

ASE Homework 1

Alberto Ottimo

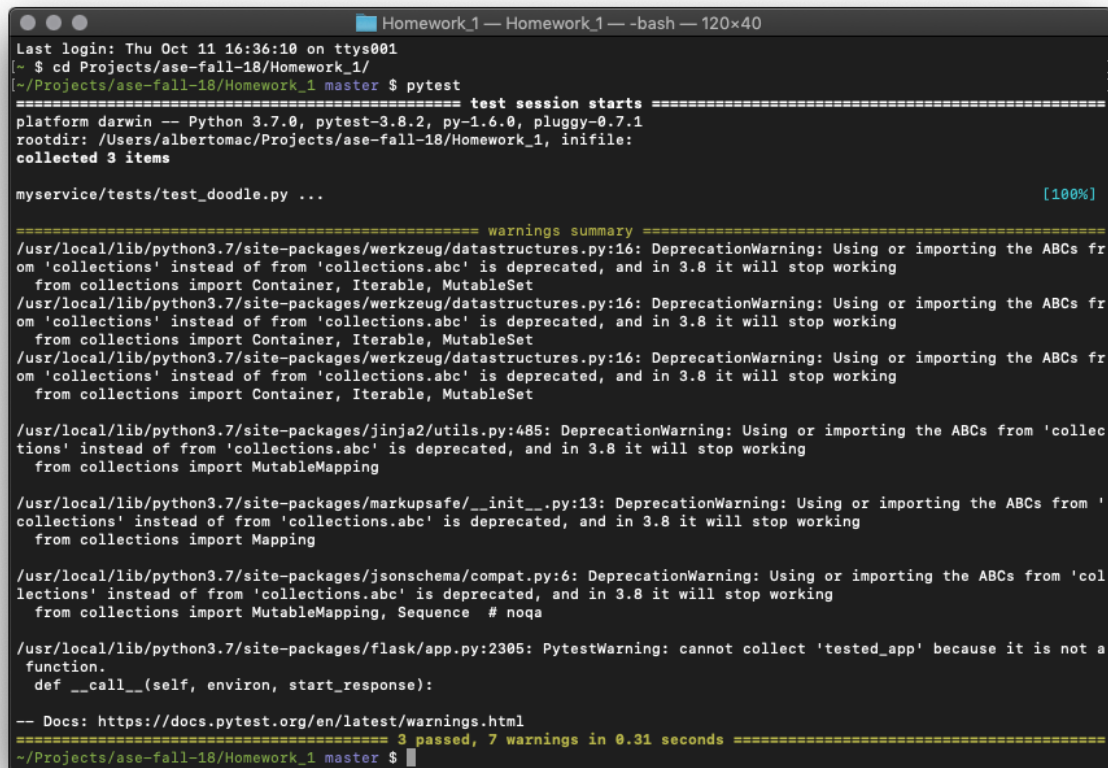
October 14, 2018

Project

The project code can be found at the following link:

https://github.com/Albertomac/ase-fall-18/tree/master/Homework_1

As shown in figure, it passed all tests of `test_doodle.py` python file.

