

**MOBILE SOLUTIONS DEVELOPMENT**

**ASSIGNMENT 4**

**Software QA Techniques**



**CONESTOGA**

Connect Life and Learning

**SUBMITTED BY:**

**NIXIT AHIR(8748790)**

**SUBMITTED TO:**

**Prof.Sharifi Lotfabad, F.,**

**Conestoga College Institute of Technology and Advanced Learning**



**Contents**

TEN UNIQUE API CALLS.....	4
Create fifteen (15) unique passing tests that assert on at least one element. Again, using a variety of the available routes .....	9
Create five (5) unique passing tests that assert on more than one element .....	15
Create at least one (1) failing test.....	17
Github .....	18
References .....	19

## TEN UNIQUE API CALLS

Output:

The image displays two screenshots of the Postman API client interface, showing the results of two API calls.

**Top Screenshot: GET LIST OF USERS**

- Method:** GET
- URL:** `https://reqres.in/api/users?page=1`
- Tests:**

```
1 tests["STATUS CODE"] = responseCode.code == 200;
2 tests["BODY RESPONSE"] = responseBody.has("data");
3
4 var response = JSON.parse(responseBody);
5 tests["PER PAGE RESPONSE"] = response.per_page == 6;
6
```
- Body:** Pretty view showing the response structure:

```
1 {
2   "page": 1,
3   "per_page": 6,
4   "total": 12,
5   "total_pages": 2,
6   "data": [
```
- Status:** 200 OK, 235 ms, 1.84 KB

**Bottom Screenshot: GET GET SINGLE USER**

- Method:** GET
- URL:** `https://reqres.in/api/users/4`
- Tests:**

```
1 tests["validating response Body"] = responseBody.has("support");
2
3 var response = JSON.parse(responseBody);
4 tests["ID RESPONSE"] = response.data.id == 4;
5 tests["EMAIL RESPONSE"] = response.data.email == "eve.holt@reqres.in";
```
- Body:** Pretty view showing the response structure:

```
1 {
2   "data": {
3     "id": 4,
4     "email": "eve.holt@reqres.in",
5     "first_name": "Eve",
6     "last_name": "Holt",
```
- Status:** 200 OK, 233 ms, 1.14 KB

The image displays two screenshots of the Postman API client interface, showing a workspace named 'PROG8170\_NIXIT\_AHIR'.

**Top Screenshot: GET UNKNOWN DATA RESPONSE**

- Request:** GET `https://reqres.in/api/unknown`
- Response:** 200 OK, 45 ms, 1.57 KB. The response body is JSON: 

```
{  "page": 1,  "per_page": 6,  "total": 12,  "total_pages": 2,  "data": [
```

**Bottom Screenshot: POST REGISTER USER**

- Request:** POST `https://reqres.in/api/users`
- Request Body:** JSON 

```
{  "first_name": "nixit",  "last_name": "ahir",  "studentid": "8748790",  "course_code": "1415g"}
```
- Response:** 201 Created, 229 ms, 945 B. The response body is JSON: 

```
{  "last_name": "ahir",  "studentid": "8748790",  "course_code": "1415g",  "id": "48",  "createdAt": "2022-04-05T20:34:23.954Z"}
```

The image displays two screenshots of the Postman API client interface, showing the configuration and execution of REST API requests.

**Top Screenshot: PUT Request**

- Collection:** PROG8170\_NIXIT\_AHIR
- Request:** PUT PUT REQUEST FOR USER
- URL:** `https://reqres.in/api/users/2`
- Method:** PUT
- Body:**

```
{  "studentid": 8748790,  "course_code": "1415c",  "updatedAt": "2022-04-05T20:38:15.483Z"}
```
- Response:** 200 OK, 231 ms, 950 B

**Bottom Screenshot: POST Request**

- Collection:** PROG8170\_NIXIT\_AHIR
- Request:** POST SIGNIN USER AND TESTING TOKEN
- URL:** `https://reqres.in/api/login`
- Method:** POST
- Body:**

```
{  "token": "QpwL5tke4Pnpja7X4"}
```
- Response:** 200 OK, 240 ms, 836 B

The image displays two screenshots of the Postman API client interface, showing the results of two API requests.

