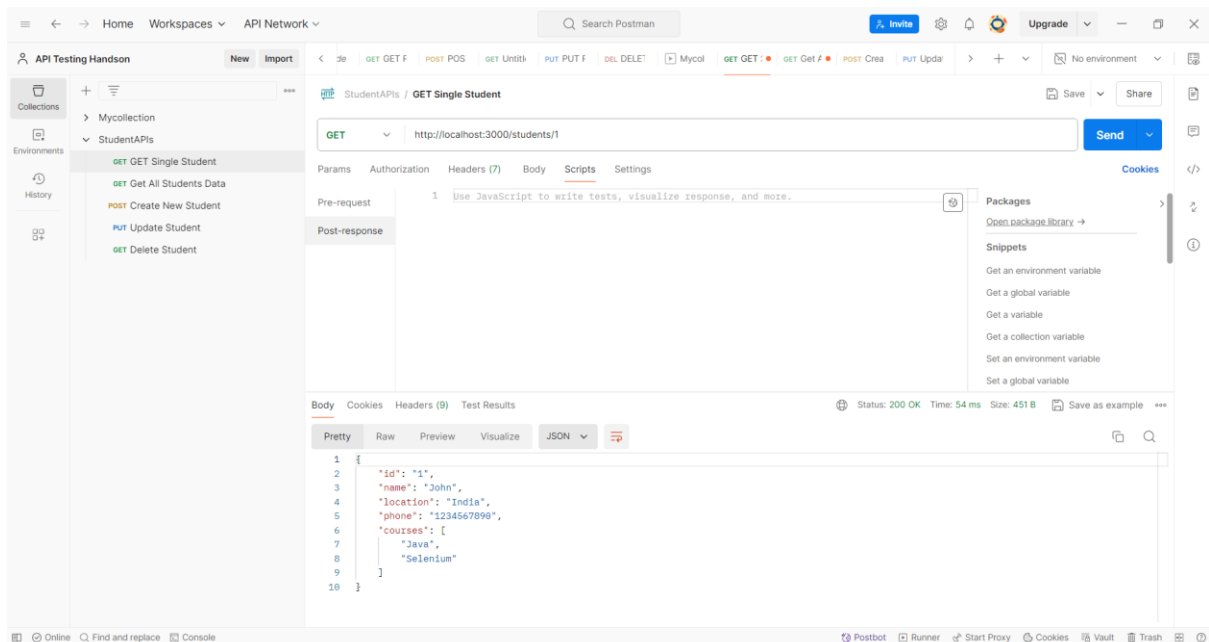
```
pm.test("Status code is 200", () => {
```

```
pm.response.to.have.status(200);  
});
```



```
Microsoft Windows [Version 10.0.22631.3880]  
(c) Microsoft Corporation. All rights reserved.  
  
D:\Automation\API Testing\API_Testing>json-server students.json  
JSON Server started on PORT :3000  
Press CTRL-C to stop  
Watching students.json...  
  
♡(→ ~ <~)♡  
  
Index:  
http://localhost:3000/  
  
Static files:  
Serving ./public directory if it exists  
  
Endpoints:  
http://localhost:3000/students
```

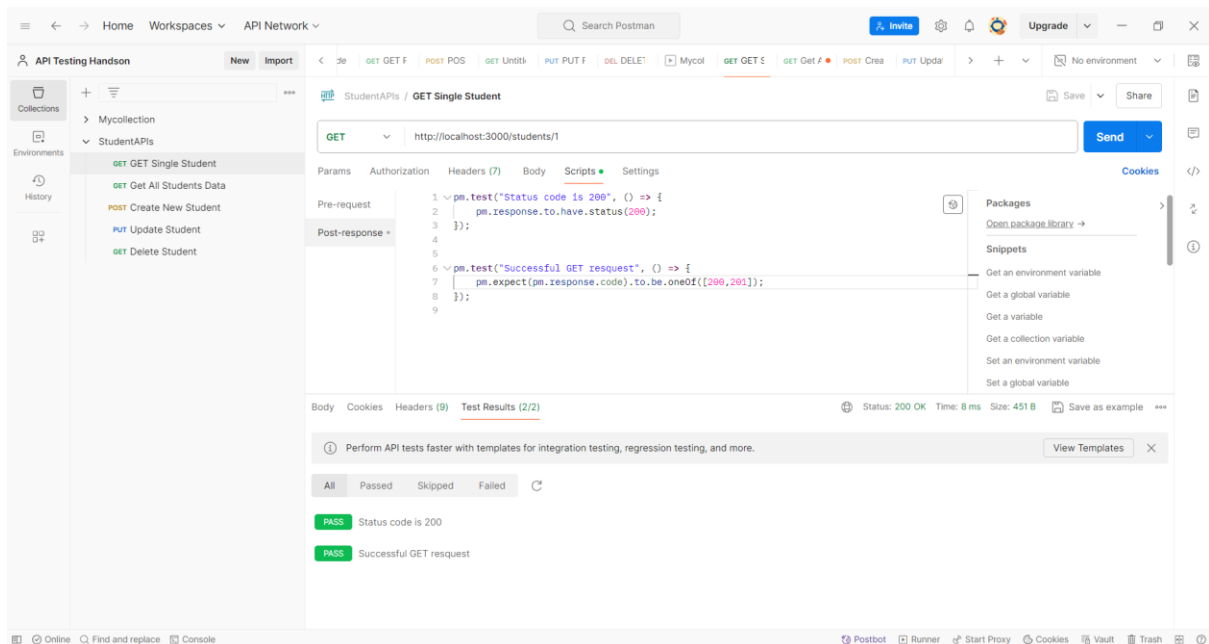
Postman:



```
pm.test("Status code is 200", () => {  
  pm.response.to.have.status(200);  
});
```



```
pm.test("Successful GET request", () => {
    pm.expect(pm.response.code).to.be.oneOf([200,201]);
});
```



Testing status codes

Test for the response status code:

```
pm.test("Status code is 200", () => {
    pm.response.to.have.status(200);
});
```

If you want to test for the status code being one of a set, include them all in an array and use *one of*

```
pm.test("Successful POST request", () => {
    pm.expect(pm.response.code).to.be.oneOf([201,202]);
});
```

Check the status code text:

```
pm.test("Status code name has string", () => {
    pm.response.to.have.status("Created");
});
```

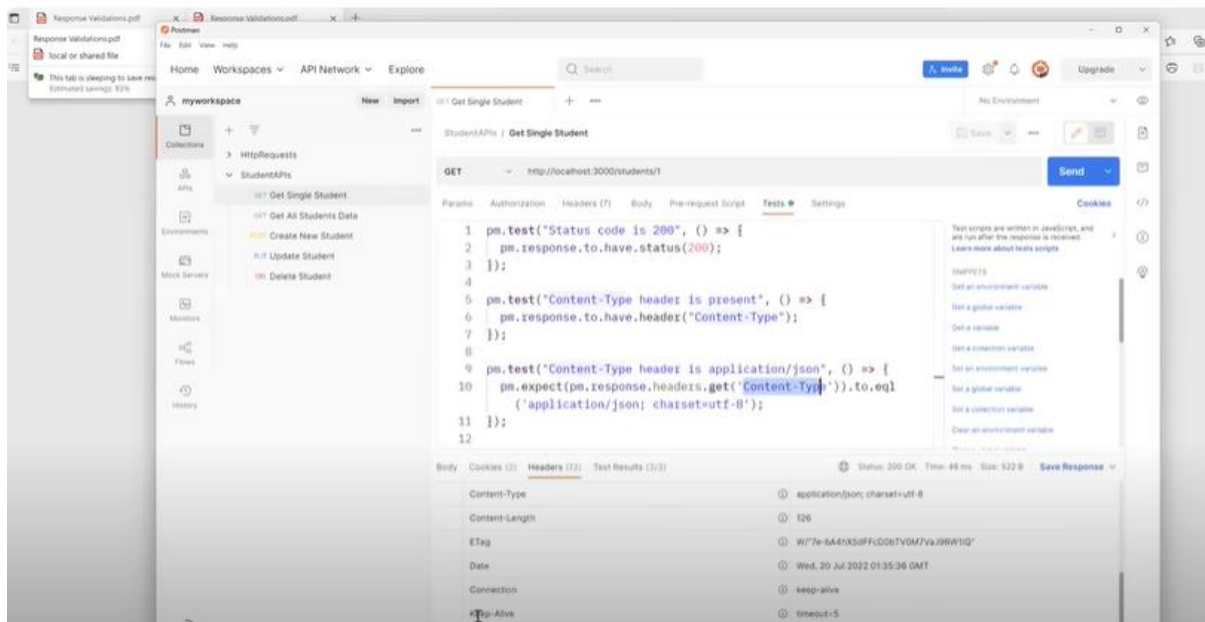
Testing headers

Check that a response header is present:

```
pm.test("Content-Type header is present", () => {  
  pm.response.to.have.header("Content-Type");  
});
```

Test for a response header having a particular value:

```
pm.test("Content-Type header is application/json", () => {  
  pm.expect(pm.response.headers.get('Content-Type')).to.eql('application/json; charset=utf-8');  
});
```



Testing cookies

Test if a cookie is present in the response:

```
pm.test("Cookie 'language' is present", () => {  
  pm.expect(pm.cookies.has('language')).to.be.true;  
});
```