A terminal window titled 'Homework_1 — Homework_1 — -bash — 120x40' showing the execution of 'pytest'. The output indicates a successful test session with 3 items passed and 7 warnings. The warnings are related to deprecated imports from 'collections' and 'collections.abc' in various packages like werkzeug, jinja2, markupsafe, and flask. The terminal text is as follows:

```
Last login: Thu Oct 11 16:36:10 on ttys001
[~ $ cd Projects/ase-fall-18/Homework_1/
~/Projects/ase-fall-18/Homework_1 master $ pytest
===== test session starts =====
platform darwin -- Python 3.7.0, pytest-3.8.2, py-1.6.0, pluggy-0.7.1
rootdir: /Users/albertomac/Projects/ase-fall-18/Homework_1, inifile:
collected 3 items

myservice/tests/test_doodle.py ... [100%]

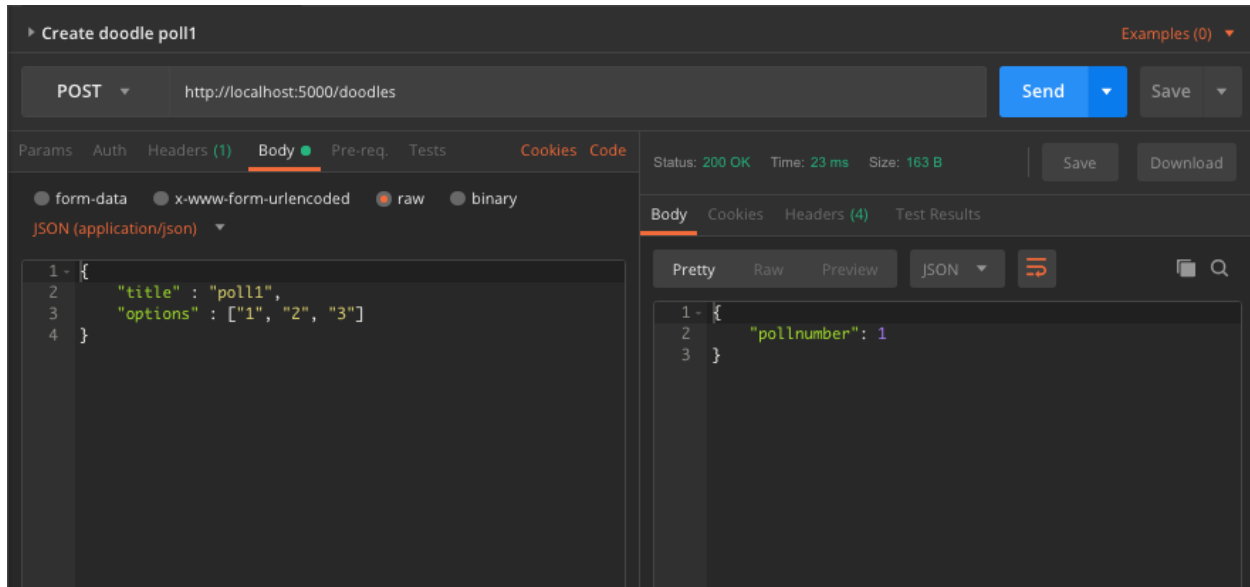
===== warnings summary =====
/usr/local/lib/python3.7/site-packages/werkzeug/datastructures.py:16: DeprecationWarning: Using or importing the ABCs from 'collections' instead of from 'collections.abc' is deprecated, and in 3.8 it will stop working
  from collections import Container, Iterable, MutableSet
/usr/local/lib/python3.7/site-packages/werkzeug/datastructures.py:16: DeprecationWarning: Using or importing the ABCs from 'collections' instead of from 'collections.abc' is deprecated, and in 3.8 it will stop working
  from collections import Container, Iterable, MutableSet
/usr/local/lib/python3.7/site-packages/werkzeug/datastructures.py:16: DeprecationWarning: Using or importing the ABCs from 'collections' instead of from 'collections.abc' is deprecated, and in 3.8 it will stop working
  from collections import Container, Iterable, MutableSet
/usr/local/lib/python3.7/site-packages/jinja2/utils.py:485: DeprecationWarning: Using or importing the ABCs from 'collections' instead of from 'collections.abc' is deprecated, and in 3.8 it will stop working
  from collections import MutableMapping
/usr/local/lib/python3.7/site-packages/markupsafe/_init_.py:13: DeprecationWarning: Using or importing the ABCs from 'collections' instead of from 'collections.abc' is deprecated, and in 3.8 it will stop working
  from collections import Mapping
/usr/local/lib/python3.7/site-packages/jsonschema/compat.py:6: DeprecationWarning: Using or importing the ABCs from 'collections' instead of from 'collections.abc' is deprecated, and in 3.8 it will stop working
  from collections import MutableMapping, Sequence
/usr/local/lib/python3.7/site-packages/flask/app.py:2305: PytestWarning: cannot collect 'tested_app' because it is not a function.
  def __call__(self, environ, start_response):

-- Docs: https://docs.pytest.org/en/latest/warnings.html
===== 3 passed, 7 warnings in 0.31 seconds =====
~/Projects/ase-fall-18/Homework_1 master $
```

