SENDGRID INTERGRATING WITH PYTHON:

Date	19 Nov 2022
Team ID	PNT2022TMID38222
Project Name	NUTRITION ASSISTANT APPLICATION

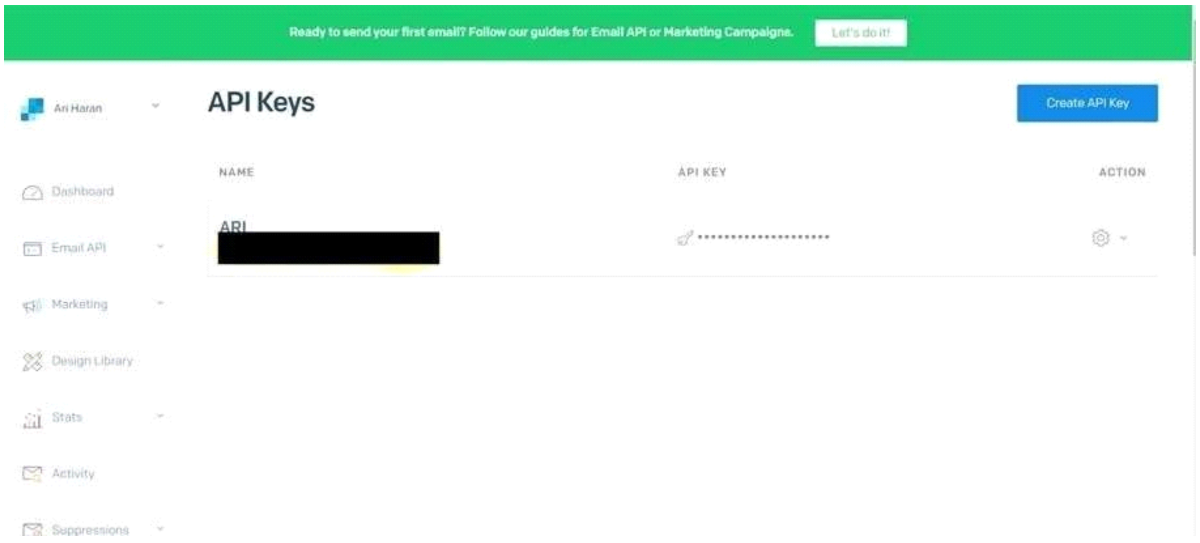
STEP 1:

Requirements:

Python 2.6, 2.7, 3.4 or 3.5.

STEP 2:

Creating an API key



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API Keys

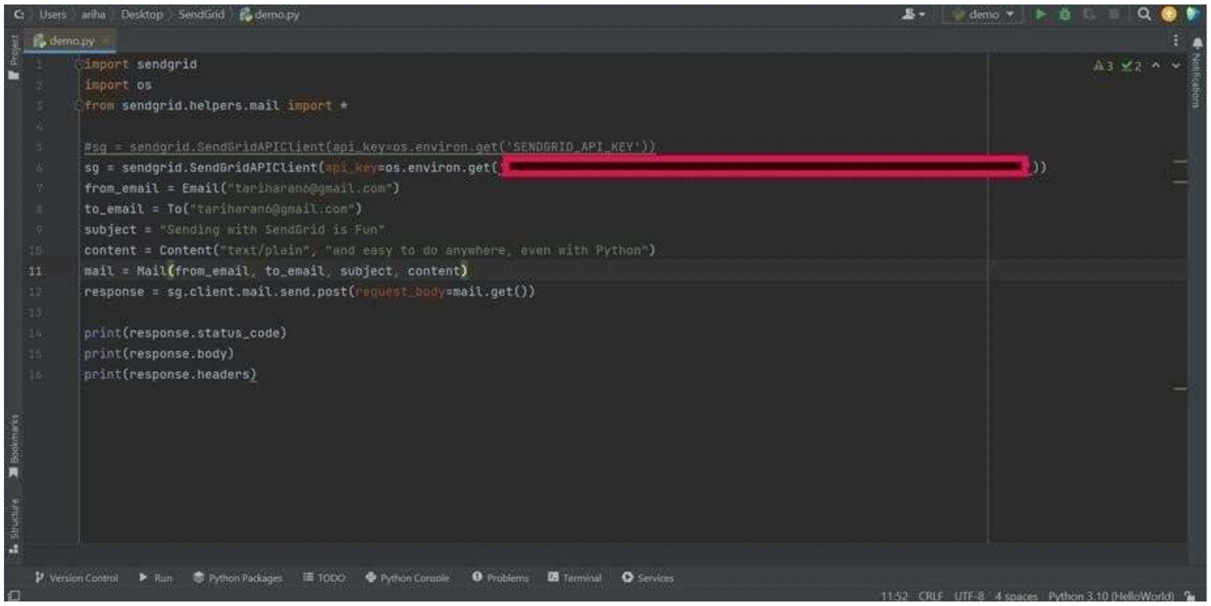
NAME	API KEY	ACTION
ARI [redacted]	••••••••••••••••••••	

