Che-Wei,Hsu 1805844 **Project 3**

Thao Nguyen 1805858

Bachelor of Information Technology

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Service Deployment Project

Timo Hynninen

JokeAPI

1. Implementation: (writing API, meet requirements and build an app)

Using python flask as server and local json dictionary file as small size of database.

Working directory:

```
SerDep_project3/
                 |--------.git
                 |--------fun.py
                 |--------jokeCollection.json
                 |--------templates/
                                  |---------base.html
                                  |---------cateoryjoke.html
                                  |---------cats.html
                                  |---------home.html
                                  |---------onejoke.html
                                  |---------randomj.html
```

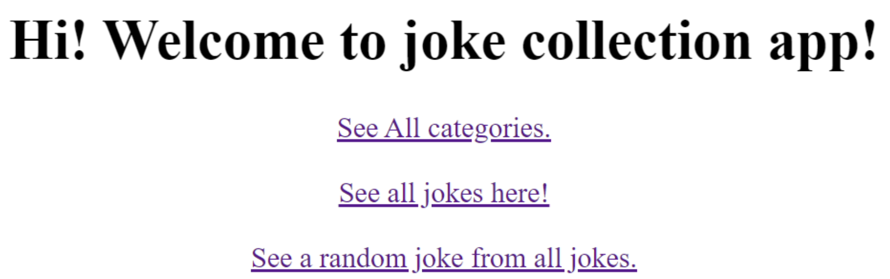
Project has been push to the GitHub: (public)

https://github.com/KingOfSpicy/ServiceDeployment_3_v2

In flask @app.route() handle the client request url, or API restful action and return the .html from templates/

Open Visual Code→open the working folder “SerDep_Ass33”→Terminal: type “python fun.py” to launch the server.

This is home page: http://127.0.0.1:5000

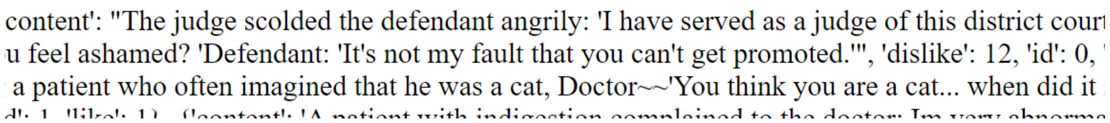


Hi! Welcome to joke collection app!

See All categories.

See all jokes here!

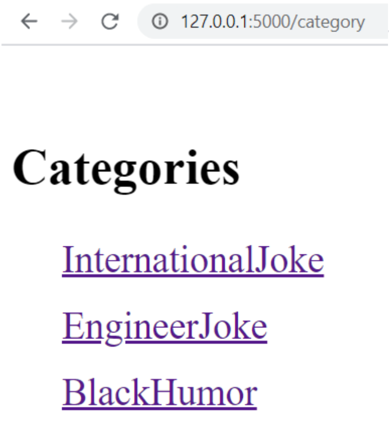
See a random joke from all jokes.



```
content': "The judge scolded the defendant angrily: 'I have served as a judge of this district court
u feel ashamed? 'Defendant: 'It's not my fault that you can't get promoted.'", 'dislike': 12, 'id': 0, '
 a patient who often imagined that he was a cat, Doctor~~'You think you are a cat... when did it
d': 1, 'like': 1}, {'content': 'A patient with indigestion complained to the doctor: Im very abnorma
```

In home page if click: “see all categories”, and then pick one category can see what jokes inside. (listing work)

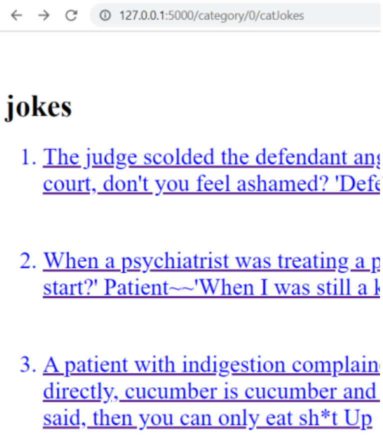
And client can also click the joke he/she likes to gives it a vote!



127.0.0.1:5000/category

Categories

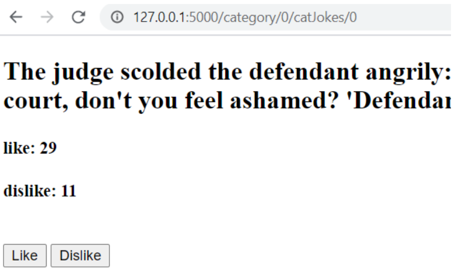
- InternationalJoke
- EngineerJoke
- BlackHumor



127.0.0.1:5000/category/0/catJokes

jokes

1. The judge scolded the defendant ang court, don't you feel ashamed? 'Defe
2. When a psychiatrist was treating a p start?' Patient~~'When I was still a k
3. A patient with indigestion complain directly, cucumber is cucumber and said, then you can only eat sh*t Up



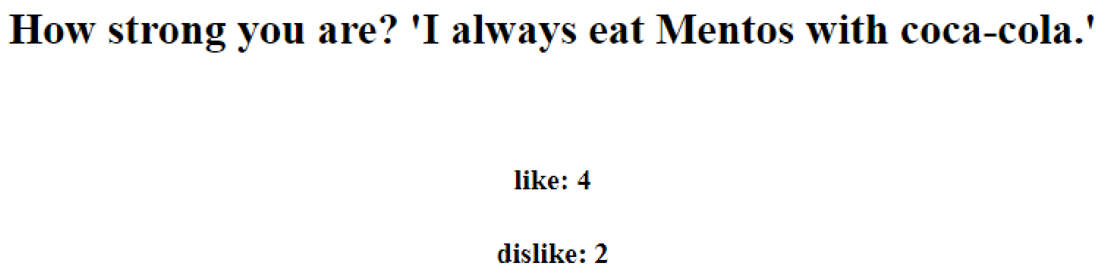
127.0.0.1:5000/category/0/catJokes/0

The judge scolded the defendant angrily: court, don't you feel ashamed? 'Defendar

like: 29

dislike: 11

But if click “See a random joke from all jokes”, client will get a random job on the browser.

