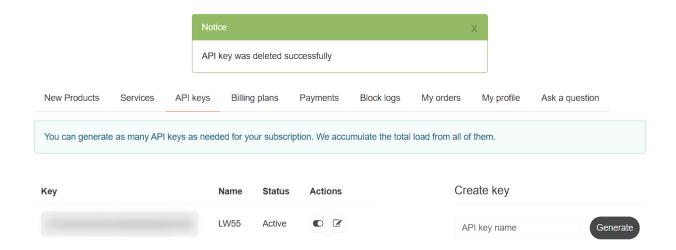
Лабораторная работа№ 2

1. Генерируем API openweathermap.org.



2. Модуль getweatherdata.py с функцией для URL запроса к API openweathermap.org и формирования json ответа.

```
def get_weather_data(place, api_key=None):
    if api_key is None:
        raise ValueError("API key is required")
    url =
f'https://api.openweathermap.org/data/2.5/weather?q={place}&appid={api_key}&units=m
etric'
    response = requests.get(url)
    if response.status code != 200:
        response.raise_for_status()
    data = response.json()
    city_name = data['name']
    country_code = data['sys']['country']
    lat = data['coord']['lat']
    lon = data['coord']['lon']
    feels_like = data['main']['feels_like']
    timezone = data['timezone']
```

```
timezone_hours = timezone // 3600
timezone_str = f"UTC{'+' if timezone_hours >= 0 else '-'}{abs(timezone_hours)}"

result = {
    "name": city_name,
    "coord": {"lon": lon, "lat": lat},
    "country": country_code,
    "feels_like": feels_like,
    "timezone": timezone_str
}

return json.dumps(result, ensure_ascii=False, indent=4)
```

3. main.py файл для запуска модуля getweatherdata.py

```
from owm_key import owm_api_key
from getweatherdata import get_weather_data

def main():
    cities = ['Chicago', 'Saint Petersburg', 'Dakka']

    for city in cities:
        try:
            weather_data = get_weather_data(city, api_key=owm_api_key)
            print(f"Weather data for {city}: {weather_data}")
        except Exception as e:
            print(f"Error fetching weather data for {city}: {e}")

if __name__ == '__main__':
    main()
```

4. Ответ на примере Чикаго, Санкт-Петербург, Дакка:

```
PS C:\Users\gnevn\OneDrive\Pa6o+ий стол\yчeбa\PTID\nporpawwupoвание 5\ЛРМ 2> & C:\Users\gnevn/AppData\Local\Programs/Python/Python312/pyth one one control of the control
```