

HW1: Bedrock-a-party

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GitHub repository: <https://github.com/pacant/Bedrock-a-party>

1. Introduction

The homework consists in an implementation of a RESTful service, starting from a given skeleton and exposing the API listed in the assignment. The service manages the organization of parties, registering the different parties with their guests and food lists.

2. Implementation

The skeleton mainly consists in a module (*party.py*) which implements the basic functionalities of the classes and the exceptions, a file for testing the code (*test_party.py*), and a blueprint (*parties.py*) that has to offer all the functionality in a RESTful way, using *flask*.

Flask allows to address the resources of the service by the URI using decorations, also I can grant the use of certain REST methods according to the API (adding `methods=[...]` to the decoration).

For exposing the API, I used the three utilities functions presents in *parties.py* for creating a party, retrieve the list of the parties and check if a party exists. For the other operations it's simply necessary to work on `_LOADED_PARTIES` dictionary and using the basic functionality of the classes for retrieving, deleting and adding data, according to the parameters in the URI of the resource.

As I said, parameters for operations are always inserted in the URI by the user (flask can fetches them because they are between angular brackets in the route), except when creating a party: in fact the user has to send the guests list (I tested it sending JSON data) with the POST method.

3. Testing

Two kinds of testing:

- **Pytest** (*test_party.py*)

```

bedrock_a_party/tests/test_party.py: 13 warnings
/usr/local/lib/python3.9/site-packages/flask/json/__init__.py:211: Deprecation
Warning: Importing 'itsdangerous.json' is deprecated and will be removed in ItsD
angerous 2.1. Use Python's 'json' module instead.
rv = _json.dumps(obj, **kwargs)

-- Docs: https://docs.pytest.org/en/stable/warnings.html

----- coverage: platform darwin, python 3.9.7-final-0 -----
Name                               Stmts   Miss Branch BrPart  Cover   Missing
-----
bedrock_a_party/classes/party.py    64      10      10      2    84%    17, 31, 3
9-40, 86, 94, 99, 102, 107, 110
bedrock_a_party/views/parties.py    72       9      22      5    83%    25->29, 5
4-56, 70->75, 95-96, 103-104, 120-121, 142
-----
TOTAL                               187     19      32      7    87%

6 files skipped due to complete coverage.
Coverage HTML written to dir htmlcov

FAIL Required test coverage of 98% not reached. Total coverage: 87.21%
===== 2 passed, 17 warnings in 0.61s =====

```

- Postman (request and response)

http://127.0.0.1:5000/parties

Save

GET http://127.0.0.1:5000/parties Send

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

Query Params

KEY	VALUE	DESCRIPTION	...	Bulk Edit
Key	Value	Description		

Body Cookies Headers (4) Test Results 200 OK 7 ms 167 B Save Response

Pretty Raw Preview Visualize JSON

```

1
2  "loaded_parties": []
3

```

http://127.0.0.1:5000/parties

Save



POST

http://127.0.0.1:5000/parties

Send

Params Authorization Headers (9) **Body** Pre-request Script Tests Settings

Cookies

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

Beautify

```
1 {  "guests": [  "Giacomo",  
2    "Francesco",  
3    "Federico"] }
```

Body Cookies Headers (4) Test Results

200 OK 18 ms 164 B

Save Response

Pretty

Raw

Preview

Visualize

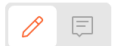
JSON



```
1 {  
2   "party_number": 0  
3 }
```

http://127.0.0.1:5000/parties

Save



POST

http://127.0.0.1:5000/parties

Send

Params Authorization Headers (9) **Body** Pre-request Script Tests Settings

Cookies

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

Beautify

```
1 {  "guests": [  "Antonio",  
2    "Lisa",  
3    "Carmin" ] }
```

Body Cookies Headers (4) Test Results

200 OK 7 ms 164 B

Save Response

Pretty

Raw

Preview

Visualize

JSON



```
1 {  
2   "party_number": 1  
3 }
```

http://127.0.0.1:5000/parties

Save



POST

http://127.0.0.1:5000/parties

Send

Params Authorization Headers (9) **Body** Pre-request Script Tests Settings

Cookies

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

Beautify

```
1 { ... "guests": [ "Benjamin",  
2   ... "Martina",  
3   ... "Costanza" ] }
```

