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Activities Terminal
Tue 19:14
gabriel@gabriel-Lenovo-920-13IKB: ~/demo

File Edit View Search Terminal Help
gabriel@gabriel-Lenovo-920-13IKB:~$ cd demo
gabriel@gabriel-Lenovo-920-13IKB:~/demo$ vim thingspeak_feed.py
gabriel@gabriel-Lenovo-920-13IKB:~/demo$ cat thingspeak_cpu_loop.py
import http.client, urllib.request, urllib.parse, urllib.error
from time import localtime, strftime
import psutil
import time
def dot():
    cpu_pc = psutil.cpu_percent()
    mem = psutil.virtual_memory()
    mem_avail_mb = mem.available/(1024*1024)
    params = urllib.parse.urlencode({'field1': cpu_pc, 'field2':
    mem_avail_mb, 'key': 'MLH32P252QV923JU'})
    headers = {'Content-type':
    'application/x-www-form-urlencoded', 'Accept': 'text/plain'}
    conn = http.client.HTTPConnection("api.thingspeak.com:80")
    try:
        conn.request("POST", "/update", params, headers)
        response = conn.getresponse()
        print(cpu_pc)
        print(mem_avail_mb)
        print(strftime("%a, %d %b %Y %H:%M:%S", localtime()))
        print(response.status, response.reason)
        data = response.read()
        conn.close()
    except:
        print("connection failed")
#sleep for 60 seconds (message update interval limit of 15 seconds)
if __name__ == "__main__":
    while True:
        dot()
        time.sleep(60)
gabriel@gabriel-Lenovo-920-13IKB:~/demo$ cat thingspeak_feed.py
import http.client, urllib.request, urllib.parse, urllib.error
from time import localtime, strftime
import psutil
import time
"""
2020-11-26: Pridhvi Mynent added lines 13-18, 25, and 43-54
1. gitignore (https://git-scm.com/docs/gitignore) now prevents students from pushing up credentials.
2. This program now attempts to cache the API key, but always prompts the user for their preference prior to saving credentials locally.
3. Pickle data type used to store credentials. Pickle is a binary storage version of JSON. Please note not-human-readable does not mean secure.
4. Removed key storage in source, which is generally a bad practice, as it leads to version control systems having your key.
5. Key for storage in a dictionary. This could be expanded in the future if other information needs to be similarly stored.
"""
from pickle import dump as pickle_dump
from pickle import load as pickle_load
from os.path import exists as file_exists
from os.path import isfile as is_file
PICKLE_FILE_NAME = "API_KEY.pickle"
API_KEY_INDEX = "API_KEY"
def dot():
    """
    """
    cpu_pc = psutil.cpu_percent()
    mem = psutil.virtual_memory()
    mem_avail_mb = mem.available/(1024*1024)
    params = urllib.parse.urlencode({'field1': cpu_pc, 'field2':
    mem_avail_mb, 'key': 'YOURKEYHERE'})
    headers = {'Content-type':
    'application/x-www-form-urlencoded', 'Accept': 'text/plain'}
    conn = http.client.HTTPConnection("api.thingspeak.com:80")
    try:
        conn.request("POST", "/update", params, headers)
        response = conn.getresponse()
        print(cpu_pc)
        print(mem_avail_mb)
        print(strftime("%a, %d %b %Y %H:%M:%S", localtime()))
        print(response.status, response.reason)
        data = response.read()
        conn.close()
    except:
        print("connection failed")
#sleep for 60 seconds (message update interval limit of 15 seconds)
if __name__ == "__main__":
    #caching the Write Key for the Thingspeak API
    if file_exists(PICKLE_FILE_NAME) and is_file(PICKLE_FILE_NAME):
        save_file = None
        with open(PICKLE_FILE_NAME, 'rb') as f:
            save_file = pickle.load(f)
        KEY = save_file[API_KEY_INDEX]
    else:
        key = input("An API key savefile was not found. Enter Write API Key >>> ")
        should_save = input("Should we save this key for future use? [y/N] >>> ")
        KEY = key.strip()
        if len(should_save)>0 and should_save.lower().startswith("y"):
            with open(PICKLE_FILE_NAME, 'wb') as f:
                pickle_dump({API_KEY_INDEX: KEY}, f)
    while True:
        dot()
        time.sleep(60)
gabriel@gabriel-Lenovo-920-13IKB:~/demo$ python3 thingspeak_feed.py
An API key savefile was not found. Enter Write API Key >>> python3 thingspeak_feCTraceback (most recent call last):
  File "thingspeak_feed.py", line 49, in <module>
    key = input("An API key savefile was not found. Enter Write API Key >>> ")
KeyboardInterrupt
gabriel@gabriel-Lenovo-920-13IKB:~/demo$ python3 thingspeak_feed.py
An API key savefile was not found. Enter Write API Key >>> MLH32P252QV923JU
Should we save this key for future use? [y/N] >>> y
10.6
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from os.path import exists as file_exists
from os.path import isfile as is_file
PICKLE_FILE_NAME = "API_KEY.pickle"
API_KEY_INDEX = "API_KEY"
def dot():
    """
    """
    cpu_pc = psutil.cpu_percent()
    mem = psutil.virtual_memory()
    mem_avail_mb = mem.available/(1024*1024)
    params = urllib.parse.urlencode({'field1': cpu_pc, 'field2':
    mem_avail_mb, 'key': 'YOURKEYHERE'})
    headers = {'Content-type':
    'application/x-www-form-urlencoded', 'Accept': 'text/plain'}
    conn = http.client.HTTPConnection("api.thingspeak.com:80")
    try:
        conn.request("POST", "/update", params, headers)
        response = conn.getresponse()
        print(cpu_pc)
        print(mem_avail_mb)
        print(strftime("%a, %d %b %Y %H:%M:%S", localtime()))
        print(response.status, response.reason)
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    else:
        key = input("An API key savefile was not found. Enter Write API Key >>> ")
        should_save = input("Should we save this key for future use? [y/N] >>> ")
        KEY = key.strip()
        if len(should_save)>0 and should_save.lower().startswith("y"):
            with open(PICKLE_FILE_NAME, 'wb') as f:
                pickle_dump({API_KEY_INDEX: KEY}, f)
    while True:
        dot()
        time.sleep(60)
gabriel@gabriel-Lenovo-920-13IKB:~/demo$ python3 thingspeak_feed.py
An API key savefile was not found. Enter Write API Key >>> python3 thingspeak_feCTraceback (most recent call last):
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An API key savefile was not found. Enter Write API Key >>> MLH32P252QV923JU
Should we save this key for future use? [y/N] >>> y
10.6
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Activities Terminal Tue 19:15 gabriel@gabriel-Lenovo-920-13IKB: ~/demo