**Top Screenshot:**

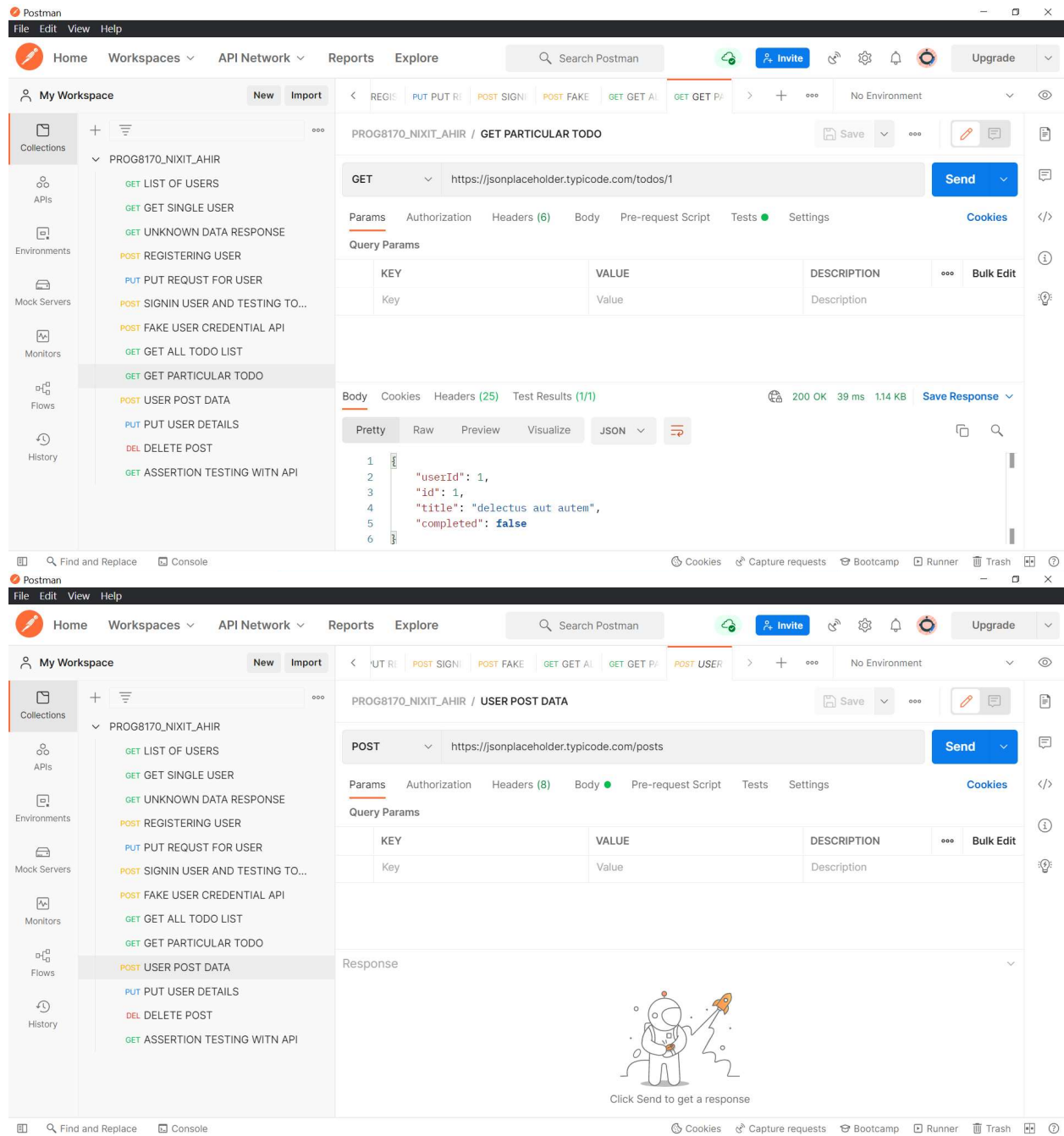
- Collection:** PROG8170\_NIXIT\_AHIR
- API:** FAKE USER CREDENTIAL API
- Method:** POST
- URL:** <https://reqres.in/api/login>
- Headers:** 7
- Body:** (Empty)
- Test Results:** 1/3
- Status:** 400 Bad Request
- Response Time:** 229 ms
- Response Size:** 855 B
- Response Body:**

```
{
  "error": "Missing email or username"
}
```

