
API Testing Heuristics for Developers

— Linda Roy —
@LindaSaraRoy

Agenda

- WHY I introduced API testing heuristics
- WHAT were the API heuristics
- Takeaways





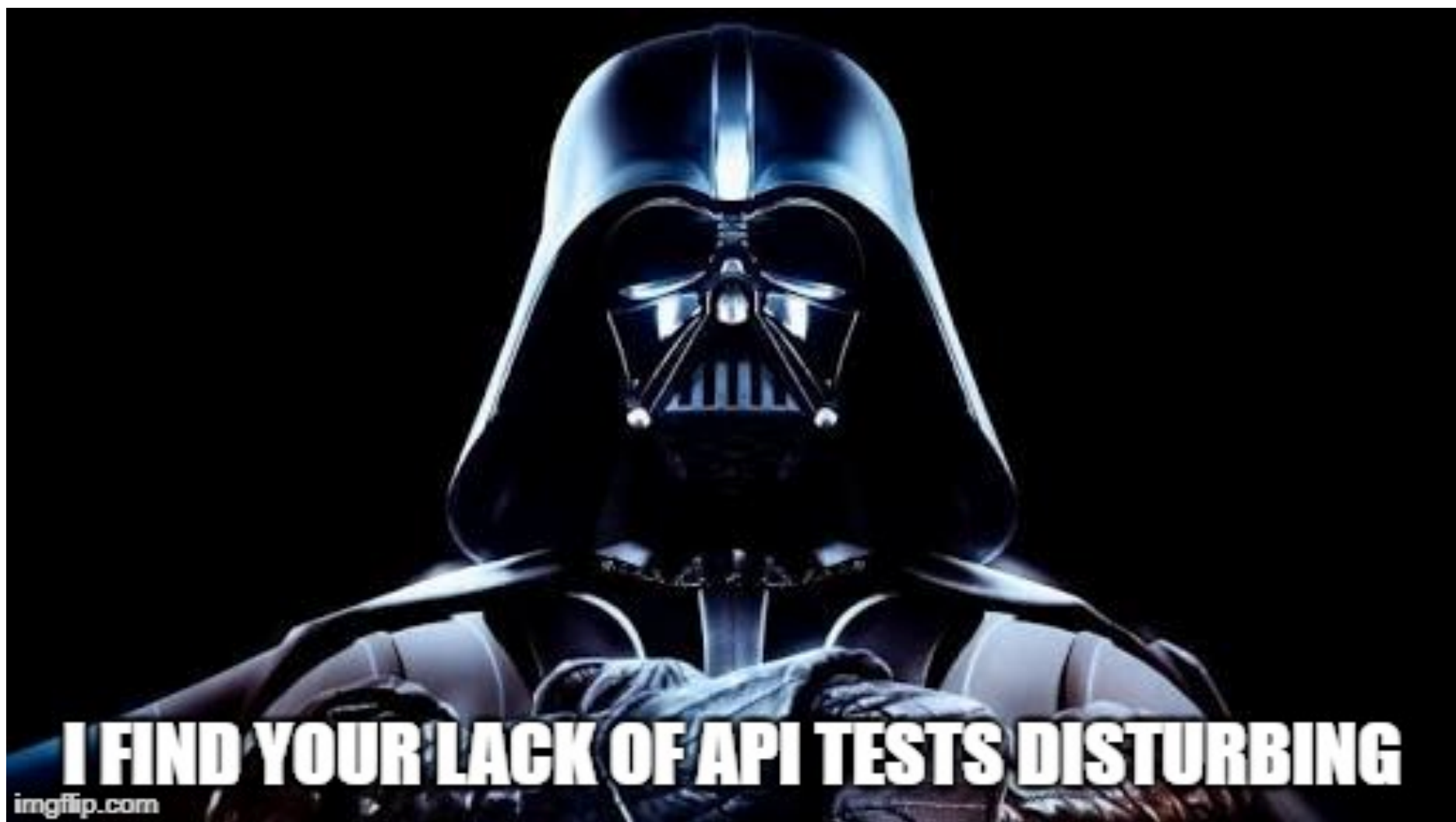


Oracles

Heuristics

Mnemonics

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I FIND YOUR LACK OF API TESTS DISTURBING

imgflip.com

API Testing Heuristics

VADER :