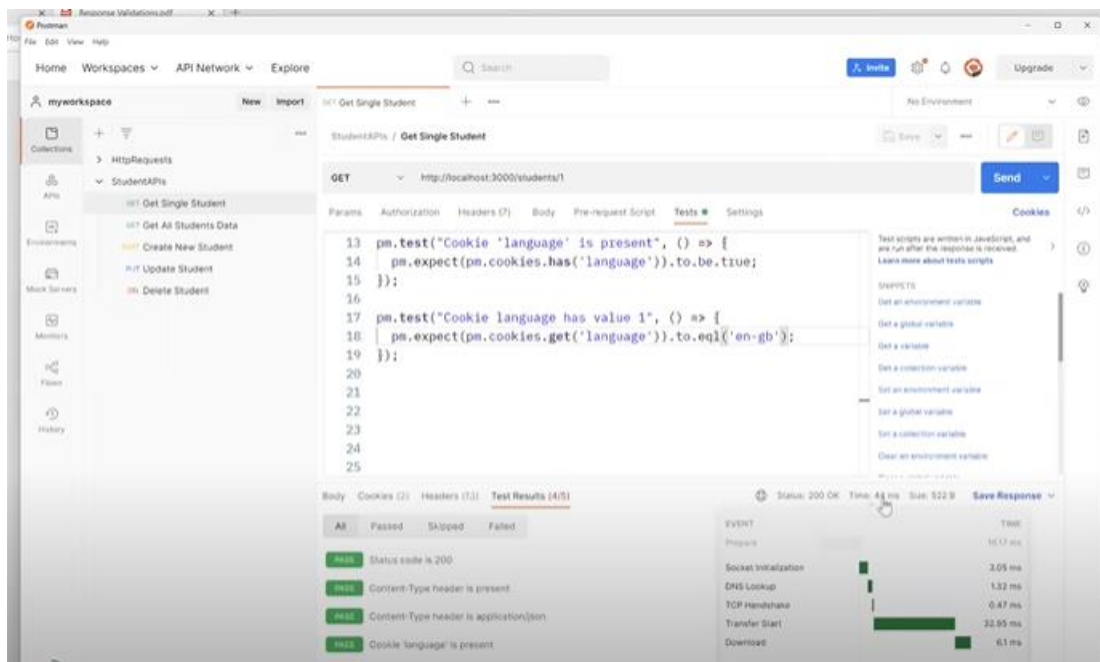
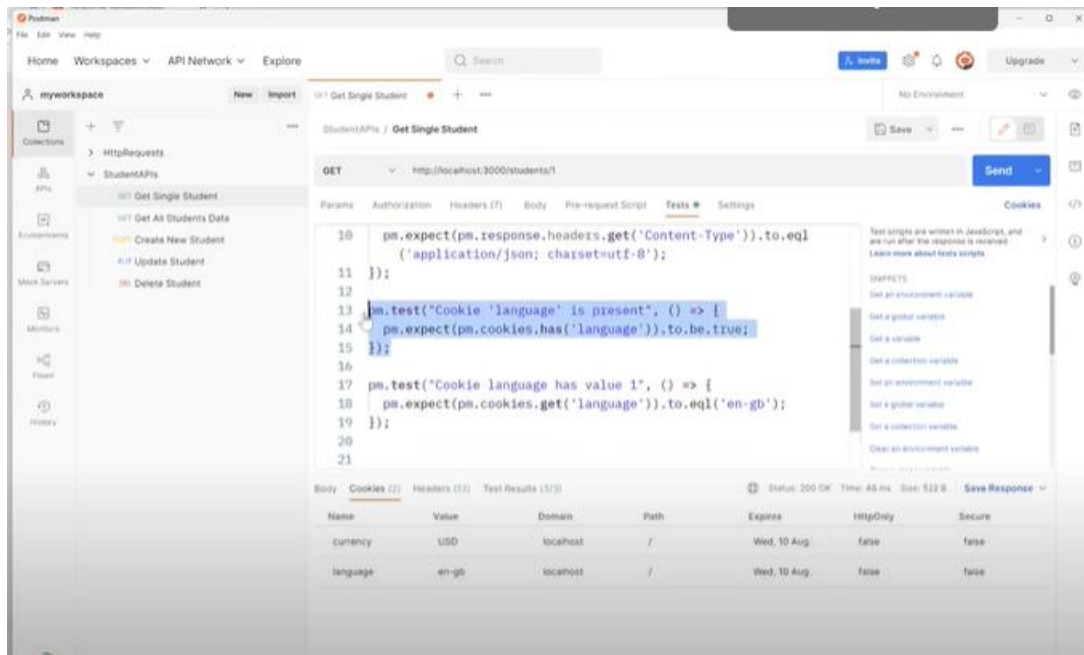
Test for a particular cookie value:

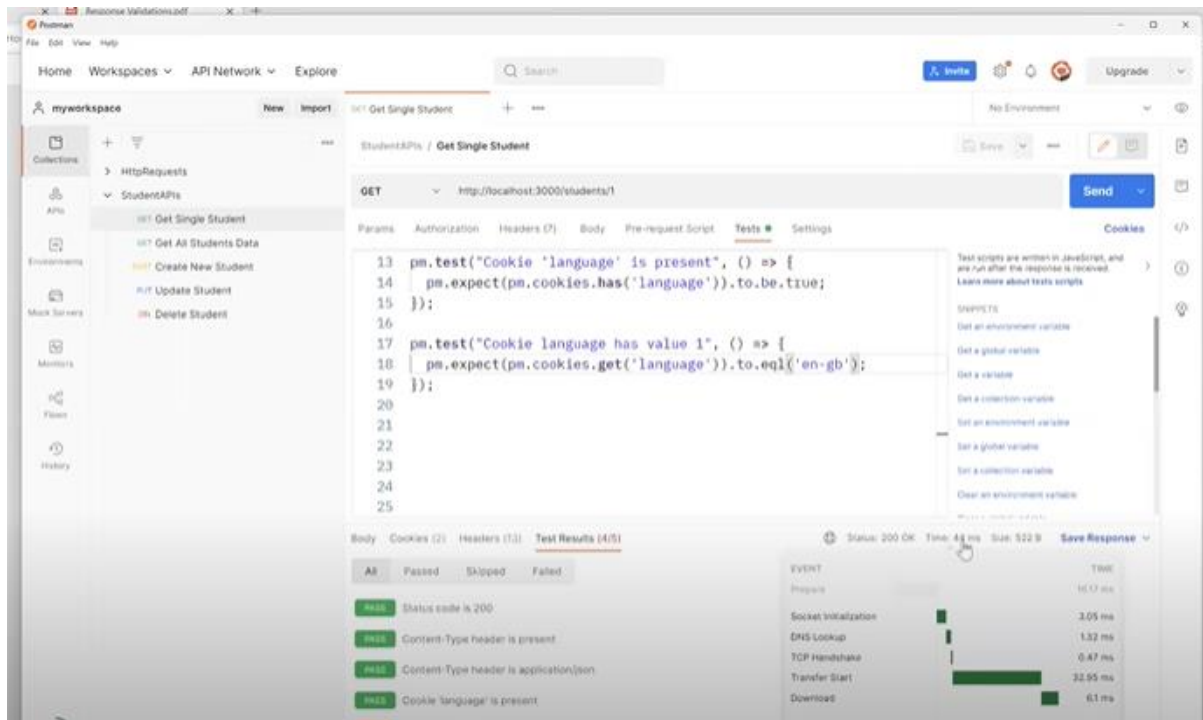
```
pm.test("Cookie language has value 1", () => {  
  pm.expect(pm.cookies.get('language')).to.eql('en-gb');  
});
```

Testing response times

Test for the response time to be within a specified range:

```
pm.test("Response time is less than 200ms", () => {  
  pm.expect(pm.response.responseTime).to.be.below(200);  
});
```





Response Body:

Asserting a value type

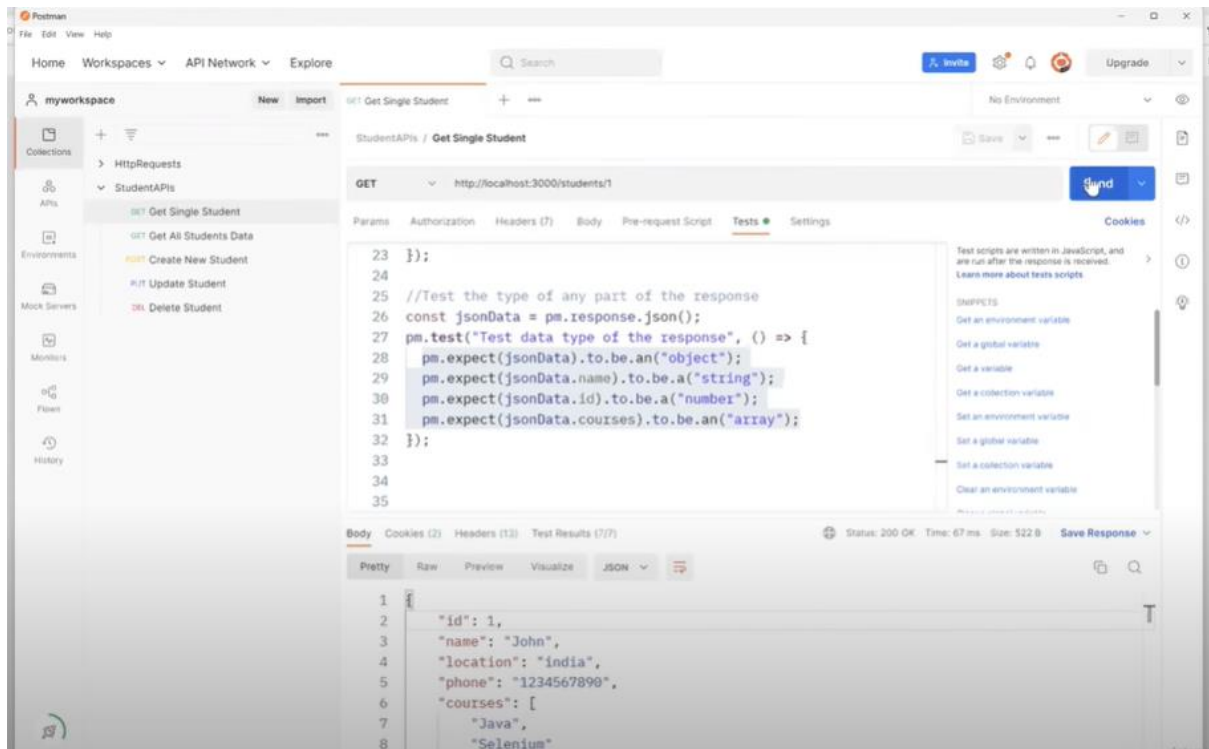
Test the type of any part of the response:

```

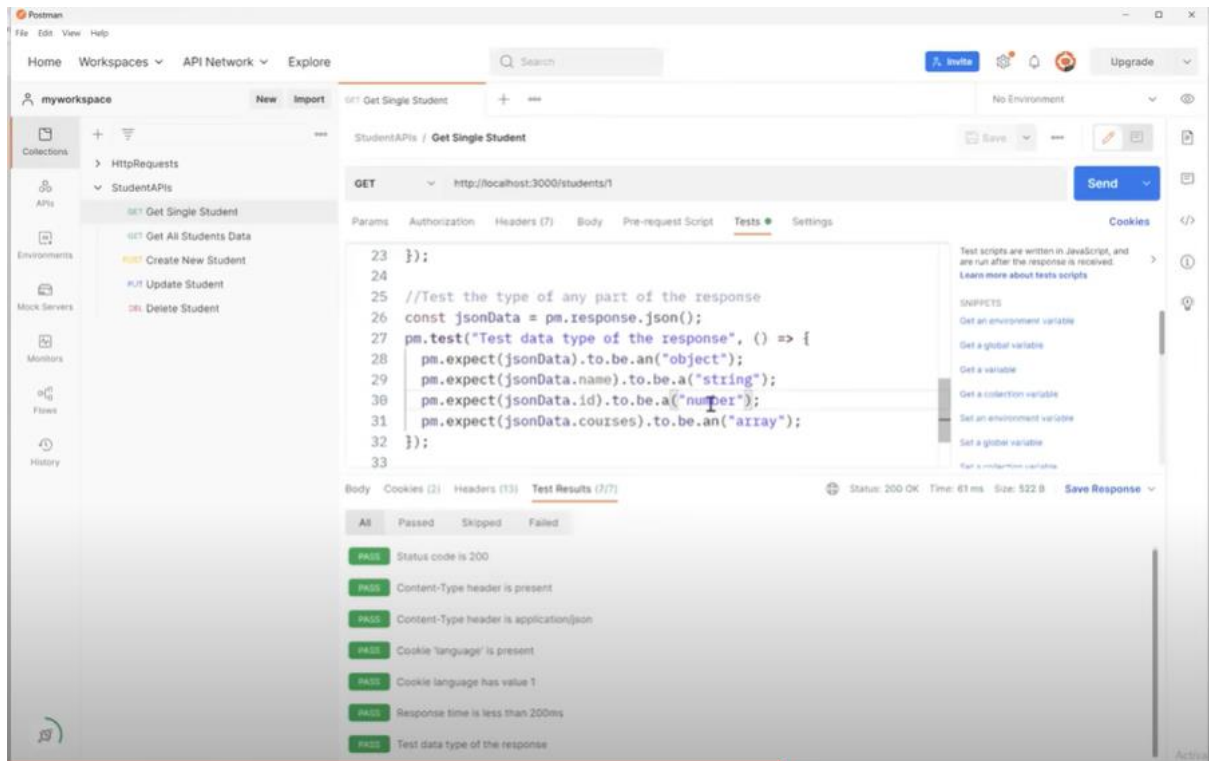
{
  "id": 1,
  "name": "John",
  "location": "india",
  "phone": "1234567890",
  "courses": [
    "Java",
    "Selenium"
  ]
}

const jsonData = pm.response.json();
pm.test("Test data type of the response", () => {
  pm.expect(jsonData).to.be.an("object");
  pm.expect(jsonData.name).to.be.a("string");
  pm.expect(jsonData.id).to.be.a("number");
  pm.expect(jsonData.courses).to.be.an("array");
});

```



```
//Test the type of any part of the response
const jsonData = pm.response.json();
pm.test("Test data type of the response", () => {
    pm.expect(jsonData).to.be.an("object");
    pm.expect(jsonData.name).to.be.a("string");
    pm.expect(jsonData.id).to.be.a("number");
    pm.expect(jsonData.courses).to.be.an("array");
});
```



Asserting array properties

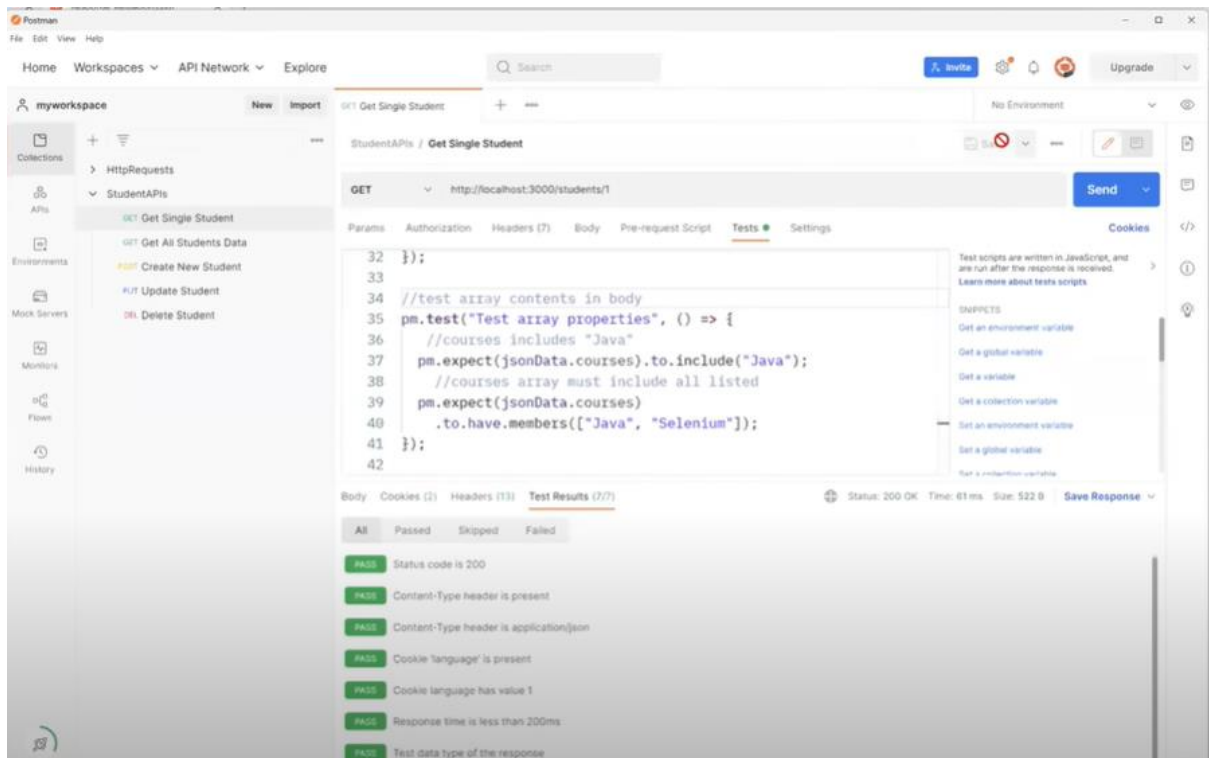
Check if an array is empty and if it contains particular items:

```

{
  "id": 1,
  "name": "John",
  "location": "india",
  "phone": "1234567890",
  "courses": [
    "Java",
    "Selenium"
  ]
}

pm.test("Test array properties", () => {
  //courses includes "Java"
  pm.expect(jsonData.courses).to.include("Java");
  //courses array must include all listed
  pm.expect(jsonData.courses)
    .to.have.members(["Java", "Selenium"]);
});

```



```
//Test array contents in body
```

```
pm.test("Test array properties", () => {
```

```
    //course includer "Java"
```

```
    pm.expect(jsonData.courses).to.include("Java");
```

```
    //courses array must include all listed
```

```
    pm.expect(jsonData.courses).to.have.members(["Java", "Selenium"]);
```

```
});
```

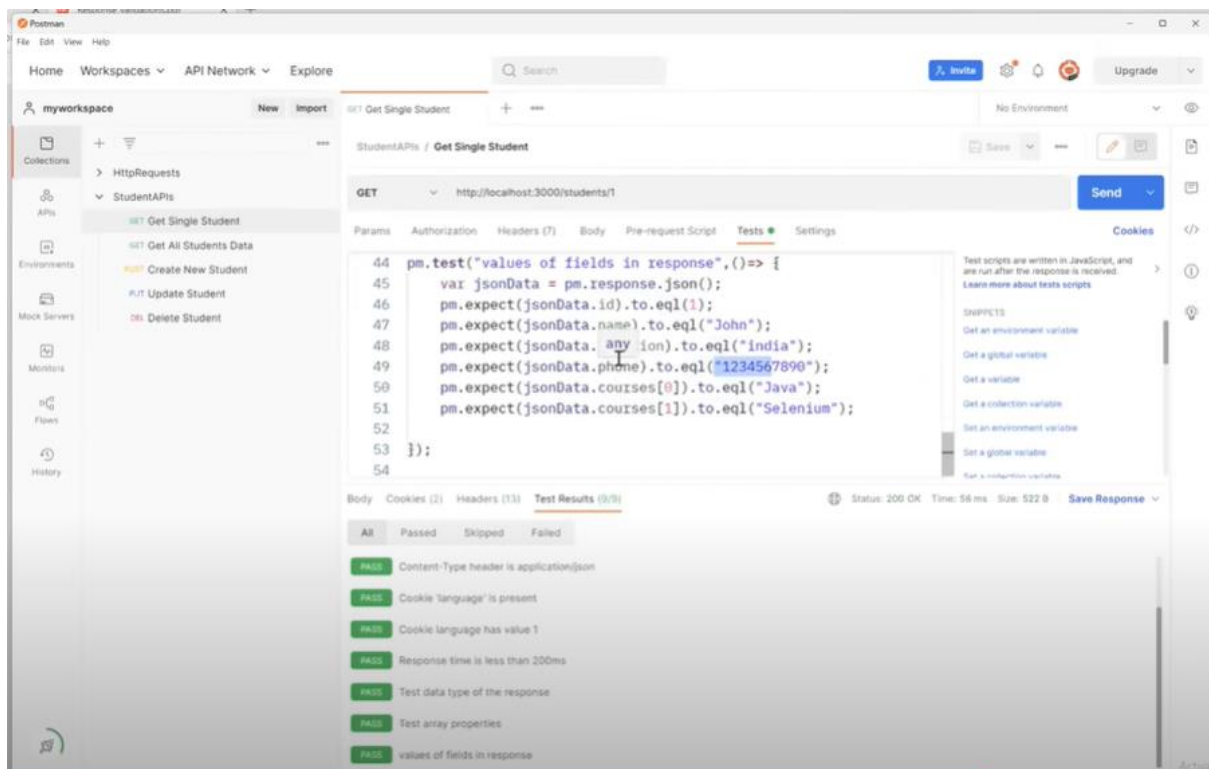

Validating JSON fields in Response

```
{
  "id": 1,
  "name": "John",
  "location": "india",
  "phone": "1234567890",
  "courses": [
    "Java",
    "Selenium"
  ]
}

pm.test("value of location field is India", () => {
  var jsonData = pm.response.json();
  pm.expect(jsonData.id).to.eql(1);
  pm.expect(jsonData.name).to.eql("John");
  pm.expect(jsonData.location).to.eql("india");
  pm.expect(jsonData.phone).to.eql("1234567890");
  pm.expect(jsonData.courses[0]).to.eql("Java");
  pm.expect(jsonData.courses[1]).to.eql("Selenium");
});
```

