

Защищено:  
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Демонстрация:  
Гапанюк Ю.Е.

" \_ " \_\_\_\_\_ 2017 г.

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## **Отчет по лабораторной работе № 3 по курсу**

### **Разработка интернет приложений**

6

(количество листов)

ИСПОЛНИТЕЛЬ:

студент группы ИУ5Ц-72

(подпись)

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" \_ " \_\_\_\_\_ 2017 г.

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# Задание

## Вход:

username или vk\_id пользователя

## Выход:

Гистограмма распределения возрастов друзей пользователя, поступившего на вход

## Пример:

### Вход:

reigning

### Выход:

```
19 #
20 ##
21 ##
22 #####
23 #####
24 ####
25 #
28 #
29 #
30 #
37 #
38 ##
45 #
```

## base.py

```
import requests
class BaseClient:
    # URL vk api
    BASE_URL = None
    # ìàðîü vk api
    method = None
    # GET, POST, ...
    http_method = None
    def __init__(self, url, m, h):
        self.BASE_URL = url
        self.method = m
        self.http_method = h
    # Îëó÷áíèà GET ìàðîüððîâ çàððîñà
    def get_params(self):
        return None
    # Îëó÷áíèà äàíóð POST çàððîñà
    def get_json(self):
        return None
    # Îëó÷áíèà HTTP çàâîñîâîâ
    def get_headers(self):
        return None
    # Ñèâåéèà url
    def generate_url(self, method):
        return '{0}{1}'.format(self.BASE_URL, method)
    # Îðîäââèà çàððîñà ê VK API
    def _get_data(self, method, http_method):
        response = None
        print('base')
        return self.response_handler(response)
    # Íáððáâîðèà òðâàðà ò VK API
    def response_handler(self, response):
        return response
    # Çàðîñê èâèáîðà
    def execute(self):
        return self._get_data(
            self.method,
            self.http_method
        )
)
```

## vk\_clients.py

```
from base import *
from exceptions import *
from datetime import datetime
import requests
class GettingID(BaseClient):
    v = 5.58
    user_id = None
    def __init__(self, username):
        super().__init__('https://api.vk.com/method/', 'users.get', 'GET')
        self.user_id = username
    def get_params(self):
        return {'user_ids': self.user_id, 'v': self.v}
    def _get_data(self, method, http_method):
        r = requests.get(self.generate_url(method), self.get_params())
        return self.response_handler(r)
    def response_handler(self, response):
        res_dic = response.json()
        if not res_dic.get('error') is None:
            err = res_dic.get('error')
            err_msg = err.get('error_msg')
            raise API_Exception(err_msg)
        else:
            return res_dic.get('response')[0]
class GettingFriends(BaseClient):
    user_id = None
    fields = 'bdate'
    v = 5.68
    def __init__(self, user_id):
        super().__init__('https://api.vk.com/method/', 'friends.get', 'GET')
        self.user_id = user_id
    def get_params(self):
        return {'user_id': self.user_id, 'v': self.v, 'fields': self.fields}
    def _get_data(self, method, http_method):
        r = requests.get(self.generate_url(method), self.get_params())
        return self.response_handler(r)
    def response_handler(self, response):
        res_dic = response.json()
        if not res_dic.get('error') is None:
            err = res_dic.get('error')
            err_msg = err.get('error_msg')
            raise API_Exception(err_msg)
        else:
            return res_dic.get('response').get('items')
    def execute(self):
        ages = []
        today = datetime.now()
        for i in super().execute():
            bdate_str = i.get('bdate')
            try:
                bdate = datetime.strptime(bdate_str, '%d.%m.%Y')
                days = (today - bdate).days
                ages.append(days // 365)
            except:
                pass
return ages
```

## diagram\_friends.py

```
from vk_clients import *
get_user = GettingID('id33783942')
user = get_user.execute()
user_id = user.get('id')
get_friends = GettingFriends(user_id)
friends = get_friends.execute()
age_list = [0 for i in range(120)]
today = datetime.now()
print(user.get('last_name')+" "+user.get('first_name'))
for f in friends:
    age_list[f] += 1
for i in range(120):
    if age_list[i]>0:
        print(i,': ', '#'*age_list[i])
```

## exceptions.py

```
class API_Exception(Exception):
    pass
```

## Результат

```
C:\Python34\python.exe C:/Users/student/PycharmProjects/Lab3/diagram_friends.py
```

```
15 : #  
18 : ##  
19 : ###  
20 : ####  
21 : #####  
22 : #####  
23 : #####  
24 : #####  
25 : #####  
26 : #####  
27 : #####  
28 : #  
29 : #####  
30 : ##  
31 : ##  
32 : ###  
34 : ##  
35 : ###  
36 : ###  
37 : #  
41 : #  
45 : #  
48 : #  
54 : #  
94 : #  
100 : #  
116 : #
```

```
Process finished with exit code 0
```