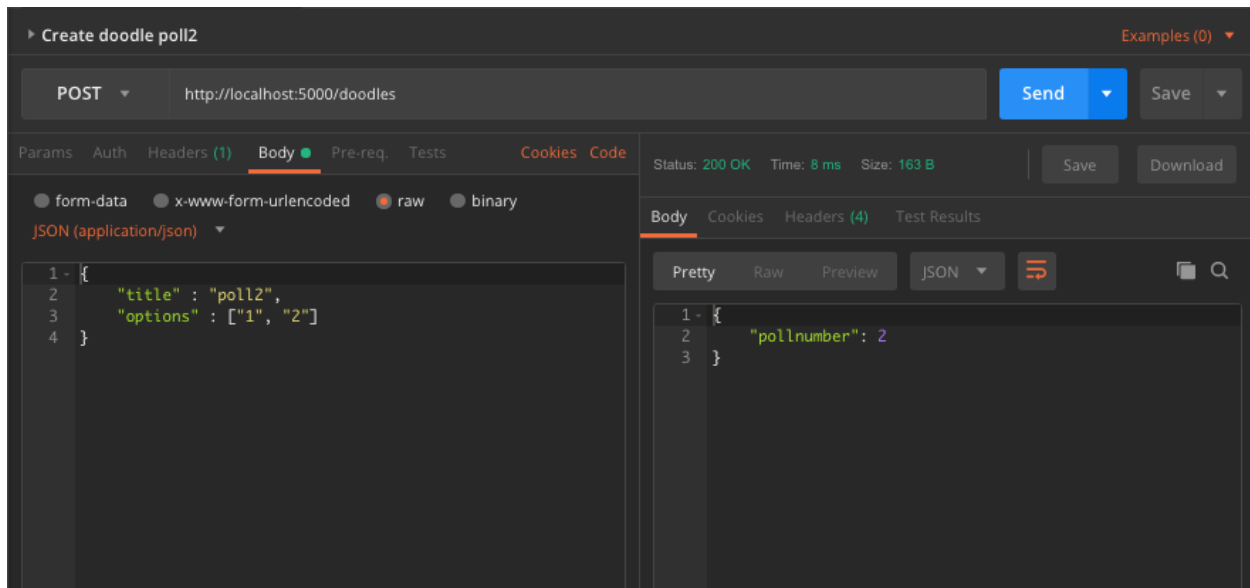
Test 1

Porting of all tests contained in `test1` function to Postman application. These tests refer to the resource `http://localhost:5000/doodles`. The first 3 tests are in charge of creating distinct doodles. The 4th test checks if the previous doodles are stored properly in the server.

Request 1: Create doodle “poll1”



Request 2: Create doodle “poll2”



Request 3: Create doodle “pool3”

► Create doodle poll3 Examples (0)

POST http://localhost:5000/doodles Send Save

Params Auth Headers (1) **Body** Pre-req. Tests Cookies Code

form-data x-www-form-urlencoded raw **JSON (application/json)**

```
1- {
2-   "title" : "poll3",
3-   "options" : ["pizza", "disco"]
4- }
```

Status: 200 OK Time: 6 ms Size: 163 B Save Download

Body Cookies Headers (4) Test Results

Pretty Raw Preview JSON ↕

```
1- {
2-   "pollnumber": 3
3- }
```

Request 4: Get the three doodles

► Get the three doodles Examples (0)

GET http://localhost:5000/doodles Send Save

Params Auth Headers Body Pre-req. Tests Cookies Code

KEY	VALUE	DESCRIPTION	...	Bulk Edit
Key	Value	Description		

Status: 200 OK Time: 4 ms Size: 405 B Save Download

Body Cookies Headers (4) Test Results

Pretty Raw Preview JSON ↕

```
2- "activepolls": [
3-   {
4-     "id": 1,
5-     "options": {
6-       "1": ☐,
7-       "2": ☐,
8-       "3": ☐
9-     },
10-    "title": "poll1",
11-    "winners": [
12-      "1",
13-      "2",
14-      "3"
15-    ]
16-  },
17-   {
18-     "id": 2,
19-     "options": {
20-       "1": ☐,
21-       "2": ☐
22-     },
23-     "title": "poll2",
24-     "winners": [
25-       "1",
26-       "2"
27-     ]
28-   },
29-   {
30-     "id": 3,
31-     "options": {
32-       "disco": ☐,
33-       "pizza": ☐
34-     },
35-     "title": "poll3",
36-     "winners": [
37-       "pizza",
38-       "disco"
39-     ]
40-   }
41- ]
```

Test 2

Porting of all tests contained in `test2` function to Postman application. These tests refer to the resource `http://localhost:5000/doodles/<id>`. They test all possible limit case for every defined *HTTP methods* (GET, PUT, DELETE).