//Validating JSON fields in Response

```
pm.test("value of fields in response", () => {
  var jsonData = pm.response.json();
  pm.expect(jsonData.id).to.eql(1);
  pm.expect(jsonData.name).to.eql("John");
  pm.expect(jsonData.location).to.eql("India");
  pm.expect(jsonData.phone).to.eql("1234567890");
  pm.expect(jsonData.courses[0]).to.eql("Java");
});
```

JSON Schema

Response

```

{
  "id": 1,
  "name": "John",
  "location": "india",
  "phone": "1234567890",
  "courses": [
    "Java",
    "Selenium"
  ]
}

```

JSON schema

```

var schema={
  "$schema": "http://json-schema.org/draft-04/schema#",
  "type": "object",
  "properties": {
    "id": {

```

```

      "type": "integer"
    },
    "name": {
      "type": "string"
    },
    "location": {
      "type": "string"
    },

```

JSON Schema: <https://www.liquid-technologies.com/online-json-to-schema-converter>

```
{
  "id": 1,
  "name": "John",
  "location": "India",
  "phone": "1234567890",
  "courses": [
    "Java",
    "Selenium"
  ]
}
```

Generate Schema:

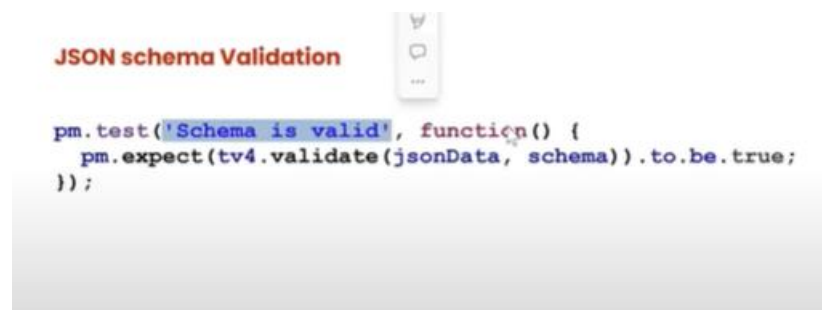
JSON Schema:

```
{
  "$schema": "http://json-schema.org/draft-04/schema#",
  "type": "object",
  "properties": {
    "id": {
      "type": "integer"
    },
    "name": {
      "type": "string"
    },
    "location": {
      "type": "string"
    },
    "phone": {
      "type": "string"
    }
  }
}
```

```

"courses": {
  "type": "array",
  "items": [
    {
      "type": "string"
    },
    {
      "type": "string"
    }
  ]
},
"required": [
  "id",
  "name",
  "location",
  "phone",
  "courses"
]
}

```



Ex:

```

//JSON Schema Validation
var schema = {

```

```
"$schema": "http://json-schema.org/draft-04/schema#",
"type": "object",
"properties": {
  "id": {
    "type": "string"
  },
  "name": {
    "type": "string"
  },
  "location": {
    "type": "string"
  },
  "phone": {
    "type": "string"
  },
  "courses": {
    "type": "array",
    "items": [
      {
        "type": "string"
      },
      {
        "type": "string"
      }
    ]
  }
},
"required": [
  "id",
```

```
"name",  
"location",  
"phone",  
"courses"  
]  
}
```

```
pm.test('Schema is a valid', function() {  
  pm.expect(tv4.validate(jsonData, schema)).to.be.true;  
});
```

Example complete operations:

```
pm.test("Status code is 200", () => {  
  pm.response.to.have.status(200);  
});
```

```
pm.test("Successful GET request", () => {  
  pm.expect(pm.response.code).to.be.oneOf([200,201]);  
});
```

```
pm.test("Content-Type header is present", () => {  
  pm.response.to.have.header("Content-Type");  
});
```

```
pm.test("Content-Type header is application/json", () => {  
  pm.expect(pm.response.headers.get("Content-Type")).to.eql('application/json');  
  // pm.expect(pm.response.headers.get("Content-Type")).to.eql('application/json;  
  charset=utf-8');  
});
```

```
pm.test("Cookie 'language' is present", () => {  
    pm.expect(pm.cookies.has('language')).to.be.true;  
});
```

```
pm.test("Cookie language has value 1", () => {  
    pm.expect(pm.cookies.get('language')).to.eql('en-gb'));  
});
```

```
pm.test("Response time is less than 50ms", () => {  
    pm.expect(pm.response.responseTime).to.be.below(50);  
});
```

```
//Test the type of any part of the response  
const jsonData = pm.response.json();  
pm.test("Test data type of the response", () => {  
    pm.expect(jsonData).to.be.an("object");  
    pm.expect(jsonData.name).to.be.a("string");  
    pm.expect(jsonData.id).to.be.a("number");  
    pm.expect(jsonData.courses).to.be.an("array");  
});
```

```
//Test array contents in body  
pm.test("Test array properties", () => {  
    //course includer "Java"  
    pm.expect(jsonData.courses).to.include("Java");  
    //courses array must include all listed  
    pm.expect(jsonData.courses).to.have.members(["Java", "Selenium"]);  
});
```

//Validating JSON fields in Response

```
pm.test("value of fields in response", () => {  
  // var jsonData = pm.response.json();  
  pm.expect(jsonData.id).to.eql(1);  
  pm.expect(jsonData.name).to.eql("John");  
  pm.expect(jsonData.location).to.eql("India");  
  pm.expect(jsonData.phone).to.eql("1234567890");  
  pm.expect(jsonData.courses[0]).to.eql("Java");  
});
```

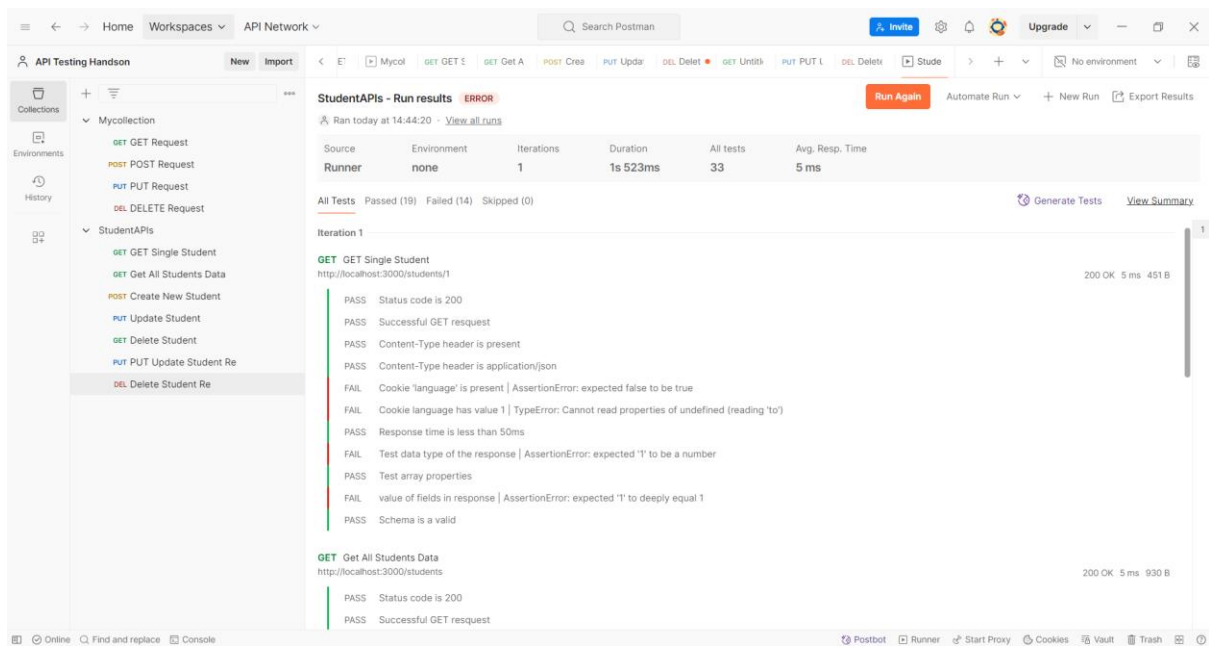
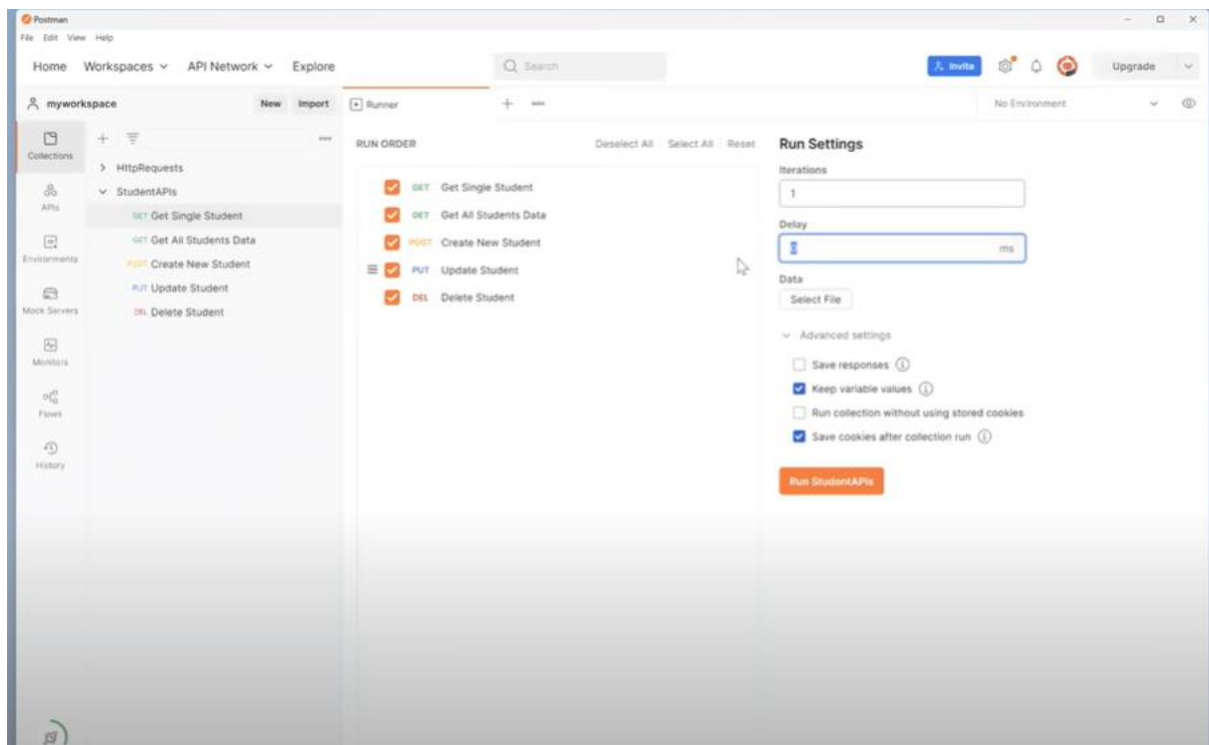
//JSON Schema Validation

```
var schema = {  
  "$schema": "http://json-schema.org/draft-04/schema#",  
  "type": "object",  
  "properties": {  
    "id": {  
      "type": "string"  
    },  
    "name": {  
      "type": "string"  
    },  
    "location": {  
      "type": "string"  
    },  
    "phone": {  
      "type": "string"  
    },  
    "courses": {  
      "type": "array",
```

```
"items": [  
  {  
    "type": "string"  
  },  
  {  
    "type": "string"  
  }  
]  
}  
,  
"required": [  
  "id",  
  "name",  
  "location",  
  "phone",  
  "courses"  
]  
}
```

```
pm.test('Schema is a valid', function() {  
  pm.expect(tv4.validate(jsonData, schema)).to.be.true;  
});
```