Verbs

Authorisation/Authentication

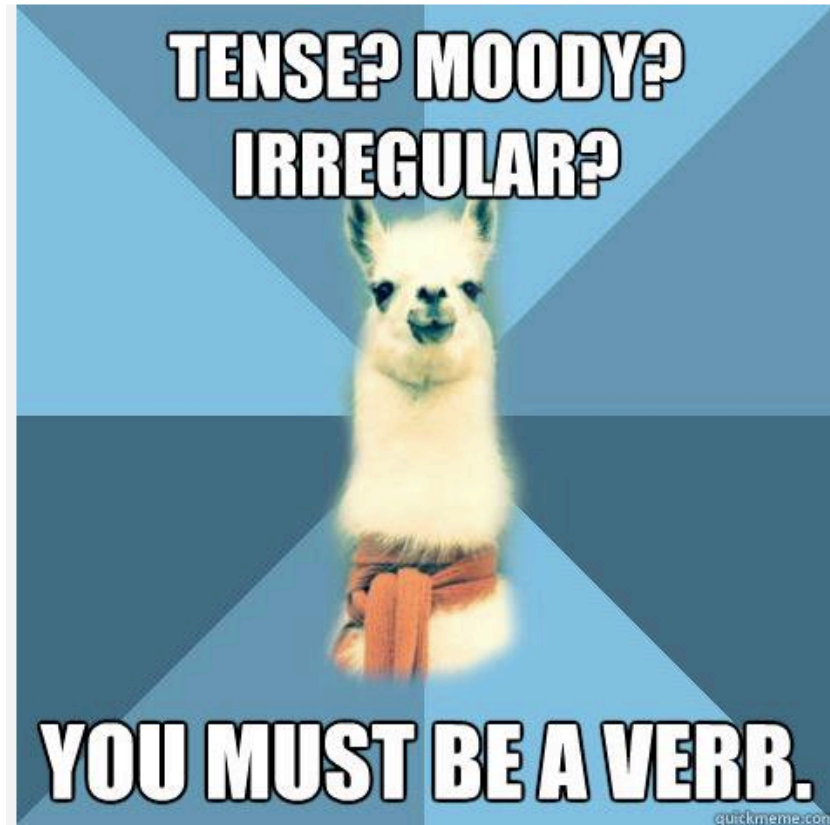
Data

Errors

Responsiveness

Verbs

A
D
E
R



POST

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

- Method:** POST
- URL:** https://swapi.co/api/people/100
- Body Type:** raw (selected)
- Request Body (JSON):**

```
1 {
2   "name": "API Tester",
3   "height": "unknown",
4   "mass": "unknown",
5   "hair_color": "unknown",
6   "skin_color": "unknown",
7   "eye_color": "unknown",
8   "birth_year": "unknown",
9   "gender": "female",
10  "homeworld": "https://swapi.co/api/planets/28/",
11  "films": [
12    "https://swapi.co/api/films/7/"
13  ],
14  "species": [],
15  "vehicles": [],
16  "starships": [],
17  "created": "2015-10-13T10:35:39.229823Z",
18  "edited": "2015-10-13T10:35:39.229894Z",
19  "url": "https://swapi.co/api/people/88/"
20 }
```
- Status:** 404 NOT FOUND
- Time:** 80ms

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DELETE

DELETE https://swapi.co/api/people/1 Params Send

Authorization Headers Body Pre-request Script Tests

TYPE
No Auth

This request does not use any authorization. [Learn more about authorization](#)

The authorization header will be automatically generated when you send the request. [Learn more about authorization](#)