Body Cookies Headers (4) Test Results

200 OK 7 ms 164 B

Save Response

Pretty

Raw

Preview

Visualize

JSON



```
1 {  
2   "party_number": 2  
3 }
```

http://127.0.0.1:5000/parties

Save



GET

http://127.0.0.1:5000/parties

Send

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

Cookies

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

Beautify

```
1
```

Body Cookies Headers (4) Test Results

200 OK 7 ms 166 B

Save Response

Pretty

Raw

Preview

Visualize

JSON



```
1 {  
2   "loaded_parties": 3  
3 }
```

http://127.0.0.1:5000/parties

Save



POST

http://127.0.0.1:5000/parties

Send

Params

Authorization

Headers (9)

Body

Pre-request Script

Tests

Settings

Cookies

none

form-data

x-www-form-urlencoded

raw

binary

GraphQL

JSON

Beautify

```
1 {
2   "guests": []
3 }
```

Body Cookies Headers (4) Test Results

400 BAD REQUEST 5 ms 367 B

Save Response

Pretty

Raw

Preview

Visualize

JSON



```
1 {
2   "code": 400,
3   "description": "The browser (or proxy) sent a request that this server could not understand.",
4   "message": "400 Bad Request: The browser (or proxy) sent a request that this server could not
5               understand."
6 }
```

http://127.0.0.1:5000/party/2

Save



GET

http://127.0.0.1:5000/party/2

Send

Params

Authorization

Headers (7)

Body

Pre-request Script

Tests

Settings

Cookies

none

form-data

x-www-form-urlencoded

raw

binary

GraphQL

JSON

Beautify

```
1
```

Body Cookies Headers (4) Test Results

200 OK 4 ms 211 B

Save Response

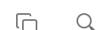
Pretty

Raw

Preview

Visualize

JSON



```
1 {
2   "foodlist": [],
3   "guests": [
4     "Benjamin",
5     "Martina",
6     "Costanza"
7   ],
8   "id": 2
9 }
```

http://127.0.0.1:5000/party/200

Save



GET

http://127.0.0.1:5000/party/200

Send

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

Cookies

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

Beautify

1

Body Cookies Headers (4) Test Results

404 NOT FOUND 7 ms 451 B Save Response

Pretty

Raw

Preview

Visualize

JSON



```
1 {
2   "code": 404,
3   "description": "The requested URL was not found on the server. If you entered the URL manually please
4   "message": "404 Not Found: The requested URL was not found on the server. If you entered the URL
5   manually please check your spelling and try again."
```

http://127.0.0.1:5000/party/2/foodlist/Martina/pizza

Save



POST

http://127.0.0.1:5000/party/2/foodlist/Martina/pizza

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

Body Cookies Headers (4) Test Results

200 OK 5 ms 179 B Save Response

Pretty

Raw

Preview

Visualize

JSON



```
1 {
2   "food": "pizza",
3   "user": "Martina"
4 }
```

http://127.0.0.1:5000/party/2/foodlist/Stefano/pizza

Save



POST

http://127.0.0.1:5000/party/2/foodlist/Stefano/pizza

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

Body Cookies Headers (4) Test Results



401 UNAUTHORIZED

12 ms 657 B

Save Response

Pretty

Raw

Preview

Visualize

JSON



```
1 {
2   "code": 401,
3   "description": "The server could not verify that you are authorized to access the URL requested. You
4   either supplied the wrong credentials (e.g. a bad password), or your browser doesn't understand
5   how to supply the credentials required.",
6   "message": "401 Unauthorized: The server could not verify that you are authorized to access the URL
7   requested. You either supplied the wrong credentials (e.g. a bad password), or your browser
8   doesn't understand how to supply the credentials required."
```

http://127.0.0.1:5000/party/2/foodlist

Save



GET

http://127.0.0.1:5000/party/2/foodlist

Send

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

Cookies

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

Beautify

1

Body Cookies Headers (4) Test Results



200 OK 16 ms 194 B

Save Response

Pretty

Raw

Preview

Visualize

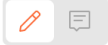
JSON



```
1 {
2   "foodlist": [
3     {
4       "food": "pizza",
5       "user": "Martina"
6     }
7   ]
8 }
```

http://127.0.0.1:5000/party/2/foodlist/Martina/pizza

Save



DELETE

http://127.0.0.1:5000/party/2/foodlist/Martina/pizza

Send

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

Cookies

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

Beautify

1

Body Cookies Headers (4) Test Results

200 OK 8 ms 169 B Save Response

Pretty

Raw

Preview

Visualize

JSON



1

2

3

"msg": "Food deleted!"