File Edit View Search Terminal Help

cpu_pc = psutil.cpu_percent()
mem = psutil.virtual_memory()
mem_avail_mb = mem.available/(1024*1024)
params = urllib.parse.urlencode({'fields': cpu_pc, 'field2':
# mem_avail_mb, 'key': 'YOURKEYHERE'})
mem_avail_mb, 'key': 'MLH32P252QV923JU'})
headers = {'Content-Type':
'application/x-www-form-urlencoded', 'Accept': 'text/plain'}
conn = http.client.HTTPConnection('api.thingspeak.com:80')
try:
    conn.request("POST", "/update", params, headers)
    response = conn.getresponse()
    print(cpu_pc)
    print(mem_avail_mb)
    print(strftime("%a, %d %b %Y %H:%M:%S", localtime()))
    print(response.status, response.reason)
    data = response.read()
    conn.close()
except:
    print("connection failed")
#sleep for 60 seconds (message update interval limit of 15 seconds)
if __name__ == '__main__':
    #caching the Write Key for the Thingspeak API
    if file_exists(PICKLE_FILE_NAME) and is_file(PICKLE_FILE_NAME):
        save_file = None
        with open(PICKLE_FILE_NAME, 'rb') as f:
            save_file = pickle.load(f)
        KEY = save_file[API_KEY_INDEX]
    else:
        key = input("An API key savefile was not found. Enter Write API Key >>> ")
        should_save = input("Should we save this key for future use? [y/N] >>> ")
        KEY = key.strip()
        if len(should_save)>0 and should_save.lower().startswith("y"):
            with open(PICKLE_FILE_NAME, 'wb') as f:
                pickle.dump([API_KEY_INDEX: KEY], f)
    while True:
        doIt()
        time.sleep(60)
gabriel@gabriel-Lenovo-920-13IKB:~/demo$ python3 thingspeak_feed.py
An API key savefile was not found. Enter Write API Key >>> python3 thingspeak_fe*CTraceback (most recent call last):
  File "thingspeak_feed.py", line 49, in <module>
    key = input("An API key savefile was not found. Enter Write API Key >>> ")
KeyboardInterrupt
gabriel@gabriel-Lenovo-920-13IKB:~/demo$ python3 thingspeak_feed.py
An API key savefile was not found. Enter Write API Key >>> MLH32P252QV923JU
Should we save this key for future use? [y/N] >>> y
10.6
3823.7265625
Tue, 22 Mar 2022 19:14:25
200 OK
]
```