**Bottom Screenshot:**

- Collection:** PROG8170\_NIXIT\_AHIR
- API:** GET ALL TODO LIST
- Method:** GET
- URL:** <https://jsonplaceholder.typicode.com/todos/>
- Headers:** 6
- Body:** (Empty)
- Test Results:** 1/2
- Status:** 200 OK
- Response Time:** 219 ms
- Response Size:** 24.81 KB
- Response Body:**

```
{
  "userId": 1,
  "id": 1,
  "title": "delectus aut autem",
  "completed": false
}
```





**Create fifteen (15) unique passing tests that assert on at least one element. Again, using a variety of the available routes**

Output:

The screenshot shows a REST client interface for a request to `https://reqres.in/api/users?page=1`. The request method is `GET`. The `Tests` tab is active, displaying three tests:

```
1 tests["STATUS CODE"] = responseCode.code == 200;
2 tests["BODY RESPONSE"] = responseBody.has("data");
3
4 var response = JSON.parse(responseBody);
5 tests["PER PAGE RESPONSE"] = response.per_page == 6;
6
```

Below the tests, the `Test Results (3/3)` section shows that all three tests passed:

- PASS** STATUS CODE
- PASS** BODY RESPONSE
- PASS** PER PAGE RESPONSE

The interface also shows the response status as `200 OK` with a response time of `235 ms` and a size of `1.84 KB`. The `Headers (18)` and `Cookies` tabs are also visible.

PROG8170\_NIXIT\_AHIR / GET SINGLE USER

Save

...

GET

https://reqres.in/api/users/4

Send

Params

Authorization

Headers (6)

Body

Pre-request Script

Tests

Settings

Cookies

```
1 tests["VALIDATING RESPONSE BODY"] = responseBody.has("support");
2
3 var response = JSON.parse(responseBody);
4 tests["ID RESPONSE"] = response.data.id == 4;
5 tests["EMAIL RESPONSE"] = response.data.email == "eve.
  holt@reqres.in";
```

Test scripts are written in JavaScript, and are run after the response is received.

[Learn more about tests scripts](#)

SNIPPETS

[Get an environment variable](#)

[Get a global variable](#)

[Get a variable](#)

Body

Cookies

Headers (19)

Test Results (3/3)

200 OK 35 ms 1.15 KB

Save Response

All

Passed

Skipped

Failed

PASS

VALIDATING RESPONSE BODY

PASS

ID RESPONSE

PASS

EMAIL RESPONSE

PROG8170\_NIXIT\_AHIR / UNKNOWN DATA RESPONSE

Save

...

GET

https://reqres.in/api/unknown

Send

Params

Authorization

Headers (6)

Body

Pre-request Script

Tests

Settings

Cookies

```
1 tests["STATUS CODE"] = responseCode.code == 200;
2 tests["BODY RESPONSE"] = responseBody.has("data");
3 //Content type
4 pm.test("Content-Type HEADER IS PRESENT", () => {
5   pm.response.to.have.header("Content-Type");
6 });
```

Test scripts are written in JavaScript, and are run after the response is received.

[Learn more about tests scripts](#)

SNIPPETS

[Get an environment variable](#)

[Get a global variable](#)

[Get a variable](#)

Body

Cookies

Headers (19)

Test Results (3/3)

200 OK 29 ms 1.56 KB

Save Response

All

Passed

Skipped

Failed

PASS

Content-Type HEADER IS PRESENT

PASS

STATUS CODE

PASS

BODY RESPONSE

PROG8170\_NIXIT\_AHIR / REGISTERING USER

Save

...



POST

https://reqres.in/api/users

Send

Params

Authorization

Headers (8)

Body

Pre-request Script

Tests

Settings

Cookies

```
1 tests["STATUS CODE"] = responseCode.code == 201;
2
3 var response = JSON.parse(responseBody);
4 tests["USER HAS FIRST NAME"] = response.first_name == "nixit";
5 tests["USER HAS LAST NAME"] = response.last_name == "ahir";
6
```

Test scripts are written in JavaScript, and are run after the response is received.