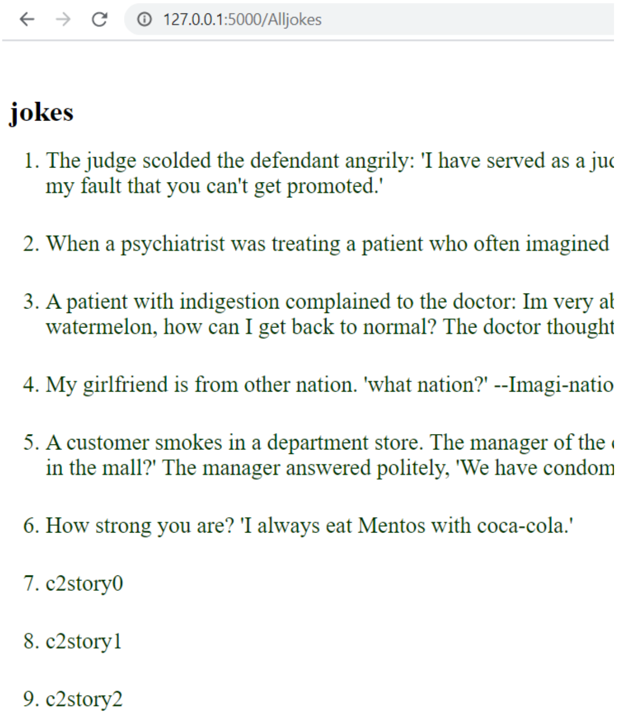


How strong you are? 'I always eat Mentos with coca-cola.'

like: 4

dislike: 2

And if click “see all jokes here!” clients will get: A list of all jokes! (from entire database!)

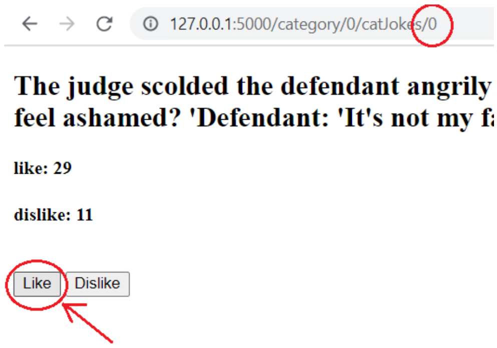


127.0.0.1:5000/Alljokes

jokes

1. The judge scolded the defendant angrily: 'I have served as a juc
   my fault that you can't get promoted.'
2. When a psychiatrist was treating a patient who often imagined
3. A patient with indigestion complained to the doctor: Im very al
   watermelon, how can I get back to normal? The doctor thought
4. My girlfriend is from other nation. 'what nation?' --Imagi-natio
5. A customer smokes in a department store. The manager of the
   in the mall?' The manager answered politely, 'We have condom
6. How strong you are? 'I always eat Mentos with coca-cola.'
7. c2story0
8. c2story1
9. c2story2

To like or dislike a joke, go to joke’s url by its own id:

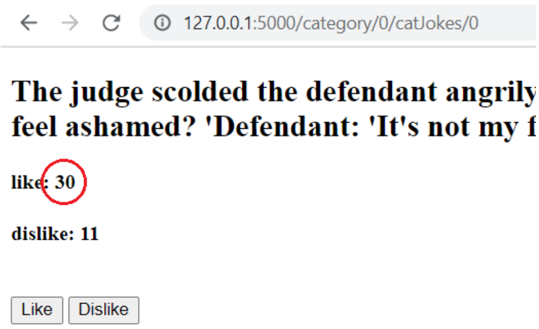


127.0.0.1:5000/category/0/catJokes/0

The judge scolded the defendant angrily
feel ashamed? 'Defendant: 'It's not my f

like: 29

dislike: 11



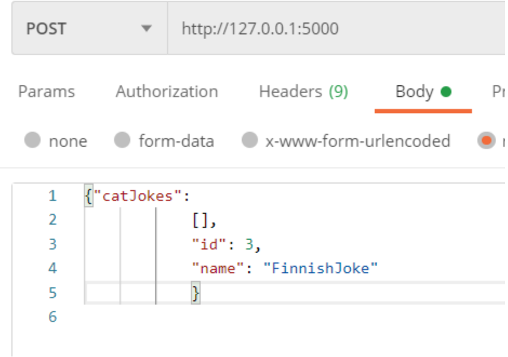
127.0.0.1:5000/category/0/catJokes/0

The judge scolded the defendant angrily
feel ashamed? 'Defendant: 'It's not my f

like: 30

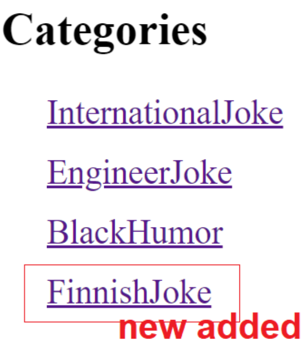
dislike: 11

To add a category or a joke in, using Postman tool: (after that new category will be shown on /category page.



POST http://127.0.0.1:5000

```
{"catJokes":
        [],
        "id": 3,
        "name": "FinnishJoke"
        }
```

