

Отчет по лабораторной работе №3
По курсу «Разработка интернет-приложений»
«Python-классы»

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1) Задание лабораторной работы.

Вход:

username или vk_id пользователя

Выход:

Гистограмма распределения возрастов друзей пользователя, поступившего на вход

Пример:

Вход:

Godlik96

Выход:

14: #

18: ##

19: #####

20: #####

21: #####

22: #

25: #

26: ##

27: #

32: #

44: #

49: #

96: #

2) Листинг

test.py

import requests

class BaseClient:

 BASE_URL = "<https://api.vk.com/method/>"

 method = **None**

 http_method = **None**

def get_params(**self**):
 pass

def get_json(**self**):
 pass

def get_headers(**self**):

pass

```
def generate_url(self, method):
    return '{0}{1}'.format(self.BASE_URL, method)
#(self.BASE_URL=https://api.vk.com/method/)
print()
def _get_data(self, method, http_method):
    #r=requests.get(self.generate_url(method), params=self.get_params())
    #print(r)

    response = requests.get(self.generate_url(method), params=self.get_params())
    # print(requests.get(self.generate_url(method), params=self.get_params()))
    #print(self.response_handler(response))
    return self.response_handler(response)

def response_handler(self, response):
    return response

def execute(self):

    return self._get_data(
        self.method,
        http_method=self.http_method
    )
methods.py
from test import BaseClient
class MyBaseClient(BaseClient):
    BASE_URL = "https://api.vk.com/method/"
    # method vk api
    method = "users.get"

    def __init__(self, username):
        self.username = username

    def get_params(self):
        return {
            "user_ids": self.username
        }

    def response_handler(self, response):
        b = response.json()
        return b['response'][0]['uid']
```

```

class FriendsGet(BaseClient):
    BASE_URL = "https://api.vk.com/method/"

    method = "friends.get"

    def __init__(self, username):
        self.username = username

    def get_params(self):
        return {
            "user_id": self.username,
            "fields": "bdate"
        }

    def response_handler(self, response):
        data = response.json()
        #print(data)
        res = {}
        for i in data['response']:
            try:
                if i["bdate"].split('.')[2] in res.keys():
                    res[i["bdate"].split('.')[2]] += 1
                    #print(i['first_name'], i['last_name'], i["bdate"])
            else:
                res[i["bdate"].split('.')[2]] = 1
                #print('! ', i['first_name'], i['last_name'], i["bdate"])
        except:
            pass
        return res

```

main.py

```

import numpy as np
import matplotlib.mlab as mlab
import matplotlib.pyplot as plt
from test import BaseClient
from methods import FriendsGet
from methods import MyBaseClient

```

```

r = MyBaseClient('Godlik96')
b = r.execute()
print(b, '!')

```

```

f = FriendsGet(b);
a = f.execute()
print(a)

```

```

arr1=[]
arr2=[]
list_date = sorted(list(a.keys()), reverse=True)
for i in list_date:
    arr2.append(int(a[i]))
    arr1.append(2016-int(i))
    x=2016-int(i)
    print(x, end=": ")
    print("#" * int(a[i]), end="")
    print()

```

```

plt.bar(arr1, arr2,color="Green")
plt.xlim(min(arr1) - 2, max(arr1) + 3)
plt.ylim(0, max(arr2) + 2)
plt.xlabel('Age', fontsize=24, color='Green')
plt.ylabel('Number of friends', fontsize=24, color='Green')
plt.show()

```

```

57148322 !
{'1920': 1, '1996': 27, '1991': 1, '1984': 1, '1998': 2, '1989': 1, '1972': 1, '1967': 1, '2002': 1, '1994': 1, '1995': 7, '1990': 2, '1997': 5}
14: #
18: ##
19: #####
20: #####
21: #####
22: #
25: #
26: ##
27: #
32: #
44: #
49: #
96: #
|

```