Body Cookies (1) Headers (13) Test Results

Status: 200 OK Time: 1294 ms

Pretty Raw Preview JSON



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V

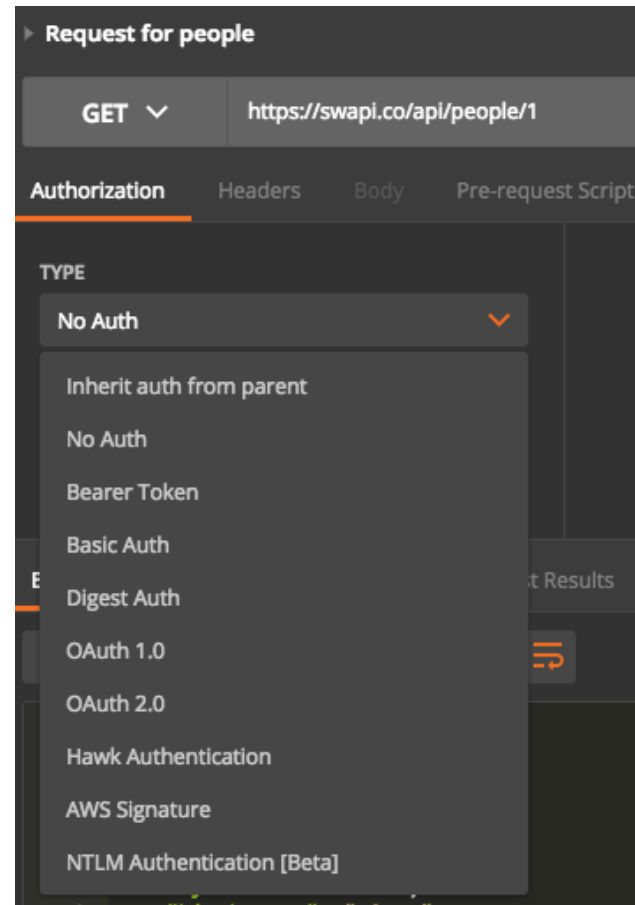
Authorisation

D

E

R





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Request for people

GET Params

Authorization Headers (1) Body Pre-request Script Tests

TYPE
Basic Auth

The authorization header will be automatically generated when you send the request. [Learn more about authorization](#)

Heads up! These parameters hold sensitive data. To keep this data secure while working in a collaborative environment, we recommend using variables. [Learn more about variables](#)

Username: ME
Password: Show Password

Body Cookies (1) Headers (13) Test Results Status: 403 FORBIDDEN Time: 944 ms

Pretty Raw Preview JSON

```
1 {  
2   "detail": "Invalid username/password"  
3 }
```

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V
A
Data
E
R



<https://www.linkedin.com/pulse/meares-digital-analytics-file-featuring-stories-voice-chris-meares>