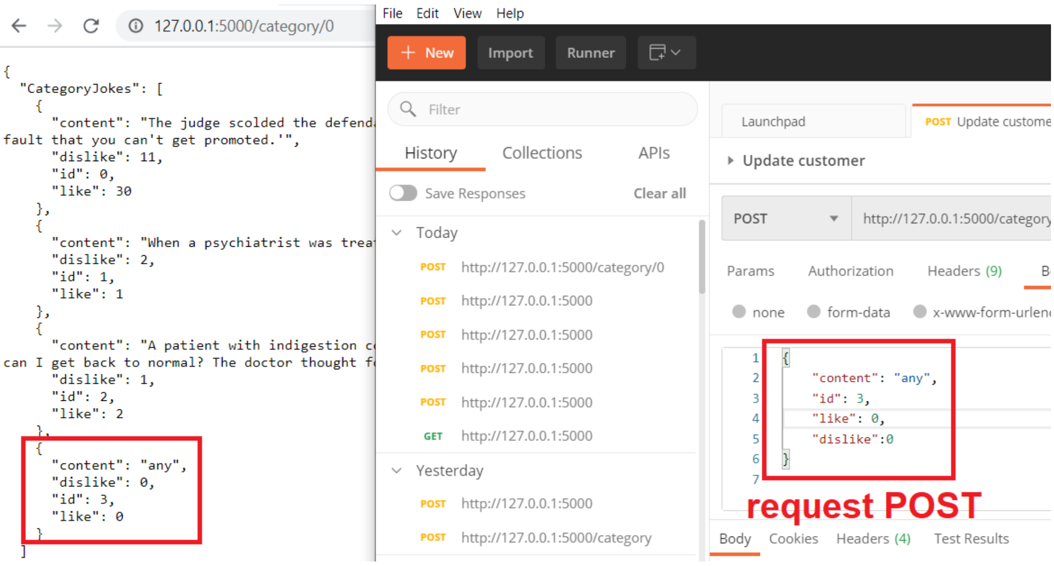


Categories

- InternationalJoke
- EngineerJoke
- BlackHumor
- FinnishJoke

new added

Same step as adding a category:


127.0.0.1:5000/category/0
File Edit View Help
New
Import
Runner
Filter
History
Collections
APIs
Save Responses
Clear all
Today
POST http://127.0.0.1:5000/category/0
POST http://127.0.0.1:5000
POST http://127.0.0.1:5000
POST http://127.0.0.1:5000
POST http://127.0.0.1:5000
GET http://127.0.0.1:5000
Yesterday
POST http://127.0.0.1:5000
POST http://127.0.0.1:5000/category
Launchpad
POST Update custome
Update customer
POST
http://127.0.0.1:5000/category
Params
Authorization
Headers (9)
B
none
form-data
x-www-form-urlen
Body
Cookies
Headers (4)
Test Results

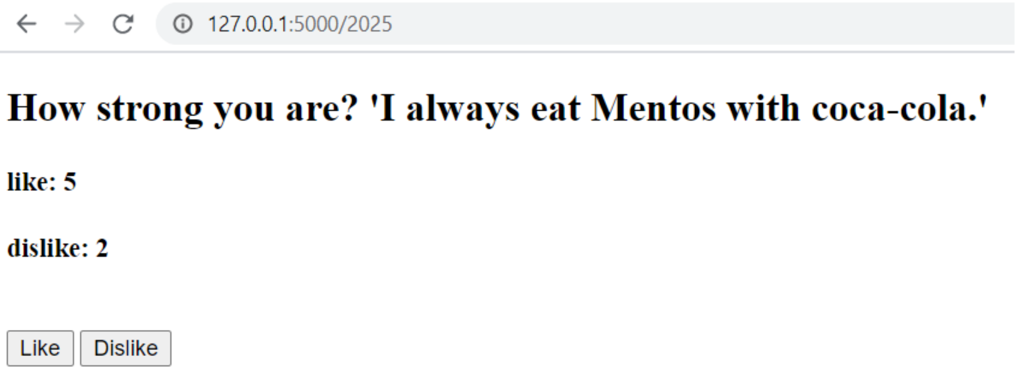
```
{
  "CategoryJokes": [
    {
      "content": "The judge scolded the defend
fault that you can't get promoted.'",
      "dislike": 11,
      "id": 0,
      "like": 30
    },
    {
      "content": "When a psychiatrist was trea
      "dislike": 2,
      "id": 1,
      "like": 1
    },
    {
      "content": "A patient with indigestion c
can I get back to normal? The doctor thought f
      "dislike": 1,
      "id": 2,
      "like": 2
    },
    {
      "content": "any",
      "dislike": 0,
      "id": 3,
      "like": 0
    }
  ]
```

```
{
    "content": "any",
    "id": 3,
    "like": 0,
    "dislike":0
}
```

request POST

Give a unique id to directly access the joke. (of course client can click like/dislike there also)

url: localhost:5000/<unique id>



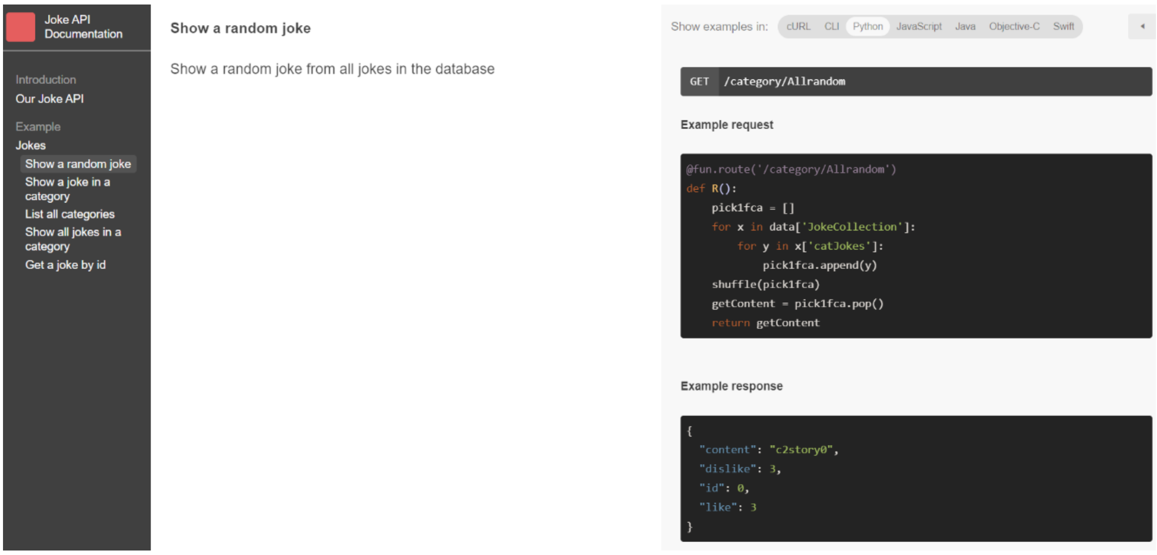
How strong you are? 'I always eat Mentos with coca-cola.'

like: 5

dislike: 2

2. Using docbox to get json results.

1. Retrieve a random joke from all jokes in the database:



Show a random joke

Show a random joke from all jokes in the database

```
GET /category/Allrandom
```