Request 1: Retrive existing doodle

Retrive existing doodle GET

GET `http://localhost:5000/doodles/2` Send Save

Params Auth Headers Body Pre-req. Tests Cookies Code

KEY	VALUE	DESCRIPTION
Key	Value	Description

Status: 200 OK Time: 12 ms Size: 217 B Save Download

Body Cookies Headers (4) Test Results

Pretty Raw Preview JSON ↺

```
1 - {
2   "id": 2,
3   "options": {
4     "1": [],
5     "2": []
6   },
7   "title": "poll2",
8   "winners": [
9     "1",
10    "2"
11  ]
12 }
```

Request 2: Retrive NON-existing doodle

Retrive non-existing doodle GET

GET `http://localhost:5000/doodles/12` Send Save

Params Auth Headers Body Pre-req. Tests Cookies Code

KEY	VALUE	DESCRIPTION
Key	Value	Description

Status: 404 NOT FOUND Time: 11 ms Size: 454 B Save Download

Body Cookies Headers (4) Test Results

Pretty Raw Preview JSON ↺

```
1 - {
2   "code": 404,
3   "description": "The requested URL was not found on
4   the server. If you entered the URL manually
5   please check your spelling and try again.",
6   "message": "404 Not Found: The requested URL was not
7   found on the server. If you entered the URL
8   manually please check your spelling and try
9   again."
10 }
```

Request 3: Vote doodle 2 (fred, 1)

Vote ok (fred, 1) Examples (0)

PUT http://localhost:5000/doodles/2 Send Save

Params Auth Headers (1) Body Pre-req. Tests Cookies Code

form-data x-www-form-urlencoded raw binary

JSON (application/json)

```
1 - {  
2   "person": "fred",  
3   "option": "1"  
4 }
```

Status: 200 OK Time: 12 ms Size: 164 B Save Download

Body Cookies Headers (4) Test Results

Pretty Raw Preview JSON

```
1 - {  
2   "winners": [  
3     "1"  
4   ]  
5 }
```

Request 4: Vote doodle 2 (fred, 2)

Vote ok (fred, 2) Examples (0)

PUT http://localhost:5000/doodles/2 Send Save

Params Auth Headers (1) Body Pre-req. Tests Cookies Code

form-data x-www-form-urlencoded raw binary

JSON (application/json)

```
1 - {  
2   "person": "fred",  
3   "option": "2"  
4 }
```

Status: 200 OK Time: 5 ms Size: 168 B Save Download

Body Cookies Headers (4) Test Results

Pretty Raw Preview JSON

```
1 - {  
2   "winners": [  
3     "1",  
4     "2"  
5   ]  
6 }
```

Request 5: Vote doodle 2 (barney, 1)

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

- Title:** Vote ok (barney, 1)
- Method:** PUT
- URL:** http://localhost:5000/doodles/2
- Body:** JSON (application/json) with content:

```
1 - {  
2   "person": "barney",  
3   "option": "1"  
4 }
```
- Status:** 200 OK
- Time:** 14 ms
- Size:** 164 B
- Response Body:** JSON (application/json) with content:

```
1 - {  
2   "winners": [  
3     "1"  
4   ]  
5 }
```

Request 6: Vote replica doodle 2 (barney, 1)

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

- Title:** Vote replica (barney, 1)
- Method:** PUT
- URL:** http://localhost:5000/doodles/2
- Body:** JSON (application/json) with content:

```
1 - {  
2   "person": "barney",  
3   "option": "1"  
4 }
```
- Status:** 400 BAD REQUEST
- Time:** 12 ms
- Size:** 368 B
- Response Body:** JSON (application/json) with content:

```
1 - {  
2   "code": 400,  
3   "description": "The browser (or proxy) sent a  
4     request that this server could not understand.",  
5   "message": "400 Bad Request: The browser (or proxy)  
6     sent a request that this server could not  
7     understand."  
8 }
```

Request 7: Vote NON-existing option (wilma, 8)

Vote non-existing option (wilma, 8) Examples (0)

PUT http://localhost:5000/doodles/2 Send Save

Params Auth Headers (1) Body Pre-req. Tests Cookies Code

form-data x-www-form-urlencoded raw binary

JSON (application/json)

```
1 - {
2   "person": "wilma",
3   "option": "8"
4 }
```

Status: 400 BAD REQUEST Time: 5 ms Size: 368 B Save Download

Body Cookies Headers (4) Test Results

Pretty Raw Preview JSON

```
1 - {
2   "code": 400,
3   "description": "The browser (or proxy) sent a
4     request that this server could not understand.",
5   "message": "400 Bad Request: The browser (or proxy)
6     sent a request that this server could not
7     understand."
8 }
```