STEP 3:

INSTALL PAKAGE: > pip install sendgrid

SETP 4:

SEND EMAIL



```
import sendgrid
import os
from sendgrid.helpers.mail import *

#sg = sendgrid.SendGridAPIClient(api_key=os.environ.get('SENDGRID_API_KEY'))
sg = sendgrid.SendGridAPIClient(api_key=os.environ.get('[redacted]'))
from_email = Email("tariharan6@gmail.com")
to_email = To("tariharan6@gmail.com")
subject = "Sending with SendGrid is Fun"
content = Content("text/plain", "and easy to do anywhere, even with Python")
mail = Mail(from_email, to_email, subject, content)
response = sg.client.mail.send.post(request_body=mail.get())

print(response.status_code)
print(response.body)
print(response.headers)
```

SENDGRID PYTHON CODE :

```
using SendGrid's Python Library
import os
from sendgrid import SendGridAPIClient
from sendgrid.helpers.mail import Mail

# from_address we pass to our Mail object, edit with your name
FROM_EMAIL = 'Your_Name@SendGridTest.com'


def SendEmail(to_email):
    """ Send an email to the provided email addresses

    :param to_email = email to be sent to
    :returns API response code
    :raises Exception e: raises an exception """
    message = Mail(
        from_email=FROM_EMAIL,
        to_emails=to_email,
        subject='A Test from SendGrid!',
        html_content='<strong>Hello there from SendGrid your URL
is: ' +
        '<a href=''https://github.com/cyberjive''>right
here!</a></strong>')
    try:
        sg =
SendGridAPIClient(os.environ.get('SENDGRID_API_KEY'))
        response = sg.send(message)
        code, body, headers = response.status_code,
response.body, response.headers
        print(f"Response Code: {code} ")
        print(f"Response Body: {body} ")
        print(f"Response Headers: {headers} ")
        print("Message Sent!")
    except Exception as e:
        print("Error: {0}".format(e))
    return str(response.status_code)


if name == "main":
    SendEmail(to_email=input("Email address
```

```
"""HTTP Client library"""

import json

import logging

from .exceptions import handle_error



try:

# Python 3

import urllib.request as urllib
```

```
from urllib.parse import urlencode

from urllib.error import HTTPError

except ImportError:
```

parameters

```
import os
from sendgrid import SendGridAPIClient
from sendgrid.helpers.mail import Mail

message = Mail(
from_email='from_email@example.com',
to_emails='to@example.com',
subject='Sending with Twilio SendGrid is Fun',
html_content='<strong>and easy to do anywhere, even with
Python</strong>')
try:
sg = SendGridAPIClient(os.environ.get('SENDGRID_API_KEY'))
response = sg.send(message)
print(response.status_code)
print(response.body)
print(response.headers)
except Exception as e:
print(e.message)
```