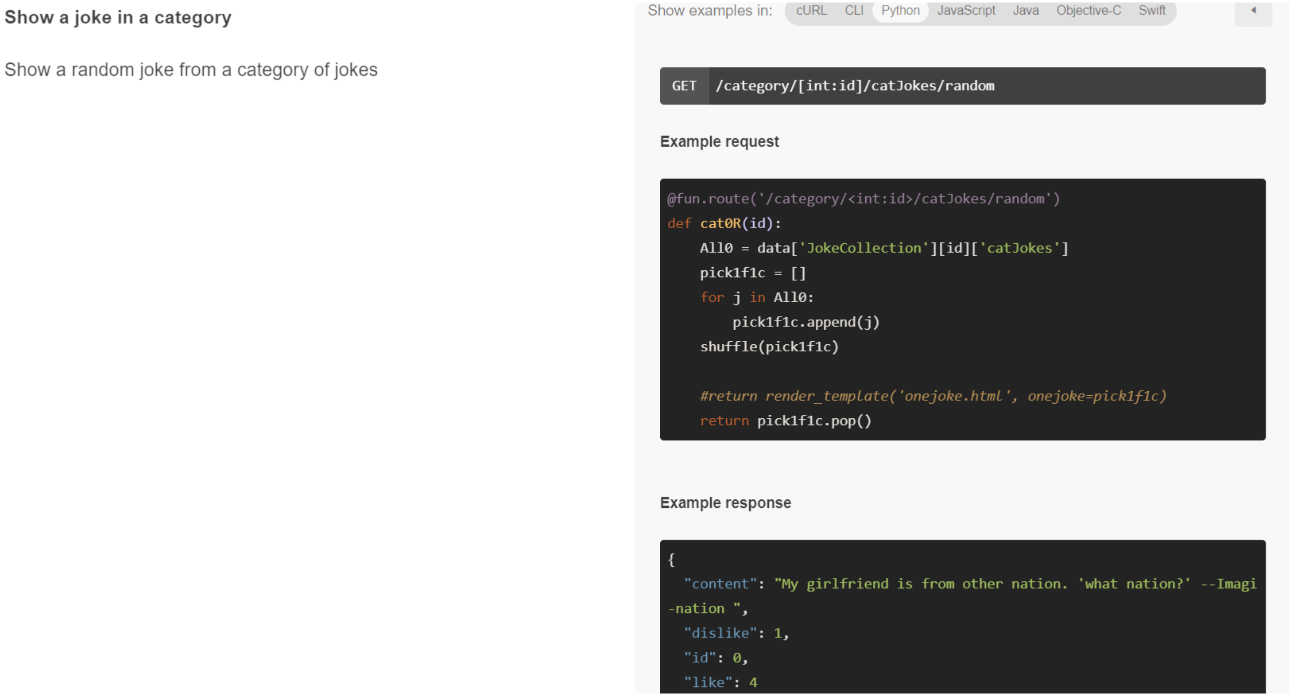
Example request

```
@fun.route('/category/Allrandom')
def R():
    pick1fca = []
    for x in data['JokeCollection']:
        for y in x['catJokes']:
            pick1fca.append(y)
    shuffle(pick1fca)
    getContent = pick1fca.pop()
    return getContent
```

Example response

```
{
  "content": "c2story0",
  "dislike": 3,
  "id": 0,
  "like": 3
}
```

2. Retrieve a random joke from a category of jokes



Show a joke in a category

Show a random joke from a category of jokes

```
GET /category/[int:id]/catJokes/random
```

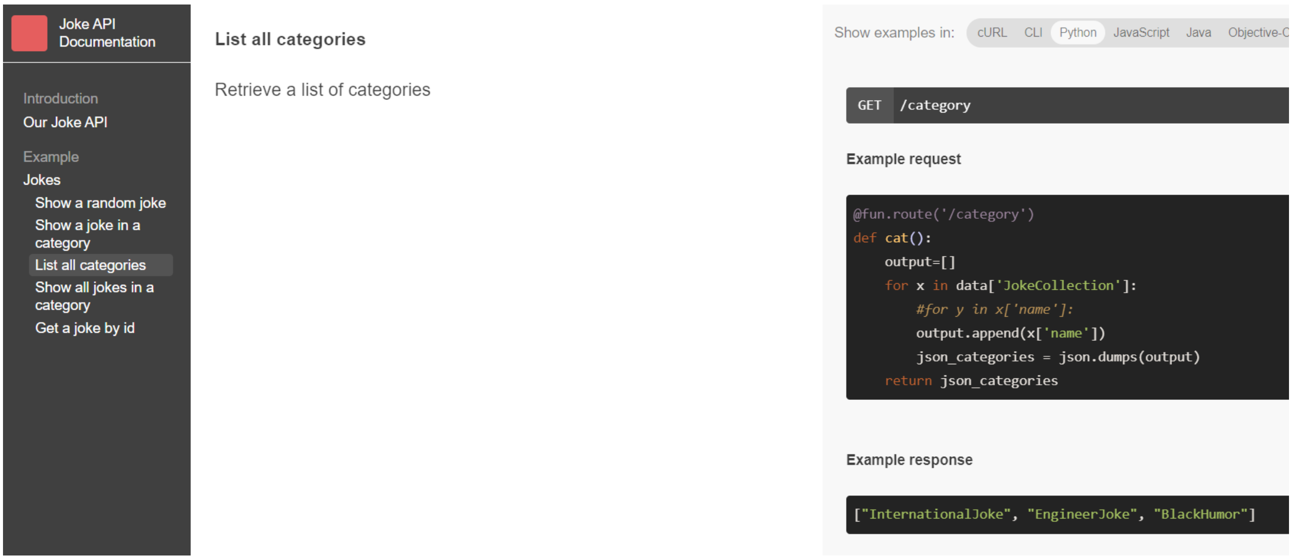
Example request

```
@fun.route('/category/<int:id>/catJokes/random')
def cat0R(id):
    All0 = data['JokeCollection'][id]['catJokes']
    pick1f1c = []
    for j in All0:
        pick1f1c.append(j)
    shuffle(pick1f1c)

    #return render_template('onejoke.html', onejoke=pick1f1c)
    return pick1f1c.pop()
```