Request 8: Delete doodle 2

Delete doodle (2) Examples (0)

DELETE http://localhost:5000/doodles/2 Send Save

Params Auth Headers Body Pre-req. Tests Cookies Code

KEY	VALUE	DESCRIPTION
Key	Value	Description

Status: 200 OK Time: 12 ms Size: 164 B Save Download

Body Cookies Headers (4) Test Results

Pretty Raw Preview JSON

```
1 - {
2   "winners": [
3     "1"
4   ]
5 }
```

Request 9: Get remaining doodles

Get remaining doodles Examples (0)

GET Send Save

Params Auth Headers Body Pre-req. Tests Cookies Code

KEY	VALUE	DESCRIPTION	*** Bulk Edit
Key	Value	Description	

Status: 200 OK Time: 9 ms Size: 334 B Save Download

Body Cookies Headers (4) Test Results

Pretty Raw Preview JSON 🔍

```
1 {
2   "activepolls": [
3     {
4       "id": 1,
5       "options": {
6         "1": ☐,
7         "2": ☐,
8         "3": ☐
9       },
10      "title": "poll1",
11      "winners": [
12        "1",
13        "2",
14        "3"
15      ]
16    },
17    {
18      "id": 3,
19      "options": {
20        "disco": ☐,
21        "pizza": ☐
22      },
23      "title": "poll3",
24      "winners": [
25        "pizza",
26        "disco"
27      ]
28    }
29  ]
30 }
```

Request 10: Delete again doodle 2

Delete previously doodle (2) Examples (0)

DELETE Send Save

Params Auth Headers Body Pre-req. Tests Cookies Code

KEY	VALUE	DESCRIPTION	*** Bulk Edit
Key	Value	Description	

Status: 410 GONE Time: 5 ms Size: 552 B Save Download

Body Cookies Headers (4) Test Results

Pretty Raw Preview JSON 🔍

```
1 {
2   "code": 410,
3   "description": "The requested URL is no longer
4   available on this server and there is no
5   forwarding address. If you followed a link from
6   a foreign page, please contact the author of
7   this page.",
8   "message": "410 Gone: The requested URL is no longer
9   available on this server and there is no
10  forwarding address. If you followed a link from
11  a foreign page, please contact the author of
12  this page."
13 }
```


Request 11: Delete NON-existing doodle 12

Delete non-existing doodle (12) Examples (0)

DELETE Send Save

Params Auth Headers Body Pre-req. Tests Cookies Code

KEY	VALUE	DESCRIPTION	...	Bulk Edit
Key	Value	Description		

Status: 404 NOT FOUND Time: 9 ms Size: 454 B Save Download

Body Cookies Headers (4) Test Results

Pretty Raw Preview JSON 🔍

```
1 {  
2   "code": 404,  
3   "description": "The requested URL was not found on  
4     the server. If you entered the URL manually  
5     please check your spelling and try again.",  
6   "message": "404 Not Found: The requested URL was not  
7     found on the server. If you entered the URL  
8     manually please check your spelling and try  
9     again."  
10 }
```

Request 12: Get previously existing doodle 2

Get previously existing doodle (2) Examples (0)