Run Collection:



Scripts and Types of variables

Scripts

Pre-request scripts

Tests

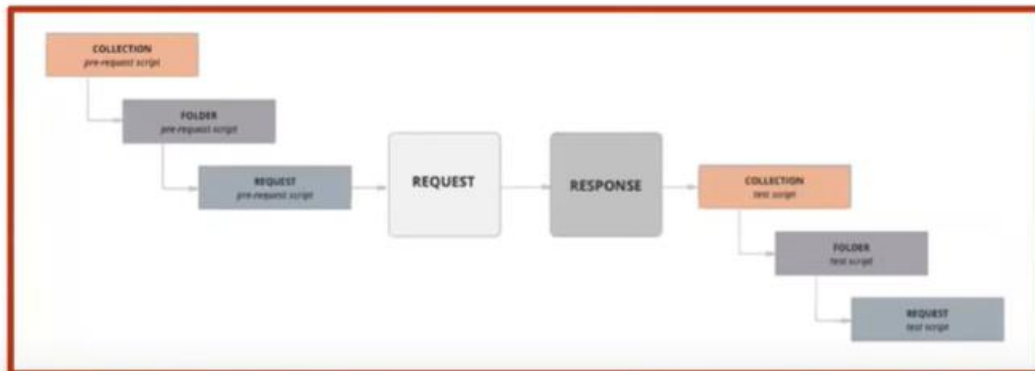
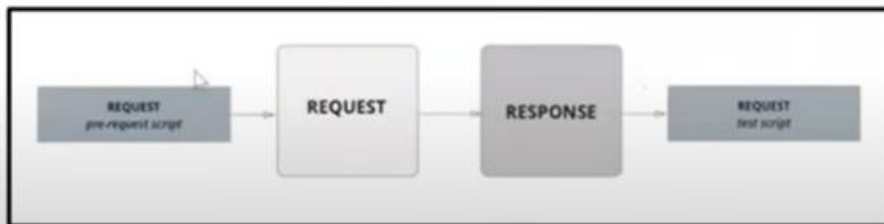
Pre-requestScript --> Request --> Response --> Tests

3 levels:

- 1) Collection
- 2) Folder
- 3) Request

Scripts in Postman

- Pre-request Scripts
- Tests Scripts



Request response order:

ReqRes_httpRequestsWorkflow - Run results

Ran today at 16:00:11 - [View all runs](#)

Source	Environment	Iterations	Duration	All tests	Avg. Resp. Time
Runner	none	1	734ms	0	27 ms

All Tests: Passed (0) Failed (0) Skipped (0) [View Summary](#)

Iteration 1

GET Get request
 https://reqres.in/api/users?page=2
 200 OK 27 ms 1.966 KB

No tests found

Console:

```

"pre-request script at collection level"
"pre-request script at folder level"
"pre-request script at request level"
* GET https://reqres.in/api/users?page=2
"Test script at collection level"
"Test script at folder level"
"Test script at request level"
  
```

Variables:

Scope:

Workspace -> Collections -> Requests

Types of variables as per Scope of access of variables:

- 1) Global => accessible in workspace.
- 2) Collection => accessible within collection.
- 3) Environment => accessible in all collections, but we need to switch to environment.
- 4) Local => accessible only within request(specific to request). Declared inside Pre-request Script i.e. Request -> Scripts -> Pre-request.
- 5) Data => external files csv/text.

Referring variable: {{variable}}

Global variables:

Globals

Global variables for a workspace are a set of variables that are always available within the scope of that workspace. They can be viewed and edited by anyone in that workspace. [Learn more about globals](#)

Filter variables

Variable	Type	Initial value	Current value
<input checked="" type="checkbox"/> url	default	https://reqres.in	https://reqres.in
Add new variable			

HomeWorkspacesAPI Network

Search Postman

Invite

Upgrade

API Testing Handson

Mycollection

- GET GET Request
- POST POST Request
- PUT PUT Request
- DEL DELETE Request

ReqRes_httpRequestsVariables

- myfolder
 - GET Get request
 - POST Post request
 - PUT PUT Request
 - DEL Delete request
- ReqRes_httpRequestsWorkFlow
 - myfolder
 - GET Get request

StudentAPIs

Globals

Global variables for a workspace are a set of variables that are always available within the scope of that workspace. They can be viewed and edited by anyone in that workspace.
[Learn more about globals](#)

Filter variables

Variable	Type	Initial value	Current value	
<input checked="" type="checkbox"/> uri	default	https://reqres.in	https://reqres.in	
Add new variable				

OnlineFind and replaceConsolePostbotRunnerStart ProxyCookiesVaultTrash

HomeWorkspacesAPI Network

Search Postman

Invite

Upgrade

API Testing Handson

Mycollection

- GET GET Request
- POST POST Request
- PUT PUT Request
- DEL DELETE Request

ReqRes_httpRequestsVariables

- myfolder
 - GET Get request
 - POST Post request
 - PUT PUT Request
 - DEL Delete request
- ReqRes_httpRequestsWorkFlow
 - myfolder
 - GET Get request

StudentAPIs

ReqRes_httpRequestsVariables / myfolder / Get request

SaveShare

GET{{uri}}/api/users?page=2

Send

ParamsAuthorizationHeaders (7)BodyScriptsSettingsCookies

Query Params

Key	Value	Description	
<input checked="" type="checkbox"/> page	2		
Key	Value	Description	

BodyCookiesHeaders (18)Test Results

Status: 200 OKTime: 27 msSize: 1.02 KBSave as example

PrettyRawPreviewVisualizeJSON

```
1 {
2   "page": 2,
3   "per_page": 6,
4   "total": 12,
5   "total_pages": 2,
6   "data": [
7     {
8       "id": 7,
9       "email": "michael.lawson@reqres.in",
10      "first_name": "Michael",
11      "last_name": "Lawson",
12      "avatar": "https://reqres.in/img/faces/7-image.jpg"
13    }
14  ]
15 }
```

OnlineFind and replaceConsolePostbotRunnerStart ProxyCookiesVaultTrash

ReqRes_httpRequestsVariables - Run results

Run today at 18:43:41 · [View all runs](#)

Source	Environment	Iterations	Duration	All tests	Avg. Resp. Time
Runner	none	1	2s 96ms	0	272 ms

All Tests: Passed (0) Failed (0) Skipped (0) [View Summary](#)

Iteration 1

GET Get request
https://reqres.in/api/users?page=2
200 OK 20 ms 1.962 KB
No tests found

POST Post request
https://reqres.in/api/users
201 Created 387 ms 929 B
No tests found

PUT PUT Request
https://reqres.in/api/users/353
200 OK 317 ms 959 B
No tests found

DELETE Delete request
https://reqres.in/api/users/353
204 No Content 365 ms 800 B
No tests found

Collection variable:

ReqRes_httpRequestsVariables

Overview Authorization Scripts **Variables** Runs

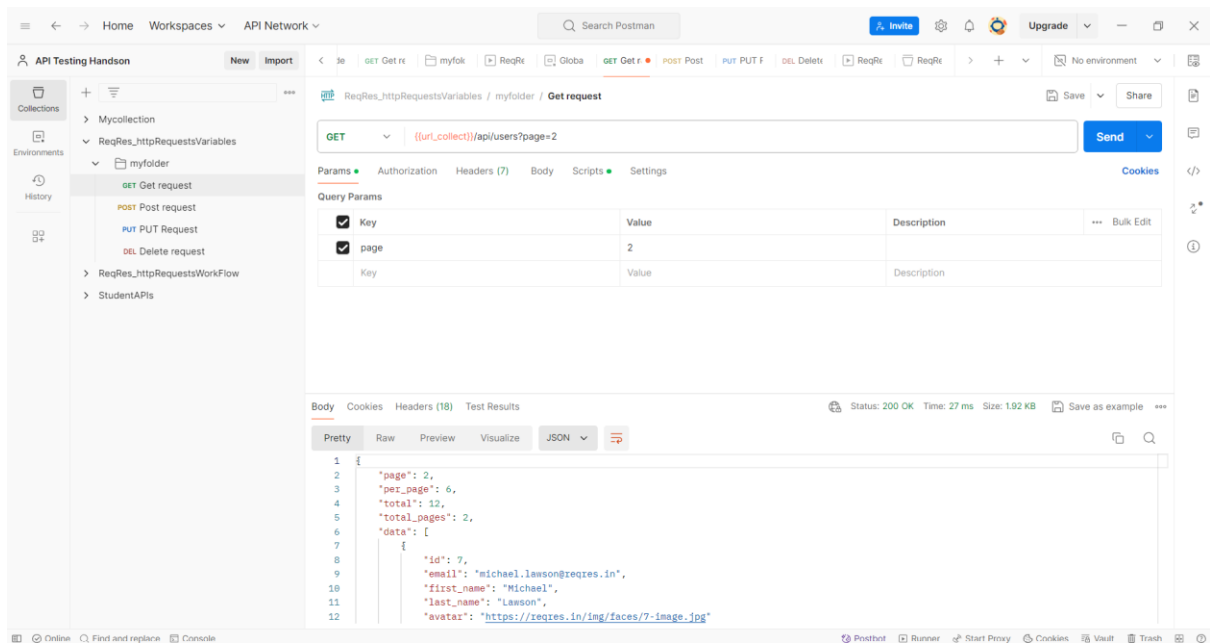
These variables are specific to this collection and its requests. Learn more about [collection variables](#)

Filter variables

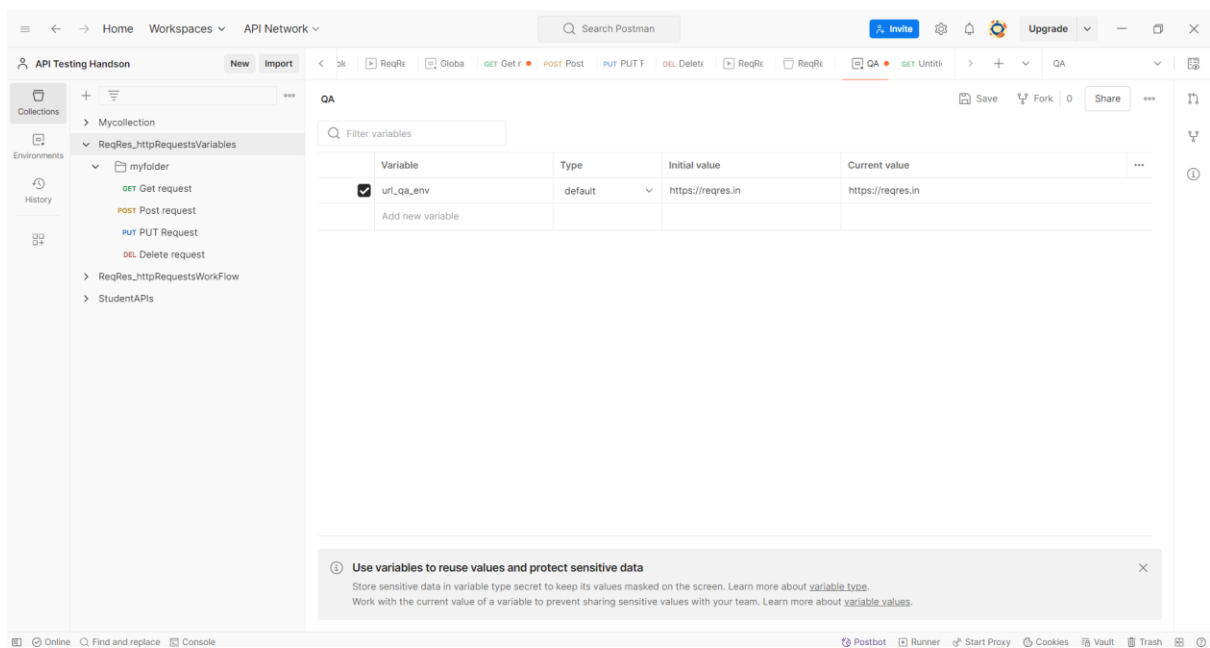
Variable	Initial value	Current value
<input checked="" type="checkbox"/> url_collect	https://reqres.in	https://reqres.in
Add new variable		

Use variables to reuse values and protect sensitive data

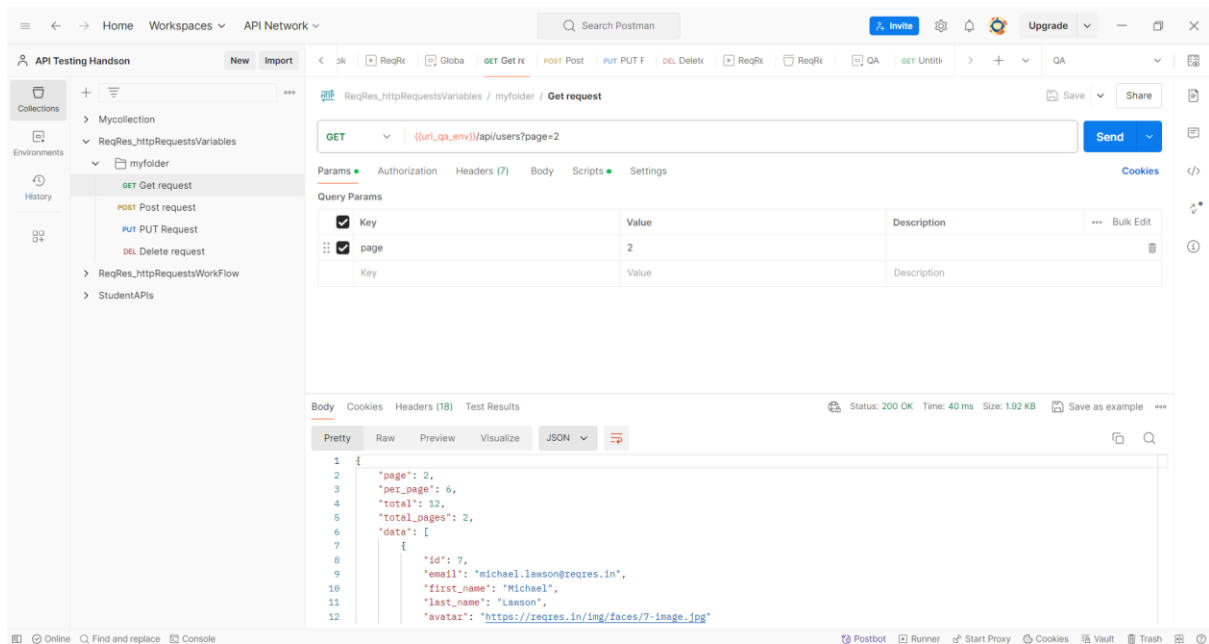
Store sensitive data in variable type secret to keep its values masked on the screen. Learn more about [variable type](#).
Work with the current value of a variable to prevent sharing sensitive values with your team. Learn more about [variable values](#).



Environment variables:



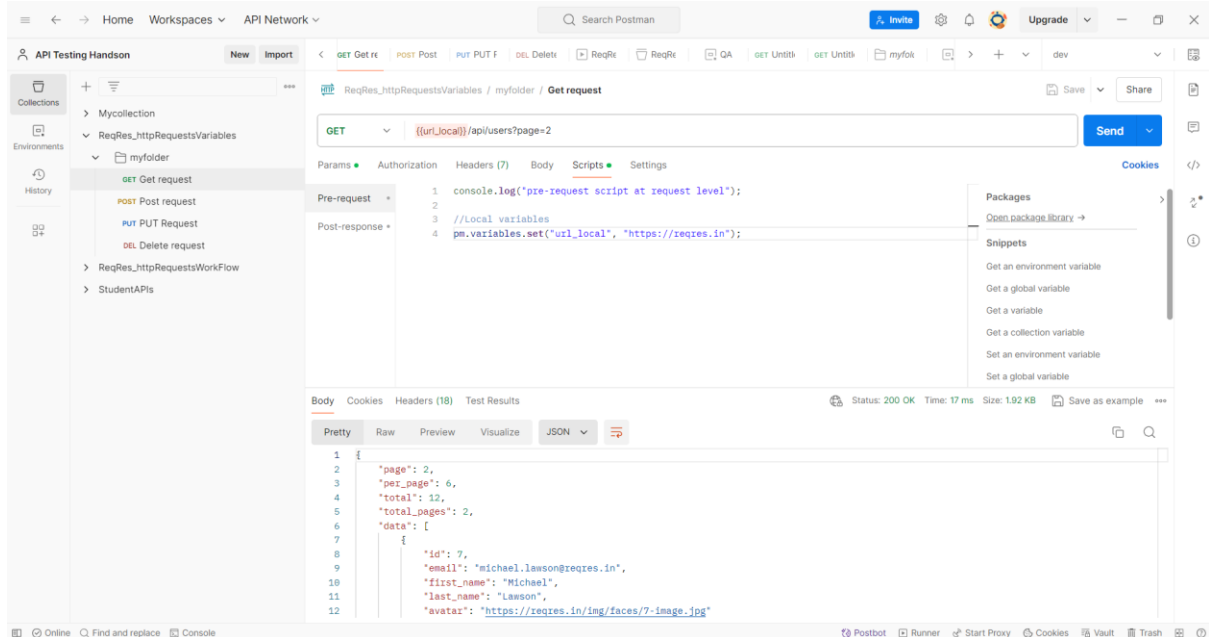
Select environment as QA.