Example response

```
{
  "content": "My girlfriend is from other nation. 'what nation?' --Imagi
-nation ",
  "dislike": 1,
  "id": 0,
  "like": 4
```

3. Retrieve a list of categories



List all categories

Retrieve a list of categories

```
GET /category
```

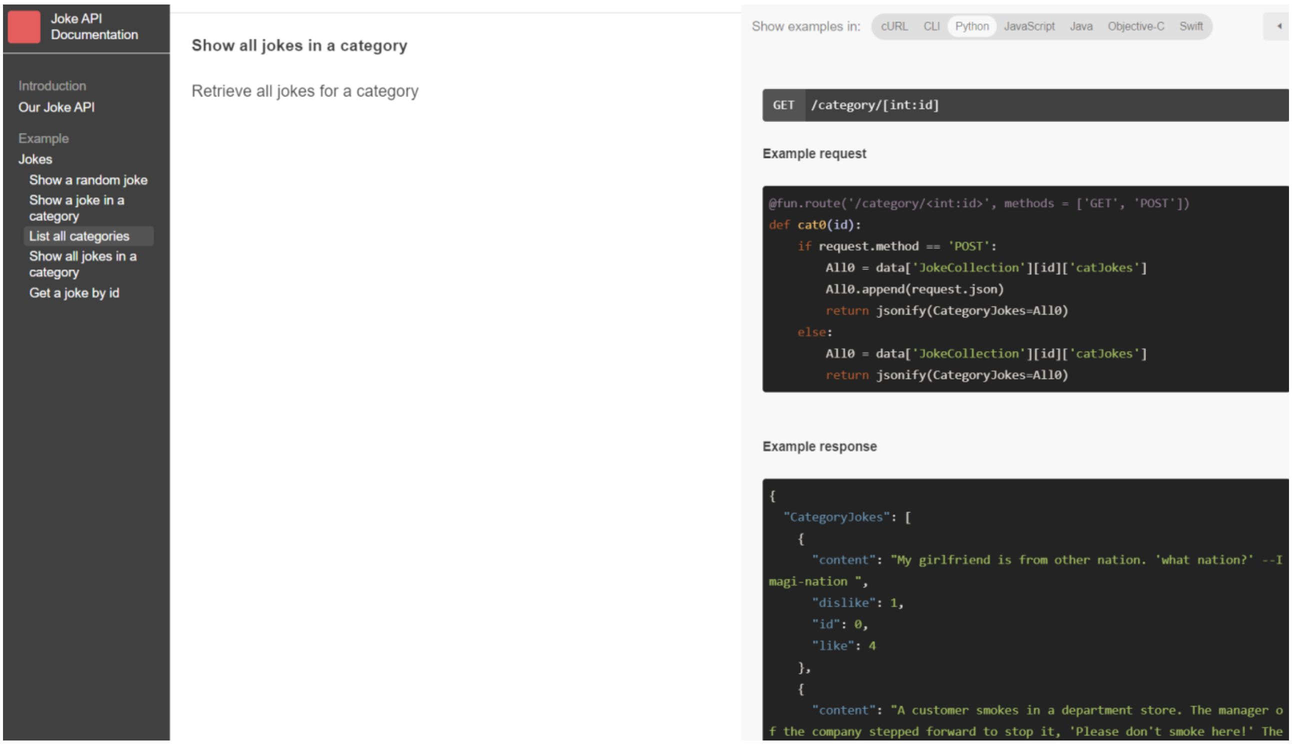
Example request

```
@fun.route('/category')
def cat():
    output=[]
    for x in data['JokeCollection']:
        #for y in x['name']:
        output.append(x['name'])
        json_categories = json.dumps(output)
    return json_categories
```

Example response

```
["InternationalJoke", "EngineerJoke", "BlackHumor"]
```

4. Retrieve all jokes for a category



Show all jokes in a category

Retrieve all jokes for a category

```
GET /category/[int:id]
```

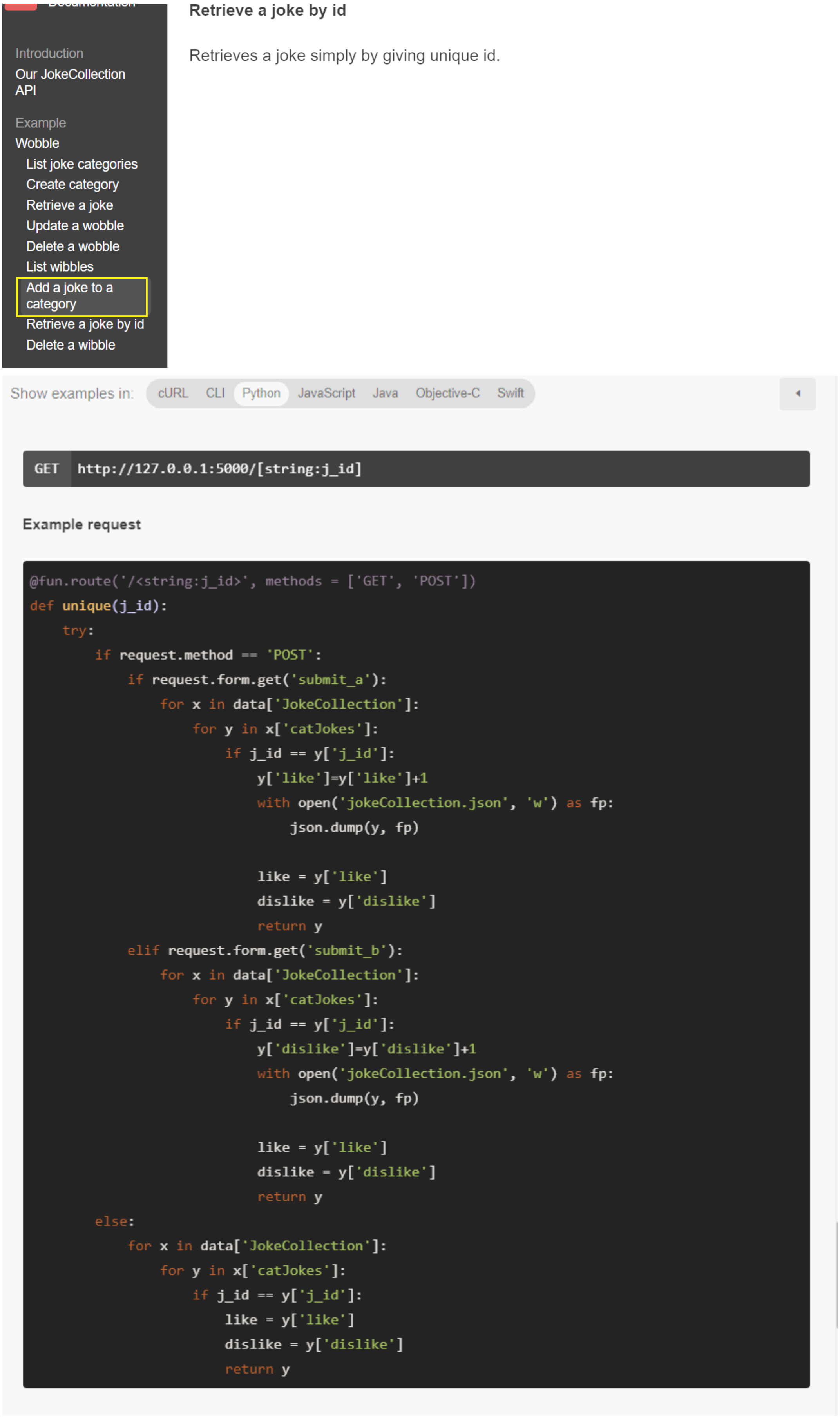
Example request

```
@fun.route('/category/<int:id>', methods = ['GET', 'POST'])
def cat0(id):
    if request.method == 'POST':
        All0 = data['JokeCollection'][id]['catJokes']
        All0.append(request.json)
        return jsonify(CategoryJokes=All0)
    else:
        All0 = data['JokeCollection'][id]['catJokes']
        return jsonify(CategoryJokes=All0)
```