[Learn more about tests scripts](#)

SNIPPETS

[Get an environment variable](#)[Get a global variable](#)[Get a variable](#)

Body

Cookies

Headers (15)

Test Results (3/3)



201 Created

229 ms

945 B

Save Response

All

Passed

Skipped

Failed

PASS

STATUS CODE

PASS

USER HAS FIRST NAME

PASS

USER HAS LAST NAME

PROG8170\_NIXIT\_AHIR / PUT REQUEST FOR USER

Save

...



PUT

https://reqres.in/api/users/2

Send

Params

Authorization

Headers (8)

Body

Pre-request Script

Tests

Settings

Cookies

```
1 pm.test("Status code is 200", function () {
2   | pm.response.to.have.status(200);
3   | });
4
5 pm.test("Response has course code", () => {
6   | pm.expect(pm.response.text()).to.include("course_code");
7   | });
```

Test scripts are written in JavaScript, and are run after the response is received.

[Learn more about tests scripts](#)

SNIPPETS

[Get an environment variable](#)[Get a global variable](#)[Get a variable](#)

Body

Cookies

Headers (17)

Test Results (2/2)



200 OK

231 ms

950 B

Save Response

All

Passed

Skipped

Failed

PASS

Status code is 200

PASS

Response has course code

PROG8170\_NIXIT\_AHIR / SIGNIN USER AND TESTING TOKEN

Save

POST

https://reqres.in/api/login

Send

Params

Authorization

Headers (8)

Body

Pre-request Script

Tests

Settings

Cookies

Query Params

KEY	VALUE	DESCRIPTION		Bulk Edit
Key	Value	Description		

Body

Cookies

Headers (15)

Test Results (1/1)

200 OK 240 ms 836 B

Save Response

All

Passed

Skipped

Failed

PASS

 VALIDATION FOR TOKEN

PROG8170\_NIXIT\_AHIR / GET ALL TODO LIST

Save

GET

https://jsonplaceholder.typicode.com/todos/

Send

Params

Authorization

Headers (6)

Body

Pre-request Script

Tests

Settings

Cookies

```
1 pm.test("RESPONSE REQUEST IS SUCCESSFULL", () => {
2   pm.response.to.have.status(200);
3 });
4
5 pm.test("Response has been received within 100ms", () => {
6   pm.expect(pm.response.responseTime).to.be.below(100);
7 });
8
```

Test scripts are written in JavaScript, and are run after the response is received.  
[Learn more about tests scripts](#)

SNIPPETS  
[Get an environment variable](#)  
[Get a global variable](#)  
[Get a variable](#)

Body

Cookies

Headers (25)

Test Results (2/2)

200 OK 53 ms 24.8 KB

Save Response

All

Passed

Skipped

Failed

PASS

 RESPONSE REQUEST IS SUCCESSFULL

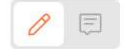
PASS

 Response has been received within 100ms

PROG8170\_NIXIT\_AHIR / GET PARTICULAR TODO

Save

...



GET

https://jsonplaceholder.typicode.com/todos/1

Send

Params

Authorization

Headers (6)

Body

Pre-request Script

Tests

Settings

Cookies

```
1 const jsonData = pm.response.json();
2 pm.test("Testing data type of the api response", () => {
3   pm.expect(jsonData).to.be.an("object");
4   pm.expect(jsonData.userId).to.be.a("number");
5   pm.expect(jsonData.id).to.be.a("number");
6   pm.expect(jsonData.title).to.be.an("string");
7 });
```

Test scripts are written in JavaScript, and are run after the response is received.

[Learn more about tests scripts](#)

SNIPPETS

[Get an environment variable](#)[Get a global variable](#)[Get a variable](#)

Body

Cookies

Headers (25)

Test Results (1/1)



200 OK

39 ms

1.14 KB

Save Response

All

Passed

Skipped

Failed

PASS

Testing data type of the api response

PROG8170\_NIXIT\_AHIR / PUT USER DETAILS

Save

...