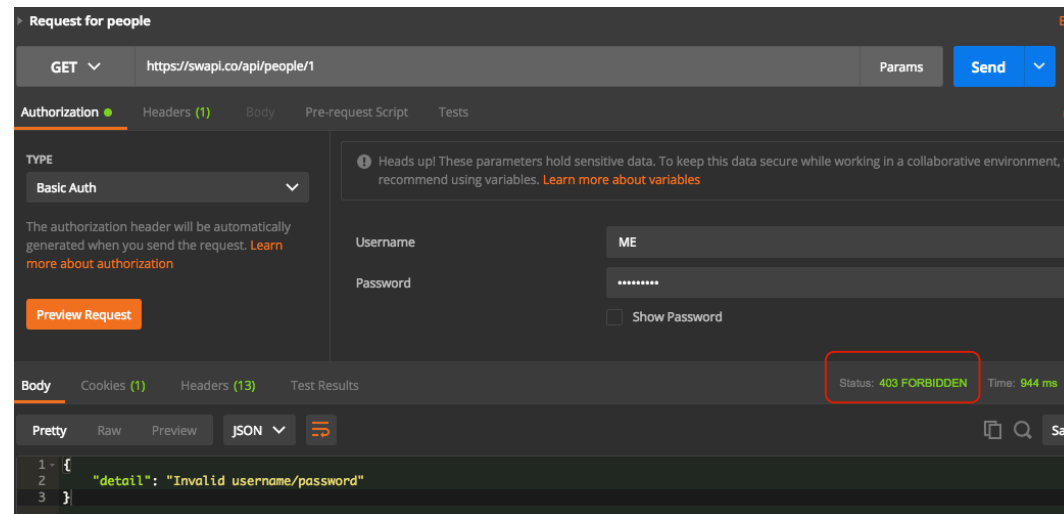
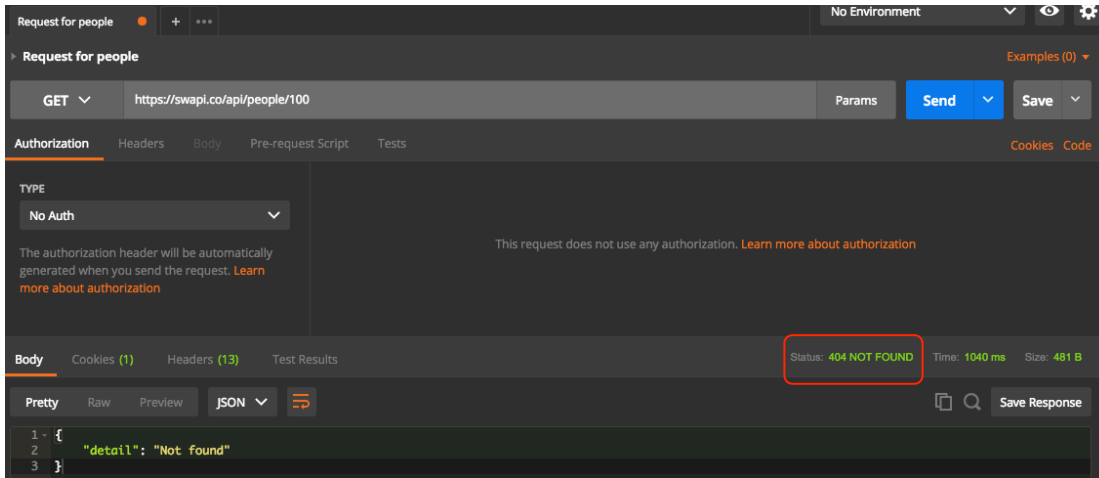
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```
GET https://swapi.co/api/people?page=1 Params Send
Pretty Raw Preview JSON
1 - {
2   "count": 87,
3   "next": "https://swapi.co/api/people?page=2",
4   "previous": null,
5   "results": [
6     {
7       "name": "Luke Skywalker",
8       "height": "172",
9       "mass": "77",
10      "hair_color": "blond",
11      "skin_color": "fair",
12      "eye_color": "blue",
13      "birth_year": "1988Y",
14      "gender": "male",
15      "homeworld": "https://swapi.co/api/planets/1/",
16      "films": [
17        "https://swapi.co/api/films/2/",
18        "https://swapi.co/api/films/6/",
19        "https://swapi.co/api/films/3/",
20        "https://swapi.co/api/films/1/",
21        "https://swapi.co/api/films/7/"
22      ],
23      "species": [
24        "https://swapi.co/api/species/1/"
25      ],
26      "vehicles": [
27        "https://swapi.co/api/vehicles/14/",
28        "https://swapi.co/api/vehicles/30/"
29      ],
30      "starships": [
31        "https://swapi.co/api/starships/12/",
32        "https://swapi.co/api/starships/22/"
33      ],
34      "created": "2014-12-09T13:50:51.644000Z",
35      "edited": "2014-12-20T21:17:56.891000Z",
36      "url": "https://swapi.co/api/people/1/"
37    }
  ]
}
```

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V
A
D
Errors
R





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V
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Responsiveness



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GET `https://swapi.co/api/films` Params Send Save

Authorization Headers Body Pre-request Script Tests Cookies Code

TYPE
Inherit auth from parent

This request is not inheriting any authorization helper at the moment. Save it in a collection to use the parent's authorization helper.

The authorization header will be automatically generated when you send the request. [Learn more about authorization](#)

Body Cookies (1) Headers (13) Test Results Status: 200 OK Time: 1411 ms Size: 19.73 KB

Pretty Raw Preview JSON

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Did It Work?

- Teammates understood quality is team's responsibility
- Mnemonics are a fun way to trigger test ideas
- Making it visible to everyone at all times

Takeaways

- Good to get devs to test
- Mnemonics are good coaching tools
- Don't forget API testing has heuristics
- Don't go to the dark side!

Thank you!

For more heuristics:

- [API and Microservices testing learning pathway](#) - Katrina The Tester
- [ICE OVER MAD](#)
- API testing playgrounds
 - Build.Kiva



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