Example response

```
{
  "CategoryJokes": [
    {
      "content": "My girlfriend is from other nation. 'what nation?' --I
magi-nation ",
      "dislike": 1,
      "id": 0,
      "like": 4
    },
    {
      "content": "A customer smokes in a department store. The manager o
f the company stepped forward to stop it, 'Please don't smoke here!' The
```

5. Retrieve a joke by id



Retrieve a joke by id

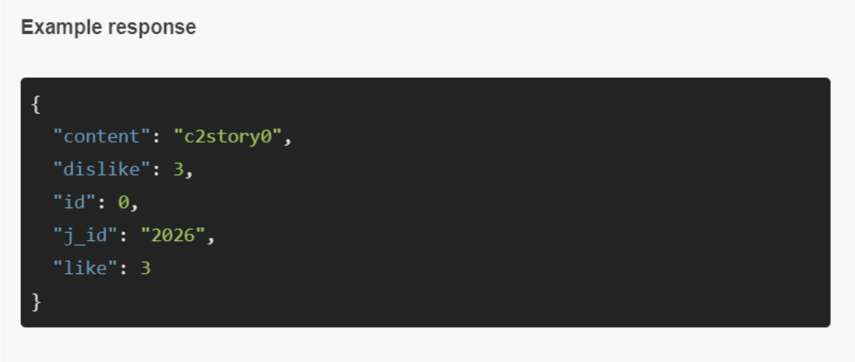
Retrieves a joke simply by giving unique id.

Show examples in: cURL CLI Python JavaScript Java Objective-C Swift

```
GET http://127.0.0.1:5000/[string:j_id]
```

Example request

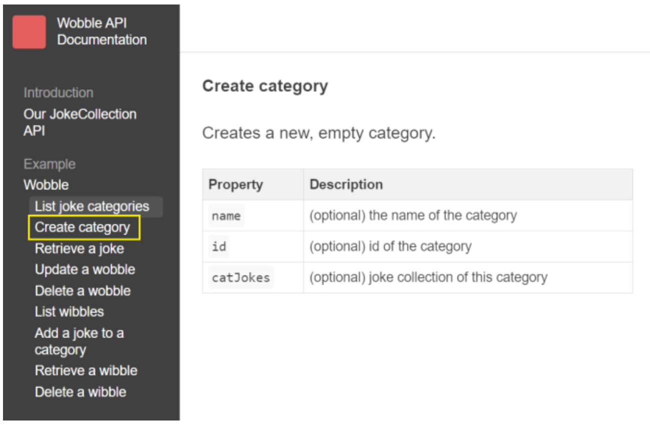
```python
@fun.route('/<string:j_id>', methods = ['GET', 'POST'])
def unique(j_id):
    try:
        if request.method == 'POST':
            if request.form.get('submit_a'):
                for x in data['JokeCollection']:
                    for y in x['catJokes']:
                        if j_id == y['j_id']:
                            y['like']=y['like']+1
                            with open('jokeCollection.json', 'w') as fp:
                                json.dump(y, fp)

                            like = y['like']
                            dislike = y['dislike']
                            return y
            elif request.form.get('submit_b'):
                for x in data['JokeCollection']:
                    for y in x['catJokes']:
                        if j_id == y['j_id']:
                            y['dislike']=y['dislike']+1
                            with open('jokeCollection.json', 'w') as fp:
                                json.dump(y, fp)

                            like = y['like']
                            dislike = y['dislike']
                            return y
        else:
            for x in data['JokeCollection']:
                for y in x['catJokes']:
                    if j_id == y['j_id']:
                        like = y['like']
                        dislike = y['dislike']
                        return y
```



Example response

```
{
  "content": "c2story0",
  "dislike": 3,
  "id": 0,
  "j_id": "2026",
  "like": 3
}
```