PUT

https://jsonplaceholder.typicode.com/posts/1

Send

Params

Authorization

Headers (8)

Body

Pre-request Script

Tests

Settings

Cookies

none

form-data

x-www-form-urlencoded

raw

binary

GraphQL

JSON

Beautify

```
1 {"firstname":"nixit","lastname":"ahir","age":"24","email":"nixit@mail.com"}
```

Body

Cookies

Headers (24)

Test Results (2/2)



200 OK

96 ms

1.16 KB

Save Response

All

Passed

Skipped

Failed

PASS

API RESPONSECONTAINS EMAIL ADDRESS

PASS

API RESPONSECONTAINS FIRSTNAME

PROG8170\_NIXIT\_AHIR / DELETE POST

Save

DELETE  https://jsonplaceholder.typicode.com/posts/1 

Send

Params Authorization Headers (6) Body Pre-request Script Tests  Settings Cookies

Query Params

	KEY	VALUE	DESCRIPTION		Bulk Edit
	Key	Value	Description		

Body Cookies Headers (23) Test Results (1/1)  200 OK 91 ms 1.02 KB 

Save Response

All Passed Skipped Failed

PASS POST HAS BEEN DELETED SUCCSESSFULLY

## Create five (5) unique passing tests that assert on more than one element

Output:

The screenshot shows the Postman REST client interface. The request is a GET to `https://reqres.in/api/users/6`. The 'Tests' tab is active, displaying five JavaScript tests. The status bar at the bottom indicates a successful response (200 OK) with a response time of 40 ms and a body size of 115 KB.

PROG8170\_NIXIT\_AHIR / ASSERTION TESTING WITHN API

GET `https://reqres.in/api/users/6` **Send**

Params Authorization Headers (6) Body Pre-request Script **Tests** Settings Cookies

```
18
19
20
21
22
23
24 pm.test("Response has valid Profile Url",function(){
25   pmVarAvatar = response.data.avatar;
26   pm.expect(pmVarAvatar).to.equal("https://reqres.in/img/faces/
    6-image.jpg");
27 });
28 pm.test("Response time is less than 50ms!!", function () {
29   pm.expect(pm.response.responseTime).to.be.below(200);
30 });
31 pm.test("Content-type is present",function(){
32   pm.response.to.have.header("Content-Type");
33 });
34
```

Test scripts are written in JavaScript, and are run after the response is received. [Learn more about tests scripts](#)

SNIPPETS

- Clear an environment variable
- Clear a global variable
- Clear a collection variable
- Send a request
- Status code: Code is 200
- Response body: Contains string
- Response body: JSON value check
- Response body: Is equal to a string
- Response headers: Content-Type header check

Body Cookies Headers (10) Test Results (7/7) 200 OK 40 ms 115 KB **Save Response**



PROG8170\_NIXIT\_AHIR / ASSERTION TESTING WITH API

Save

...

GET

https://reqres.in/api/users/6

Send

Params

Authorization

Headers (6)

Body

Pre-request Script

Tests

Settings

Cookies

```
1 var response = JSON.parse(responseBody);
2 pm.test("Response has valid Id",function(){
3   pmVarId = response.data.id;
4   pm.expect(pmVarId).to.equal(6);
5 });
6 pm.test("Response has valid Email",function(){
7   pmVarEmail = response.data.email;
8   pm.expect(pmVarEmail).to.equal("tracey.ramos@reqres.in");
9 });
10 pm.test("Response has valid first_name",function(){
11   pmVarfirst_name = response.data.first_name;
12   pm.expect(pmVarfirst_name).to.equal("Tracey");
13 });
14 pm.test("Response has valid last_name",function(){
15   pmVarlast_name = response.data.last_name;
16   pm.expect(pmVarlast_name).to.equal("Ramos");
17 });
18
```

Test scripts are written in JavaScript, and are run after the response is received.  
[Learn more about tests scripts](#)

SNIPPETS

Clear an environment variable

Clear a global variable

Clear a collection variable

Send a request

Status code: Code is 200

Response body: Contains string

Response body: JSON value check

Response body: Is equal to a string

Response headers: Content-Type header check

PROG8170\_NIXIT\_AHIR / ASSERTION TESTING WITH API

Save

...

GET

https://reqres.in/api/users/6

Send

Params

Authorization

Headers (6)

Body

Pre-request Script

Tests

Settings

Cookies

Body

Cookies

Headers (19)

Test Results (7/7)

200 OK 49 ms 1.15 KB

Save Response

All

Passed

Skipped

Failed

PASS

Response has valid Id

PASS

Response has valid Email

PASS

Response has valid first\_name

PASS

Response has valid last\_name

PASS

Response has valid Profile Url

PASS

Response time is less than 50ms!!