GET Send Save

Params Auth Headers Body Pre-req. Tests Cookies Code

KEY	VALUE	DESCRIPTION	...	Bulk Edit
Key	Value	Description		

Status: 410 GONE Time: 13 ms Size: 552 B Save Download

Body Cookies Headers (4) Test Results

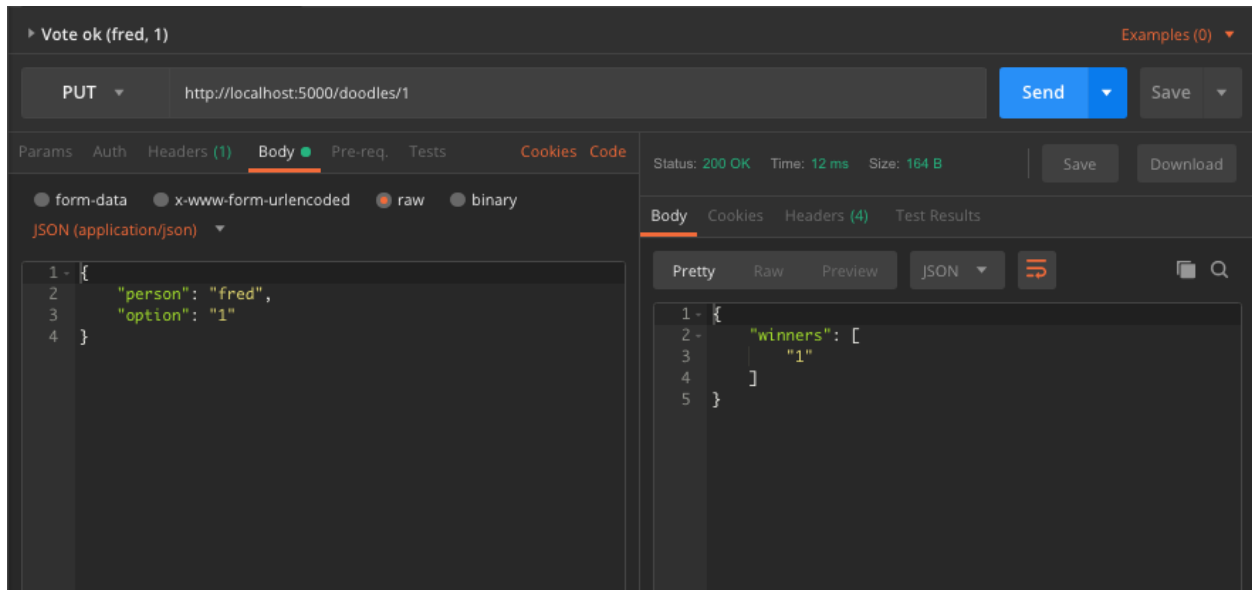
Pretty Raw Preview JSON 🔍

```
1 {  
2   "code": 410,  
3   "description": "The requested URL is no longer  
4     available on this server and there is no  
5     forwarding address. If you followed a link from  
6     a foreign page, please contact the author of  
7     this page.",  
8   "message": "410 Gone: The requested URL is no longer  
9     available on this server and there is no  
10    forwarding address. If you followed a link from  
11    a foreign page, please contact the author of  
12    this page."  
13 }
```

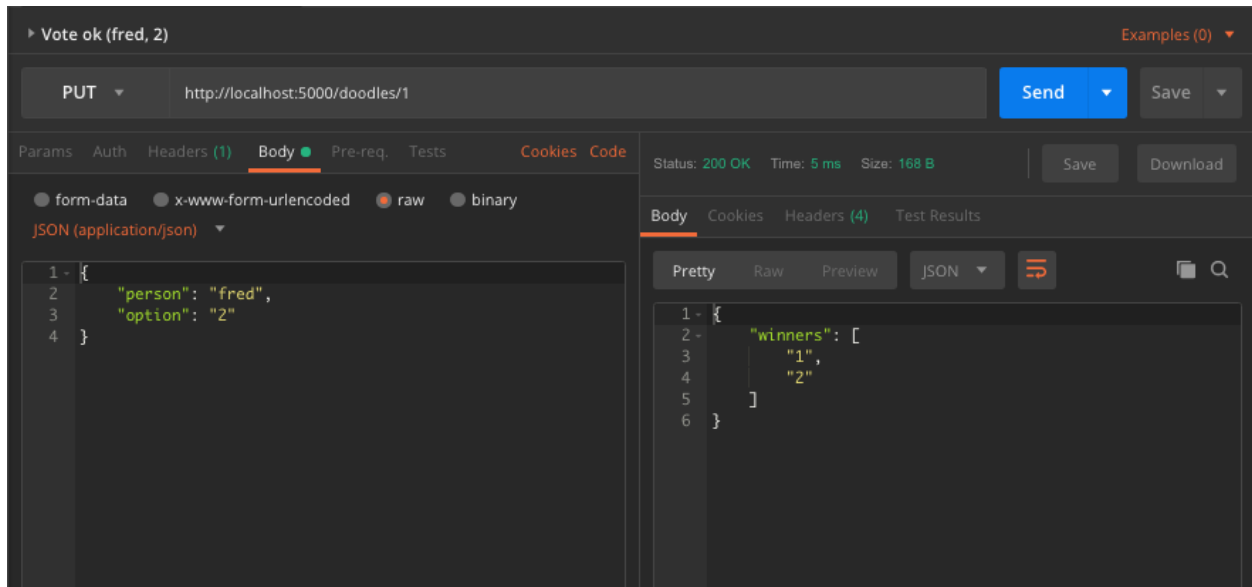
Test 3

Porting of all tests contained in `test3` function to Postman application. These tests are related to the resource `http://localhost:5000/doodles/<id>/<person>`. They test all possible limit case of `GET` and `DELETE HTTP methods`.