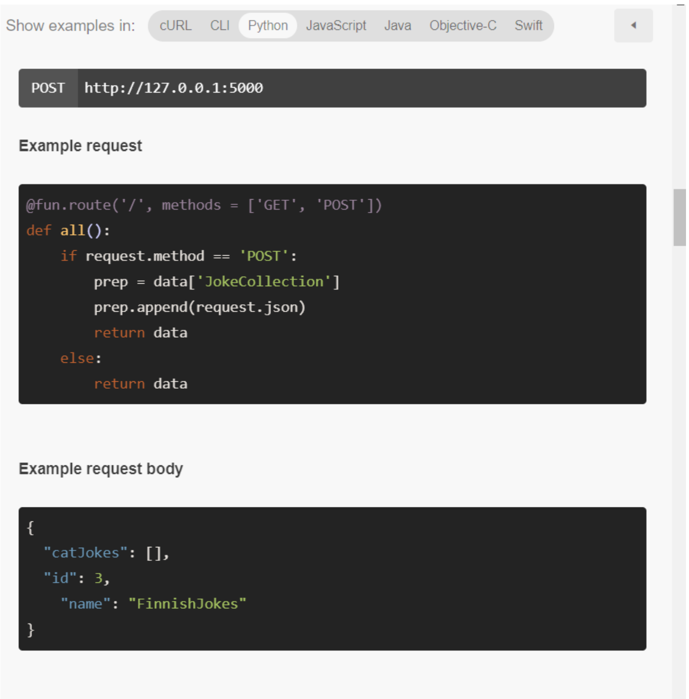
6. Add a new category of jokes



Create category

Creates a new, empty category.

Property	Description
`name`	(optional) the name of the category
`id`	(optional) id of the category
`catJokes`	(optional) joke collection of this category



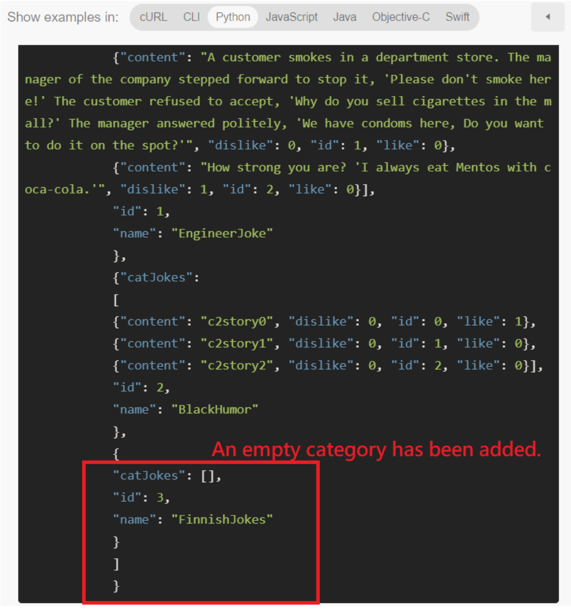
```
POST  http://127.0.0.1:5000
```

Example request

```
@fun.route('/', methods = ['GET', 'POST'])
def all():
    if request.method == 'POST':
        prep = data['JokeCollection']
        prep.append(request.json)
        return data
    else:
        return data
```

Example request body

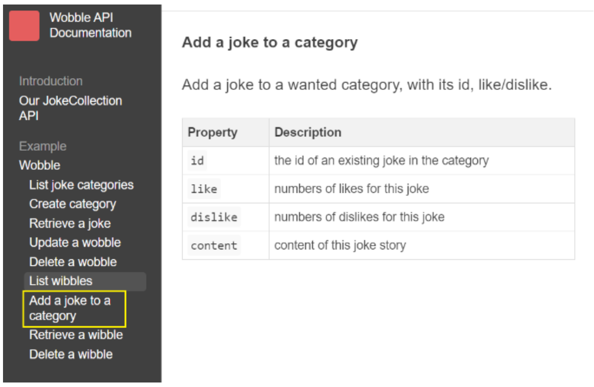
```
{
  "catJokes": [],
  "id": 3,
    "name": "FinnishJokes"
}
```



```
            {"content": "A customer smokes in a department store. The ma
nager of the company stepped forward to stop it, 'Please don't smoke her
e!' The customer refused to accept, 'Why do you sell cigarettes in the m
all?' The manager answered politely, 'We have condoms here, Do you want
to do it on the spot?'", "dislike": 0, "id": 1, "like": 0},
            {"content": "How strong you are? 'I always eat Mentos with c
oca-cola.'", "dislike": 1, "id": 2, "like": 0}],
            "id": 1,
            "name": "EngineerJoke"
            },
            {"catJokes":
            [
            {"content": "c2story0", "dislike": 0, "id": 0, "like": 1},
            {"content": "c2story1", "dislike": 0, "id": 1, "like": 0},
            {"content": "c2story2", "dislike": 0, "id": 2, "like": 0}],
            "id": 2,
            "name": "BlackHumor"
            },
            {
            "catJokes": [],
            "id": 3,
            "name": "FinnishJokes"
            }
            ]
            }
```

An empty category has been added.

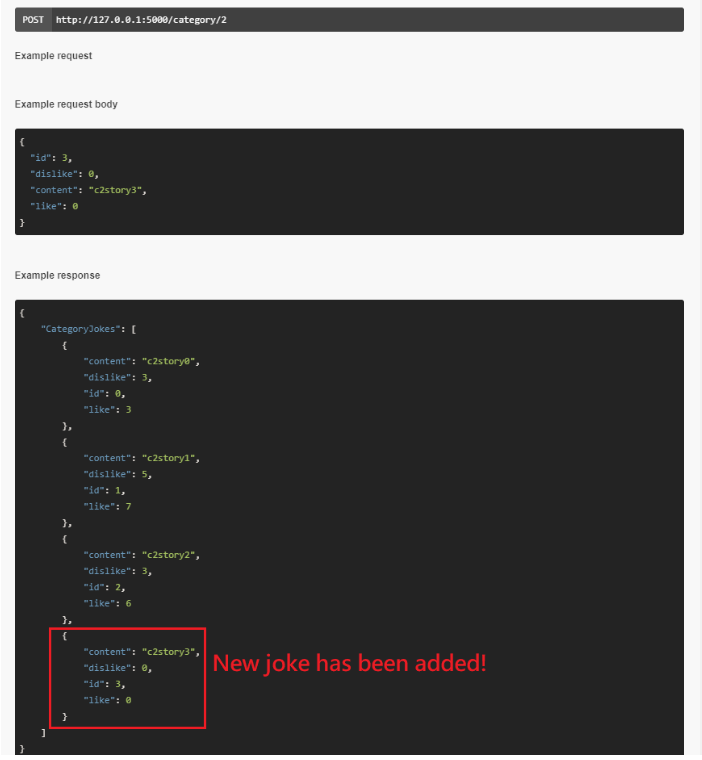
7. Add a new joke to a category



Add a joke to a category

Add a joke to a wanted category, with its id, like/dislike.

