Web Services and Applications Lab 04.02: API Keys

Lecturer: Andrew Beatty

In this lab we are going to use Python access APIs that need a key

We are using the APIs as described by:

- https://html2pdf.app/
- https://developer.github.com/v3/guides/

NOTE: You will have to get your own key from GitHub

Create a pdf.

1. Go to html2pdf.com and create an account for yourself and copy the API key.

(if you are really lazy use my key)

2. Look at their documentation.
3. Write a script that will convert my website into a pdf.

```python
import requests
import urllib.parse

# I found that this program would not work with wikepedia
#targetUrl = "https://en.wikipedia.org/wiki/Main_Page"
# so I am using my URL
targetUrl = "https://andrewbeatty1.pythonanywhere.com/bookviewer.html"

apiKey = "XXXXXXXXXXXXXXXXXXXXXXXXXX"
#api = "XXXXXXXX"

apiurl = 'https://api.html2pdf.app/v1/generate'

params = {'url': targetUrl,'apiKey': apiKey}
parsedparams = urllib.parse.urlencode(params)
requestUrl = apiurl +"?" + parsedparams

response = requests.get(requestUrl)
print (response.status_code)

result =response content
```

4. you should probably put the api into a config file

```python
config = {
    "htmltopdfkey":"eAs3mWn7R59gxZ6kSYysYdpTUsivY7Am74aSN36pOHdMMyTu3XDpdSOtaAySz3qF"
}
```

5. And modify the code.

```python
from config import config as cfg

targetUrl = "https://andrewbeatty1.pythonanywhere.com/bookviewer.html"

apiKey = cfg["htmltopdfkey"]
```

Get private data from GitHub:

6. Create a new repository on your GitHub account called 'aprivateone', make it a private repository.
7. Get your own API key for your GitHub account. (see lectures) it should look something like

Github_XXXXXXaa146eafee094d3a7cb0eec8b910

NOTE: you key will cease to work if you put it into a file that is uploaded to GitHub (this is for security reasons)

Replace this with your key.

8. Use curl to check that it works.

```
curl -i -H "Authorization: token  githubXXXXXXX0
https://api.github.com/user/repos
```

9. Write python script that will get the information from the private repository you created,

```
url = 'https://api.github.com/repos/your-username/aprivateone'
```
And output the result to a file.

```
response = requests.get(url, auth=('token',apiKey))

repoJSON = response.json()
#print (response.json())

with open(filename, 'w') as fp:
    json.dump(repoJSON, fp, indent=4)
```

You will need to make a variable called apiKey that contains the key.

Read the key from your config.py file.

If the file had got "bad credentials" written in it. Then the key you are using is invalid. (you may have accidently pushed it in a file to GitHub.

10. Add the line config.py to your .gitignore file so that the config.py is not pushed up to your repository

```
# my configuration files
config.py
```

Challenge

11. Write a script to get more information from your repository.
12. Write a script that will make a change to your repository.