Request 1: Vote doodle 1 (fred, 1)



Request 2: Vote doodle 1 (fred, 2)



Request 3: Vote doodle 1 (barney, 1)

Vote ok (barney, 1) Examples (0)

PUT http://localhost:5000/doodles/1 Send Save

Params Auth Headers (1) Body Pre-req. Tests Cookies Code

form-data x-www-form-urlencoded raw binary

JSON (application/json)

```
1 - {
2   "person": "barney",
3   "option": "1"
4 }
```

Status: 200 OK Time: 11 ms Size: 164 B Save Download

Body Cookies Headers (4) Test Results

Pretty Raw Preview JSON

```
1 - {
2   "winners": [
3     "1"
4   ]
5 }
```

Request 4: Get votes from a person who voted (fred)

Get votes from a person who voted (fred) Examples (0)

GET http://localhost:5000/doodles/1/fred Send Save

Params Auth Headers Body Pre-req. Tests Cookies Code

KEY	VALUE	DESCRIPTION	...	Bulk Edit
Key	Value	Description		

Status: 200 OK Time: 13 ms Size: 173 B Save Download

Body Cookies Headers (4) Test Results

Pretty Raw Preview JSON

```
1 - {
2   "votedoptions": [
3     "1",
4     "2"
5   ]
6 }
```

Request 5: Get votes from a person who did NOT vote (wilma)

Get votes from a person who did not vote (wilma) Examples (0)

GET http://localhost:5000/doodles/1/wilma Send Save

Params Auth Headers Body Pre-req. Tests Cookies Code

KEY	VALUE	DESCRIPTION	...	Bulk Edit
Key	Value	Description		

Status: 200 OK Time: 5 ms Size: 166 B Save Download

Body Cookies Headers (4) Test Results

Pretty Raw Preview JSON

```
1 - {  
2   "votedoptions": []  
3 }
```

Request 6: Delete votes from a person who voted (fred)

Delete votes from a person who voted (fred) Examples (0)

DELETE http://localhost:5000/doodles/1/fred Send Save

Params Auth Headers Body Pre-req. Tests Cookies Code

KEY	VALUE	DESCRIPTION	...	Bulk Edit
Key	Value	Description		

Status: 200 OK Time: 6 ms Size: 163 B Save Download

Body Cookies Headers (4) Test Results

Pretty Raw Preview JSON

```
1 - {  
2   "removed": true  
3 }
```

Request 7: Get votes from previously deleted doodle (fred, 1)

► Get votes from previously deleted doodle (fred, 1) Examples (0)

GET Send Save

Params Auth Headers Body Pre-req. Tests Cookies Code

KEY	VALUE	DESCRIPTION	...	Bulk Edit
Key	Value	Description		

Status: 200 OK Time: 9 ms Size: 166 B Save Download

Body Cookies Headers (4) Test Results

Pretty Raw Preview JSON 🔍

```
1 - {  
2   "votedoptions": []  
3 }
```

Request 8: Delete votes from a person who did NOT vote (wilma, 1)

► Delete votes from a person who did not vote (wilma) Examples (0)

DELETE Send Save

Params Auth Headers Body Pre-req. Tests Cookies Code

KEY	VALUE	DESCRIPTION	...	Bulk Edit
Key	Value	Description		

Status: 200 OK Time: 14 ms Size: 164 B Save Download

Body Cookies Headers (4) Test Results

Pretty Raw Preview JSON 🔍

```
1 - {  
2   "removed": false  
3 }
```

Request 9: Get votes from a NON existing pool (fred, 13)

Get votes from a non existing pool (fred, 13) Examples (0)

GET Send Save

Params Auth Headers Body Pre-req. Tests Cookies Code

KEY	VALUE	DESCRIPTION	...	Bulk Edit
Key	Value	Description		

Status: 404 NOT FOUND Time: 4 ms Size: 454 B Save Download

Body Cookies Headers (4) Test Results

Pretty Raw Preview JSON 🔍

```
1 {  
2   "code": 404,  
3   "description": "The requested URL was not found on  
4     the server. If you entered the URL manually  
5     please check your spelling and try again.",  
6   "message": "404 Not Found: The requested URL was not  
7     found on the server. If you entered the URL  
8     manually please check your spelling and try  
9     again."  
10 }
```