PASS

Content-type is present



**Create at least one (1) failing test**

Output:

PROG8170\_NIXIT\_AHIR / FAKE USER CREDENTIALIAL API

Save

Send

Params Authorization Headers (7) Body Pre-request Script Tests Settings Cookies

Query Params

KEY	VALUE	DESCRIPTION	...	Bulk Edit
Key	Value	Description		

Body Cookies Headers (15) Test Results (1/3) 400 Bad Request 229 ms 855 B Save Response

All Passed Skipped Failed

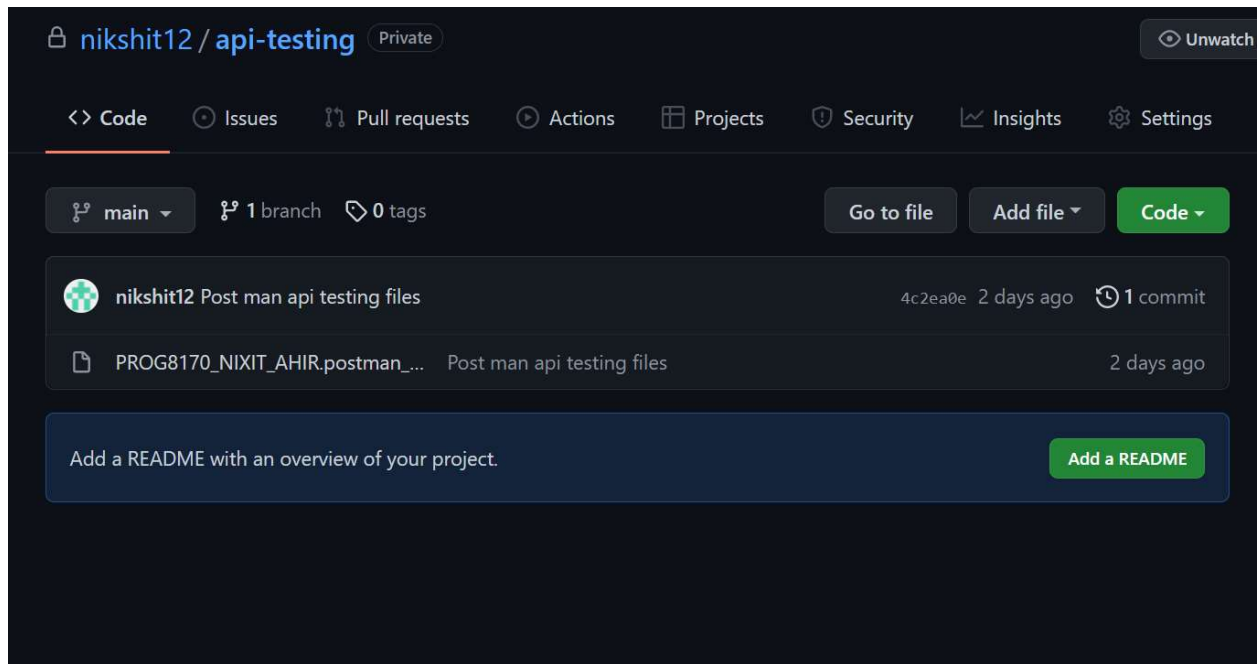
PASS STATUS CODE

FAIL VALIDATION FOR TOKEN | AssertionError: expected false to be truthy

FAIL BODY RESPONSE | AssertionError: expected false to be truthy

**Github**

Output:



## References

### **Writing tests | Postman Learning Center**

*Writing tests | Postman Learning Center. (2022). Retrieved 5 April 2022, from <https://learning.postman.com/docs/writing-scripts/test-scripts/>*

### **Writing tests | Postman Learning Center**

*Writing tests | Postman Learning Center. (2022). Retrieved 5 April 2022, from <https://learning.postman.com/docs/writing-scripts/test-scripts/>*

### **JSONPlaceholder - Free Fake REST API**

*JSONPlaceholder - Free Fake REST API. (2022). Retrieved 5 April 2022, from <https://jsonplaceholder.typicode.com/>*

### **Reqres - A hosted REST-API ready to respond to your AJAX requests**

*Reqres - A hosted REST-API ready to respond to your AJAX requests . (2022). Retrieved 5 April 2022, from <https://reqres.in/>*