Local Variable:

//Local variables

`pm.variables.set("url_local", "https://reqres.in");`



We can also initialize global variable under request

Ex:

GET => `{{url_local}}/api/users?page={{userid_globals}}`

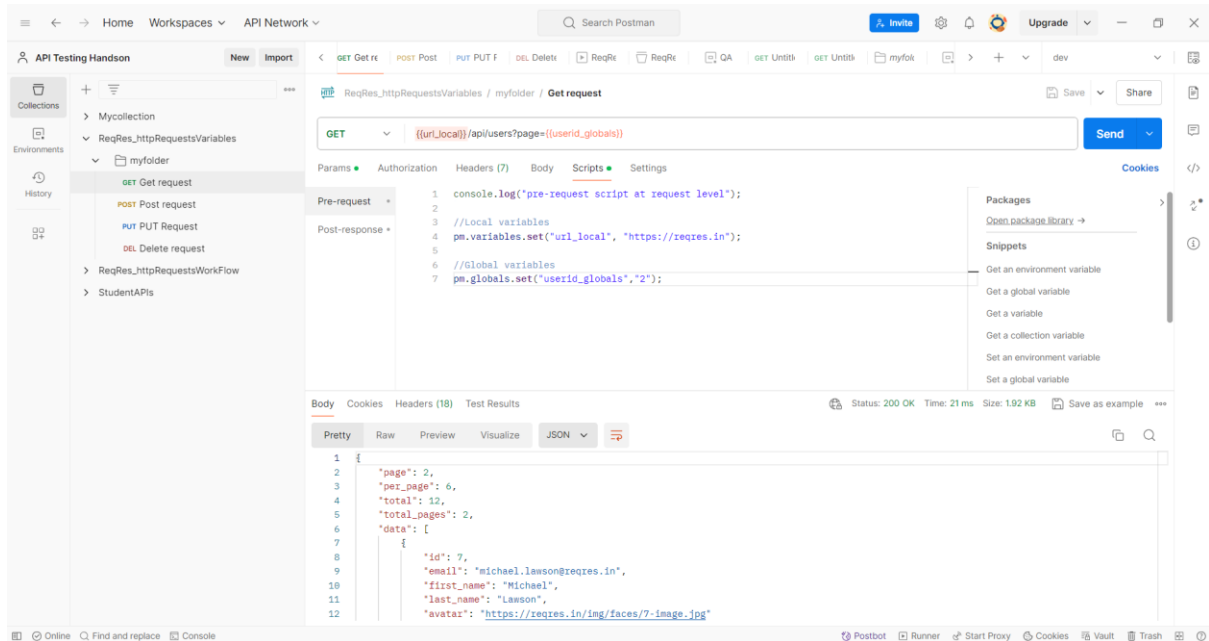
Script=>

//Local variables

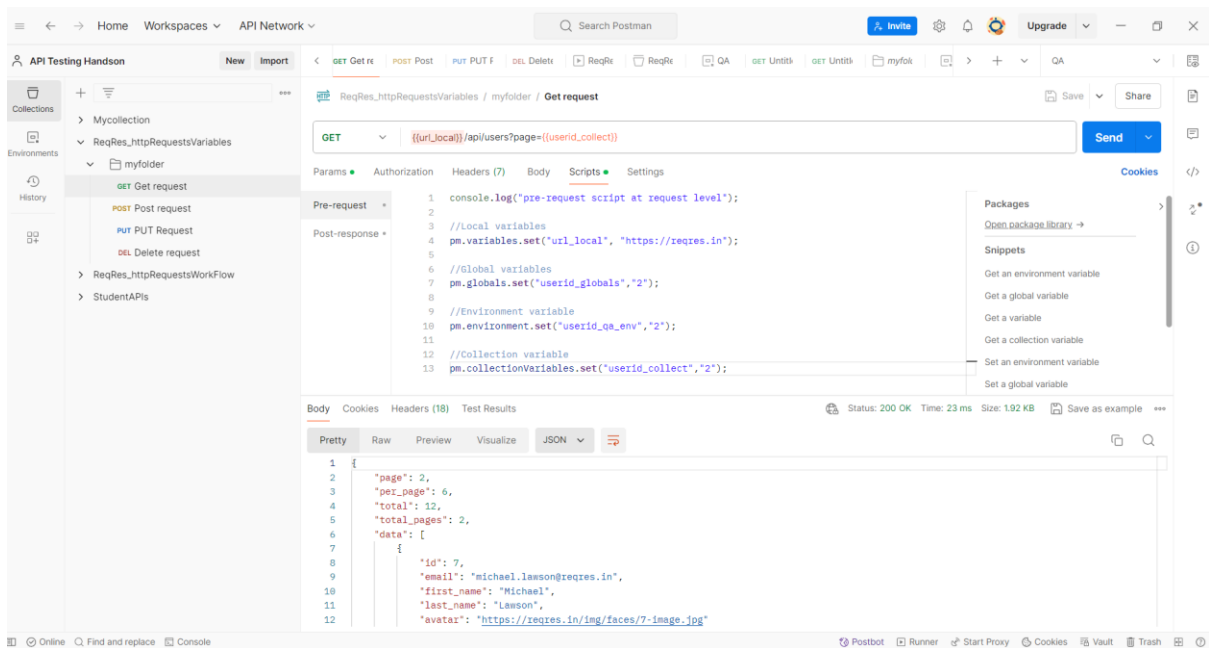
```
pm.variables.set("url_local", "https://reqres.in");
```

```
//Global variables
```

```
pm.globals.set("userid_globals","2");
```



A global variable created in a request can also be accessible everywhere.



```
//Local variables
```

```
pm.variables.set("url_local", "https://reqres.in");
```

```
//Global variables
```



```
pm.globals.set("userid_globals","2");
```

```
//Environment variable
```

```
pm.environment.set("userid_qa_env","2");
```

```
//Collection variable
```

```
pm.collectionVariables.set("userid_collect","2");
```

Creating variables using pre-request scripts:

```
//Local variables
```

```
pm.variables.set("url_local", "https://reqres.in");
```

```
//Global variables
```

```
pm.globals.set("userid_globals","2");
```

```
//Environment variable
```

```
pm.environment.set("userid_qa_env","2");
```

```
//Collection variable
```

```
pm.collectionVariables.set("userid_collect","2");
```

Unset/Delete: in Post-response Scripts

Ex:

```
//Global variables
```

```
pm.globals.unset("userid_globals");
```

Capture the values from variables:

```
console.log(pm.globals.get("userid_globals"));
```

```
console.log(pm.environment.get("userid_qa_env"));
```

```
console.log(pm.collectionVariables.get("userid_collect"));
```

```
console.log(pm.variables.get("url_local"));
```

Methods:

Set, unset, get => global, env, collection, local.

API Chaining

Ex: <https://gorest.co.in/>

GET: <https://gorest.co.in/public/v2/users>

GoRest API :

<https://gorest.co.in/>

Generate Token using github account

url: <https://gorest.co.in/>

endpoint: /public/v2/users

REST API Http Response Codes

- 200: OK. Everything worked as expected.
- 201: A resource was successfully created in response to a POST request. The Location header contains the URL pointing to the newly created resource.
- 204: The request was handled successfully and the response contains no body content (like a DELETE request).
- 304: The resource was not modified. You can use the cached version.
- 400: Bad request. This could be caused by various actions by the user, such as providing invalid JSON data in the request body etc.
- 401: Authentication failed.
- 403: The authenticated user is not allowed to access the specified API endpoint.
- 404: The requested resource does not exist.
- 405: Method not allowed. Please check the Allow header for the allowed HTTP methods.
- 415: Unsupported media type. The requested content type or version number is invalid.
- 422: Data validation failed (in response to a POST request, for example). Please check the response body for detailed error messages.
- 429: Too many requests. The request was rejected due to rate limiting.
- 500: Internal server error. This could be caused by internal program errors.

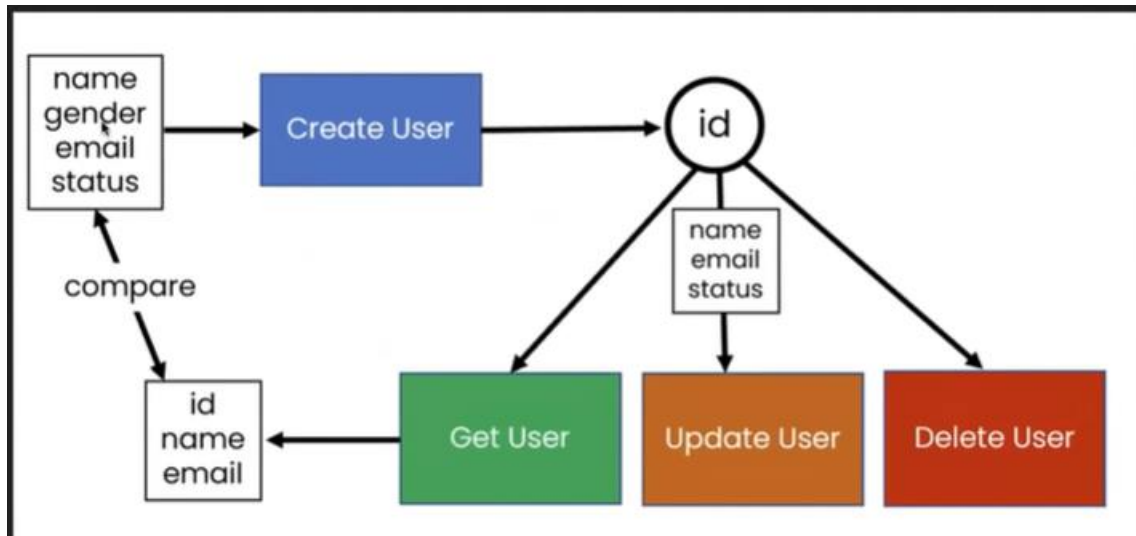
Request Body:

```
{  
  "name": "rutuja",  
  "email": "test@gmail.com",
```