HTTP CLIENT SIDE:

```
import urllib2 as urllib
 from urllib2 import HTTPError
 from urllib import urlencode

 _logger = logging.getLogger( name )
 class Response(object):
 """Holds the response from an API call.""" 22
 def init (self, response):
 """
 :param response: The return value from a
  open call
  on a urllib.build_opener() :type response:
urllib response object
 """
 self._status_code = response.getcode()
 self._body = response.read()
def status_code(self):
 """
 :return: integer, status code of API call
 """
 return self._status_code

@property
 def body(self):
 """
:return: response from the API
 """
 return self._body

@property
def headers(self):
"""
 :return: dict of response headers
 """
 return self._headers

 @property
 def to_dict(self):
 """
:return: dict of response from the API
 """
 if self.body:
 return json.loads(self.body.decode('utf-8'))
 else:
 return None
 class Client(object):
methods = {'delete', 'get', 'patch', 'post', 'put'} 70
 def init (self,
 host,
 request_headers=None,
 version=None,
 url_path=None,
 append_slash=False, 77 timeout=None):
 """
 :param host: Base URL for the api. (e.g.
)
 :type host: string
 :param request_headers: A dictionary of the headers
you want
:type request_headers: dictionary
:param version: The version number of the
API.
 Subclass _build_versioned_url for custom
behavior.
 Or just pass the version as part of the URL
(e.g. client._("/v3"))
 :type version: integer
 :param url_path: A list of the url path
segments
 :type url_path: list of strings
"""
self.host = host
 self.request_headers = request_headers or {}
 self._version = version
 # _url_path keeps track of the dynamically
built url
 self._url_path = url_path or []
 # APPEND SLASH set
self.append_slash = append_slash
 self.timeout = timeout

 def _build_versioned_url(self, url):
"""Subclass this function for your own needs.
```

```
 Or just pass the version as part of the URL
 (e.g. client._('/v3'))
 :param url: URI portion of the full URL being
requested
 :type url: string
:return: string
 """
 return '{}/v{}{}'.format(self.host,
str(self._version),
url)

 def _build_url(self, query_params):
 """Build the final URL to be passed to urllib

:param query_params: A dictionary of all the query
:type query_params: dictionary
 :return: string
 """
 url = ''
 count = 0
while count < len(self._url_path):
url += '/{}'.format(self._url_path[count])
 count += 1

 # add slash
 if self.append_slash:
 url += '/'

 if query_params:
url_values = urlencode(sorted(query_params.items()),
True)
 url = '{}?{}'.format(url, url_values)

 if self._version:
url = self._build_versioned_url(url)
 else:
url = '{}{}'.format(self.host, url)
return url

 def _update_headers(self, request_headers):
```

```
 """Update the headers for the request

 :param request_headers: headers to set for the API
call
 :type request_headers: dictionary
 :return: dictionary
 """
 self.request_headers.update(request_headers)

 def _build_client(self, name=None):
"""Make a new Client object

 :param name: Name of the url segment
:type name: string
 :return: A Client object
 """
 url_path = self._url_path + [name] if name else
self._url_path
return Client(host=self.host,
request_headers=self.request_headers,
 url_path=url_path,
 append_slash=self.append_slash,
 timeout=self.timeout)

 def _make_request(self, opener, request,
timeout=None):
 """Make the API call and return the response.
This separated into
 it's own function, so we can mock it easily for

 :param opener:
type opener:
:type request: urllib.Request object
:param timeout: timeout value or None
 :return: urllib response
 """
timeout = timeout or self.timeout
 try:
 return opener.open(request, timeout=timeout)
except HTTPError as err:
 exc = handle_error(err)
 exc. cause = None
 _logger.debug('{method} Response: {status}
self._version = args[0]
return self._build_client()
 return get_version

# We have reached the end of the method chain, make the
API call
 if name in self.methods:
 method = name.upper()

 def http_request(
 request_body=None,
 query_params=None,
 request_headers=None,
 timeout=None,
 **_):
 """Make the API call
:param timeout: HTTP request timeout. Will be
propagated to
 urllib client
 :type timeout: float
:param request_headers: HTTP headers. Will be
merged into
current client object state
:type request_headers: dict
 :param query_params: HTTP query parameters
 :type query_params: dict
 :param request_body: HTTP request body
 :type request_body: string or json-serializable
object
 :param kwargs:
 :return: Response object
 """
if request_headers:
_logger.debug('{method} Response: {status}
{body}'.format(
 method=method,
 status=response.status_code,
body=response.body))

 return response

 return http_request 288
else:
# Add a segment to the URL
 return self._(name)

 def getstate (self):
 return self. dict

 def setstate (self, state):
```