Property	Description
`id`	the id of an existing joke in the category
`like`	numbers of likes for this joke
`dislike`	numbers of dislikes for this joke
`content`	content of this joke story



```
POST  http://127.0.0.1:5000/category/2
```

Example request

Example request body

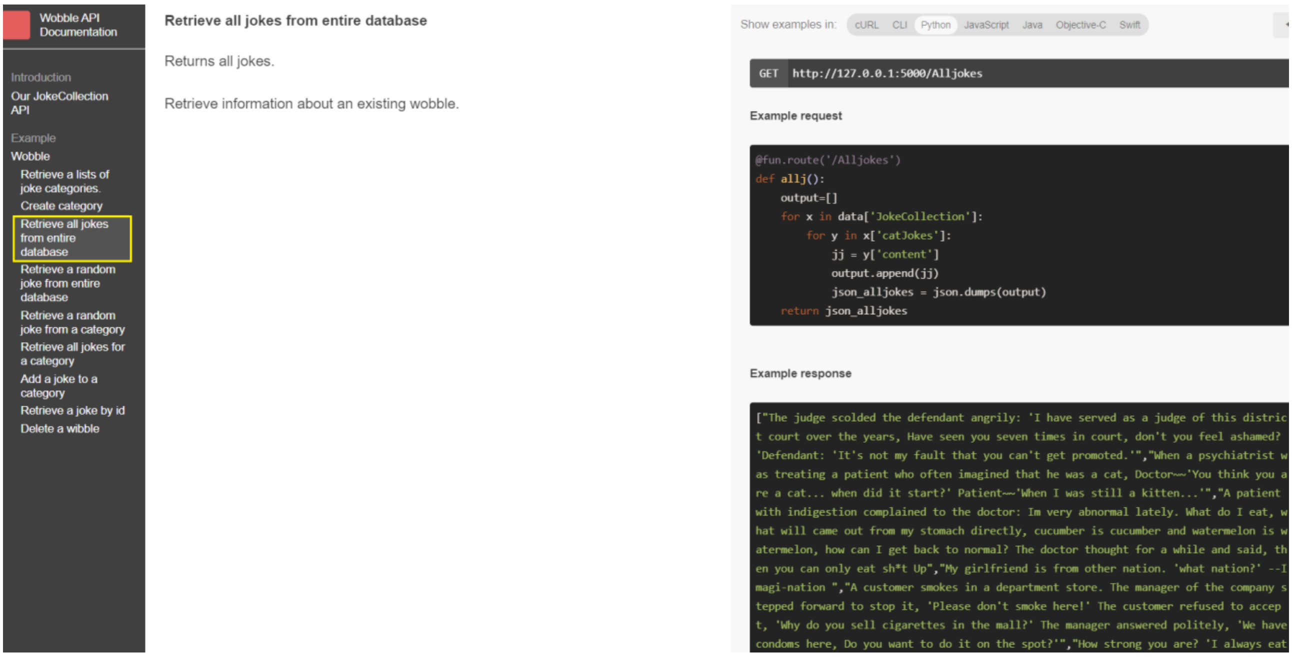
```
{
  "id": 3,
  "dislike": 0,
  "content": "c2story3",
  "like": 0
}
```

Example response

```
{
    "CategoryJokes": [
        {
            "content": "c2story0",
            "dislike": 3,
            "id": 0,
            "like": 3
        },
        {
            "content": "c2story1",
            "dislike": 5,
            "id": 1,
            "like": 7
        },
        {
            "content": "c2story2",
            "dislike": 3,
            "id": 2,
            "like": 6
        },
        {
            "content": "c2story3",
            "dislike": 0,
            "id": 3,
            "like": 0
        }
    ]
}
```

New joke has been added!

8. Retrieve all joke from database



Retrieve all jokes from entire database

Returns all jokes.

Retrieve information about an existing wobble.

```
GET http://127.0.0.1:5000/Alljokes
```

Example request

```
@fun.route('/Alljokes')
def allj():
    output=[]
    for x in data['JokeCollection']:
        for y in x['catJokes']:
            jj = y['content']
            output.append(jj)
            json_alljokes = json.dumps(output)
    return json_alljokes
```

Example response

```
["The judge scolded the defendant angrily: 'I have served as a judge of this distric
t court over the years, Have seen you seven times in court, don't you feel ashamed?
'Defendant: 'It's not my fault that you can't get promoted.'","When a psychiatrist w
as treating a patient who often imagined that he was a cat, Doctor~~'You think you a
re a cat... when did it start?' Patient~~'When I was still a kitten...'","A patient
with indigestion complained to the doctor: Im very abnormal lately. What do I eat, w
hat will came out from my stomach directly, cucumber is cucumber and watermelon is w
atermelon, how can I get back to normal? The doctor thought for a while and said, th
en you can only eat sh*t Up","My girlfriend is from other nation. 'what nation?' --I
magi-nation ","A customer smokes in a department store. The manager of the company s
tepped forward to stop it, 'Please don't smoke here!' The customer refused to accep
t, 'Why do you sell cigarettes in the mall?' The manager answered politely, 'We have
condoms here, Do you want to do it on the spot?'","How strong you are? 'I always eat
```

This is my first time to learn flask, I found flask is fun to do, although there is only 1 requirement is missing, but I still learned how to handle the request, specify the url to response and how to import html to working with, make the flask app more designable, which means I gained a lot in this project. Thank you.

Reference source:

https://flask.palletsprojects.com/en/1.1.x/tutorial/

https://www.freecodecamp.org/news/search/?query=flask

https://docs.python.org/3/tutorial/

https://en.wikipedia.org/wiki/Flask_(web_framework)

https://github.com/tmcw/docbox