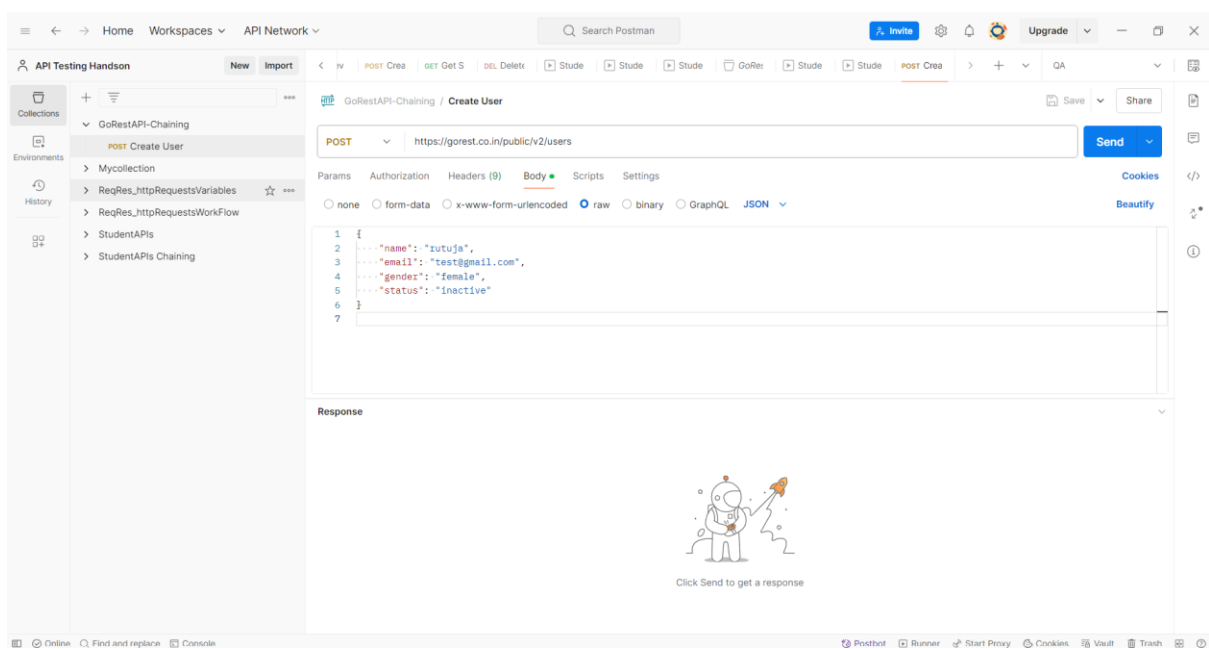
```

"gender": "female",
"status": "inactive"
}

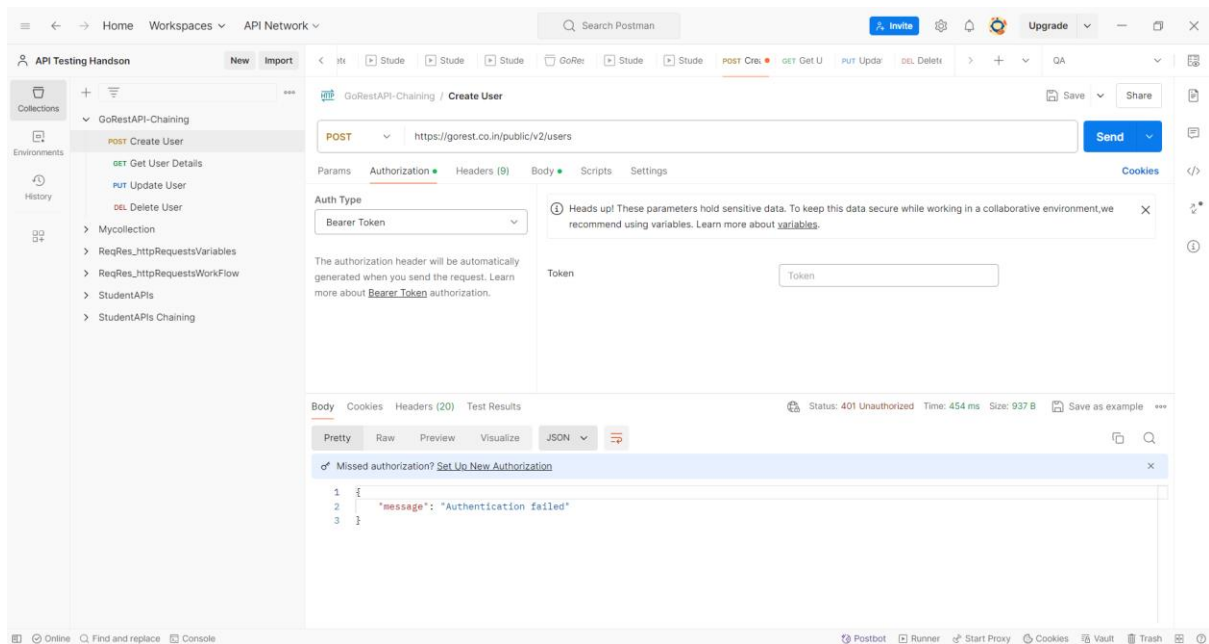
```



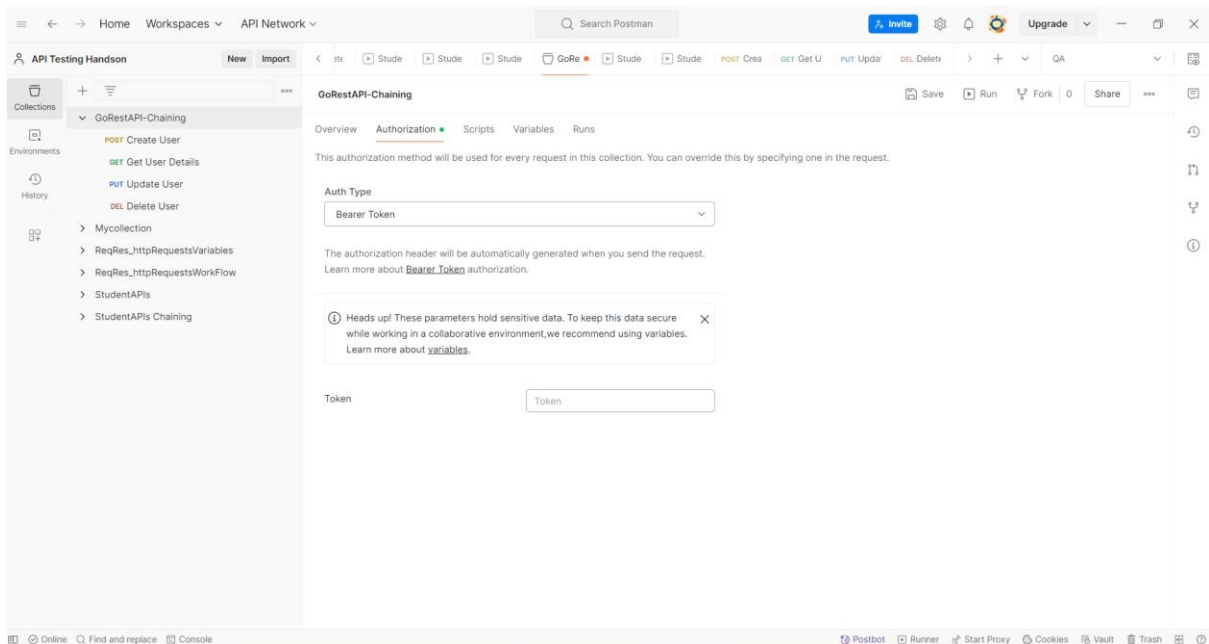
POST:



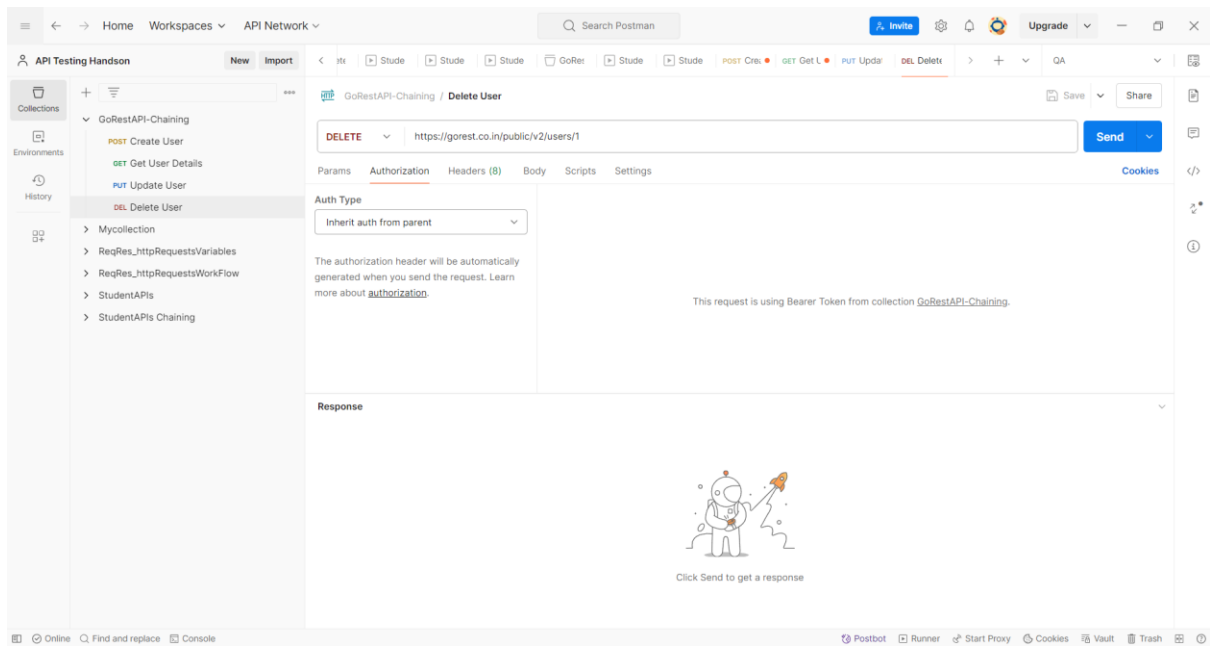
Provide Bearer Token Value.



Add Authorization i.e. Bearer Token at collection level to avoid repetitive task.



Now for Request -> under Authorization -> select Inherit Auth from Parent.



abcd