Request 10: Get votes from a previously existing pool (fred, 2)

Get votes from a previously existing pool (fred, 2) Examples (0)

GET Send Save

Params Auth Headers Body Pre-req. Tests Cookies Code

KEY	VALUE	DESCRIPTION	...	Bulk Edit
Key	Value	Description		

Status: 410 GONE Time: 12 ms Size: 552 B Save Download

Body Cookies Headers (4) Test Results

Pretty Raw Preview JSON 🔍

```
1 {  
2   "code": 410,  
3   "description": "The requested URL is no longer  
4     available on this server and there is no  
5     forwarding address. If you followed a link from  
6     a foreign page, please contact the author of  
7     this page.",  
8   "message": "410 Gone: The requested URL is no longer  
9     available on this server and there is no  
10    forwarding address. If you followed a link from  
11    a foreign page, please contact the author of  
12    this page."  
13 }
```

More Tests

The following tests show that all resource reply with "405 METHOD NOT ALLOWED" if someone tries to use an *HTTP method* not allowed by a resource.

Request 1: PUT /doodles

The screenshot shows a REST client interface for a PUT request to `http://localhost:5000/doodles`. The request body is a JSON object: `{ "title": "poll1", "options": ["1", "2", "3"] }`. The response status is `405 METHOD NOT ALLOWED` with a time of 12 ms and a size of 367 B. The response body is HTML: `<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 3.2 Final//EN"> <title>405 Method Not Allowed</title> <h1>Method Not Allowed</h1> <p>The method is not allowed for the requested URL.</p>`

Request 2: DELETE /doodles

The screenshot shows a REST client interface for a DELETE request to `http://localhost:5000/doodles`. The response status is `405 METHOD NOT ALLOWED` with a time of 11 ms and a size of 367 B. The response body is HTML: `<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 3.2 Final//EN"> <title>405 Method Not Allowed</title> <h1>Method Not Allowed</h1> <p>The method is not allowed for the requested URL.</p>`

Request 3: POST /doodles/<id>

The screenshot shows a REST client interface for a POST request to `http://localhost:5000/doodles/1`. The request body is a JSON object: `{ "title": "poll1", "options": ["1", "2", "3"] }`. The response status is `405 METHOD NOT ALLOWED` with a time of 11 ms and a size of 374 B. The response body is an HTML error page: `<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 3.2 Final//EN"><title>405 Method Not Allowed</title><h1>Method Not Allowed</h1><p>The method is not allowed for the requested URL.</p>`.

```
POST http://localhost:5000/doodles/1
```

```
{
  "title": "poll1",
  "options": ["1", "2", "3"]
}
```

Status: 405 METHOD NOT ALLOWED Time: 11 ms Size: 374 B

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 3.2 Final//EN">
<title>405 Method Not Allowed</title>
<h1>Method Not Allowed</h1>
<p>The method is not allowed for the requested URL.</p>
```

Request 4: POST /doodles/<id>/<person>

The screenshot shows a REST client interface for a POST request to `http://localhost:5000/doodles/1/fred`. The request body is a JSON object: `{ "person": "fred", "option": "1" }`. The response status is `405 METHOD NOT ALLOWED` with a time of 4 ms and a size of 369 B. The response body is an HTML error page: `<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 3.2 Final//EN"><title>405 Method Not Allowed</title><h1>Method Not Allowed</h1><p>The method is not allowed for the requested URL.</p>`.

```
POST http://localhost:5000/doodles/1/fred
```

```
{
  "person": "fred",
  "option": "1"
}
```

Status: 405 METHOD NOT ALLOWED Time: 4 ms Size: 369 B

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 3.2 Final//EN">
<title>405 Method Not Allowed</title>
<h1>Method Not Allowed</h1>
<p>The method is not allowed for the requested URL.</p>
```


Request 5: PUT /doodles/<id>/<person>

The screenshot displays a REST client interface for a PUT request. The URL bar shows the endpoint `http://localhost:5000/doodles/1/fred`. The request body is a JSON object: `{ "title": "poll1", "options": ["1", "2", "3"] }`. The response status is `405 METHOD NOT ALLOWED` with a time of `12 ms` and a size of `369 B`. The response body is an HTML error page with the following content:

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 3.2 Final//EN">
<title>405 Method Not Allowed</title>
<h1>Method Not Allowed</h1>
<p>The method is not allowed for the requested URL.</p>
```