

Отчет по лабораторной работе РИП  
№3  
«Классы»

Студент группы ИУ5-53: Алтунин Н.С.

## Файлы:

### base\_client.py:

```
class BaseClient:

    # URL vk api
    BASE_URL = None
    # метод vk api
    method = None
    # GET, POST, ...
    http_method = None

    # Получение GET параметров запроса
    def get_params(self):
        return None

    # Получение данных POST запроса
    def get_json(self):
        return None

    # Получение HTTP заголовков
    def get_headers(self):
        return None

    # Склейка url
    def generate_url(self, method):
        return '{0}{1}'.format(self.BASE_URL, method)

    # Отправка запроса к VK API
    def _get_data(self, method, http_method):
        response = None

        # todo выполнить запрос

        return self.response_handler(response)

    # Обработка ответа от VK API
    def response_handler(self, response):
        return response

    # Запуск клиента
    def execute(self):
        return self._get_data(
            self.method,
            http_method=self.http_method
        )
```

### id\_from\_username.py:

```
from base_client import *
import requests
import json
```

```

class IdFromUsername(BaseClient):
    BASE_URL = 'https://api.vk.com/method/'
    method = 'users.get'
    http_method = 'POST'

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

    def get_params(self):
        return 'user_ids=' + self.username

    def _get_data(self, method, http_method):
        response = requests.get(self.generate_url(self.method) + '?' + self.get_params())
        return self.response_handler(response)

    def response_handler(self, response):
        try:
            string = json.loads(response.text)
            return string['response'][0]['uid']
        except:
            print('Error(DARUDE SANDSTORM) ')

```

#### **get\_friends.py:**

```

from base_client import *
import requests
import json
from datetime import datetime, date, time, timedelta

```

```

class GetFriends(BaseClient):
    BASE_URL = 'https://api.vk.com/method/'
    method = 'friends.get'
    http_method = 'POST'

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

    def get_params(self):
        return 'user_id=' + str(self.uid) + '&fields=bdate'

    def _get_data(self, method, http_method):
        response = requests.get(self.generate_url(self.method) + '?' + self.get_params())
        return self.response_handler(response)

    def response_handler(self, response):
        try:
            friends = json.loads(response.text)['response']
            dates = {}
            i = 0
            for d in friends:
                try:
                    bdate = datetime.strptime(d['bdate'], '%d.%m.%Y')
                except:

```

```

        continue
    cur_date = datetime.now()
    time_delta = (cur_date - bdate).days
    years = time_delta // 365.25
    if (years not in dates):
        dates[years] = ""
        dates[years] += '#'
    return dates
except:
    print('Error')

```

### vk\_api.py:

```

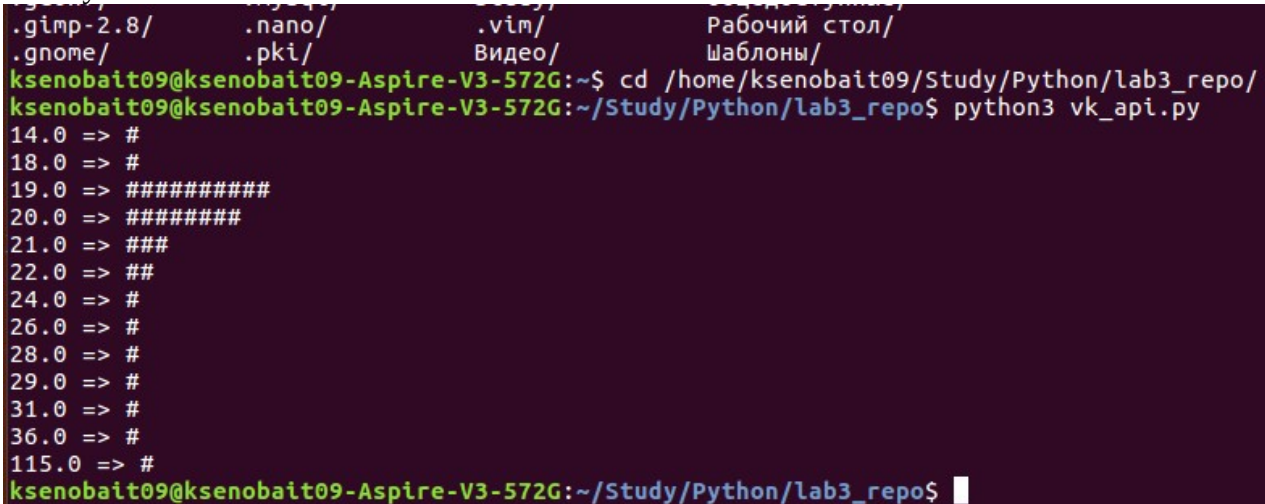
from id_from_username import IdFromUsername
from get_friends import GetFriends

user = IdFromUsername('4taaa')
uid = user.execute()

friends = GetFriends(uid)
statistic = friends.execute()
statistic = sorted(statistic.items(), key = lambda x:x[0])
for i in statistic:
    print( '{} => {}'.format(i[0], i[1]))

```

Результат:



```

. gimp-2.8/      . nano/      . vim/      Рабочий стол/
.gnome/         . pki/      Видео/     Шаблоны/
ksenobait09@ksenobait09-Aspire-V3-572G:~$ cd /home/ksenobait09/Study/Python/lab3_repo/
ksenobait09@ksenobait09-Aspire-V3-572G:~/Study/Python/lab3_repo$ python3 vk_api.py
14.0 => #
18.0 => #
19.0 => #####
20.0 => #####
21.0 => ###
22.0 => ##
24.0 => #
26.0 => #
28.0 => #
29.0 => #
31.0 => #
36.0 => #
115.0 => #
ksenobait09@ksenobait09-Aspire-V3-572G:~/Study/Python/lab3_repo$

```