

INTEGRATING SENDGRID SERVICE

SENDGRID INTERGRATION WITH PYTHON

Date	20 October 2022
Team ID	PNT2022TMID54054
Project Name	Smart Fashion Recommender Application
Maximum Marks	4 Marks

SENDGRID INTERGRATION WITH PYTHON:

SendGrid's cloud-based email infrastructure relieves businesses of the cost and complexity of maintaining custom email systems. SendGrid provides reliable delivery, scalability and real-time analytics along with flexible APIs that make custom integration simple.

In Smart Fashion Recommender Application, SendGrid has been used for sending the order confirmation mail for the customer to get further details regarding their products. It will also be used in the Register / Login Process, where need to authenticate the details by conforming the OTP / SendGrid Mail.



STEP 1: Create API Key in SendGrid

The screenshot shows the 'Create API Key' form in the SendGrid dashboard. The left sidebar contains navigation links: Dashboard, Email API, Stats, Settings, Twilio SMS, and REPUTATION. The main content area is titled 'Create API Key' and includes a form with the following fields:

- API Key Name ***: A text input field.
- API Key Permissions ***: A section with three radio button options:
 - Full Access**: Selected by default. Description: 'Allows the API key to access GET, PATCH, PUT, DELETE, and POST endpoints for all parts of your account, excluding billing and Email Address Validation.'
 - Restricted Access**: Description: 'Customize levels of access for all parts of your account, excluding billing and Email Address Validation.'
 - Billing Access**: Description: 'Allows the API key to access billing endpoints for the account. (This is especially useful for Enterprise or Partner customers looking for more advanced account management.)'

At the bottom right of the form are two buttons: 'Cancel' and 'Create & View'.

The screenshot shows the 'API Keys' table in the SendGrid dashboard. The left sidebar contains navigation links: Dashboard, Email API, Marketing, Design Library, Stats, Activity, Suppressions, Settings, Account Details, and Alert Settings. The main content area is titled 'API Keys' and includes a 'Create API Key' button in the top right corner. The table below lists the API keys:

NAME	API KEY	ACTION
Purple_Sparks API Key ID: pNMSbUtlQEwIMt6K5LDXeg	*****	 

STEP 2: Install SendGrid using PIP

```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.22000.1279]
(c) Microsoft Corporation. All rights reserved.

C:\WINDOWS\system32>pip install sendgrid
Collecting sendgrid
  Downloading sendgrid-6.9.7-py3-none-any.whl (101 kB)
----- 101.1/101.1 kB 726.5 kB/s eta 0:00:00
Collecting starkbank-ecdsa>=2.0.1
  Downloading starkbank-ecdsa-2.2.0.tar.gz (14 kB)
  Preparing metadata (setup.py) ... done
Collecting python-http-client>=3.2.1
  Downloading python_http_client-3.3.7-py3-none-any.whl (8.4 kB)
Building wheels for collected packages: starkbank-ecdsa
  Building wheel for starkbank-ecdsa (setup.py) ... done
  Created wheel for starkbank-ecdsa: filename=starkbank_ecdsa-2.2.0-py3-none-any.whl size=15969 sha256=5a70b4d4b6d7b85de66314038c47c11fe3586cd9763b9eb368c3f0ad12133a59
  Stored in directory: c:\users\delld\AppData\Local\pip\cache\wheels\e9\b3\71\c283da154561249f4c574e3caa32e4cbd66355591cc8618d5
Successfully built starkbank-ecdsa
Installing collected packages: starkbank-ecdsa, python-http-client, sendgrid
Successfully installed python-http-client-3.3.7 sendgrid-6.9.7 starkbank-ecdsa-2.2.0

C:\WINDOWS\system32>
```

STEP 3: Create Single Sender on SendGrid

Nandhitha Sree B

Dashboard

Email API

Marketing

Design Library

Stats

Activity

Suppressions

Settings

Account Details

Alert Settings

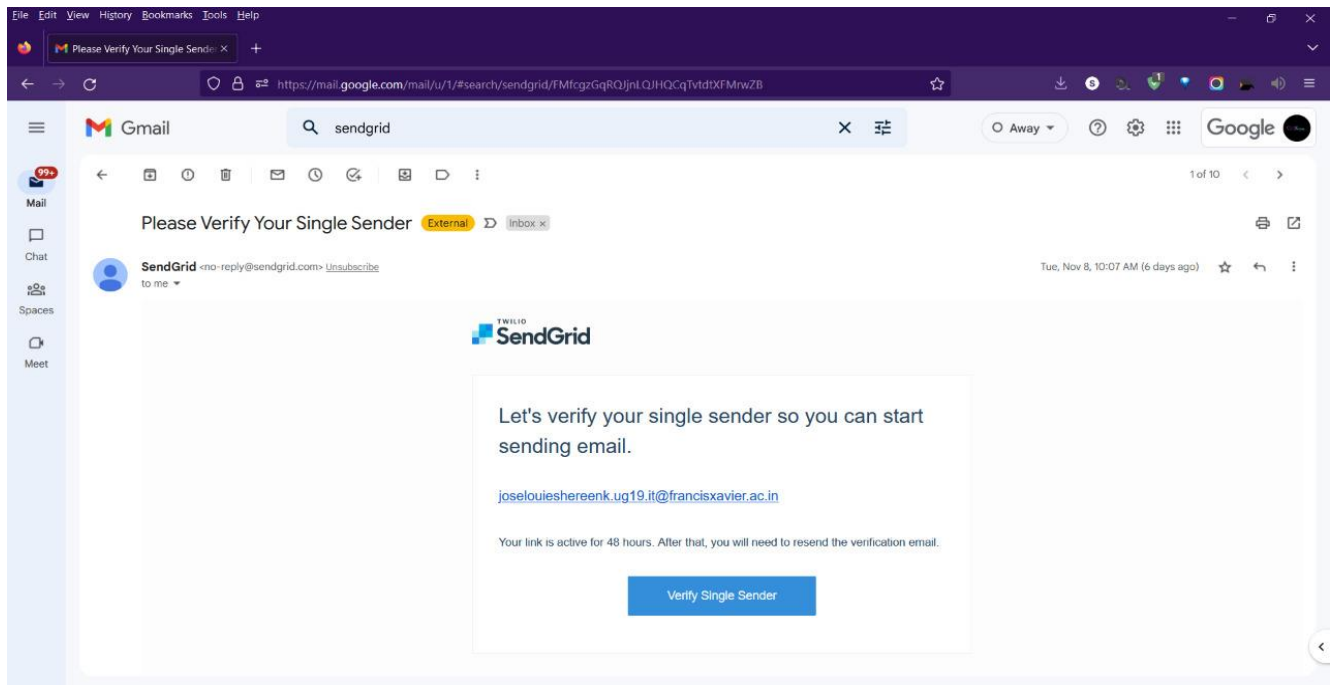
Sender Authentication /

Single Sender Verification ⓘ

Create New Sender

SENDERS	ADDRESS	NICKNAME	VERIFIED	ACTIONS
<div>Nandhitha Sree B</div> <div><div>FROM</div>nandhithasreeb.ug19.it@francisxavier.ac.in</div> <div><div>REPLY</div>joselouieshereenk.ug19.it@francisxavier.ac.in</div>	Francis Xavier Engineering College Tirunelveli, IND	Nandy	✗	⋮

STEP 4: Single Sender Verification

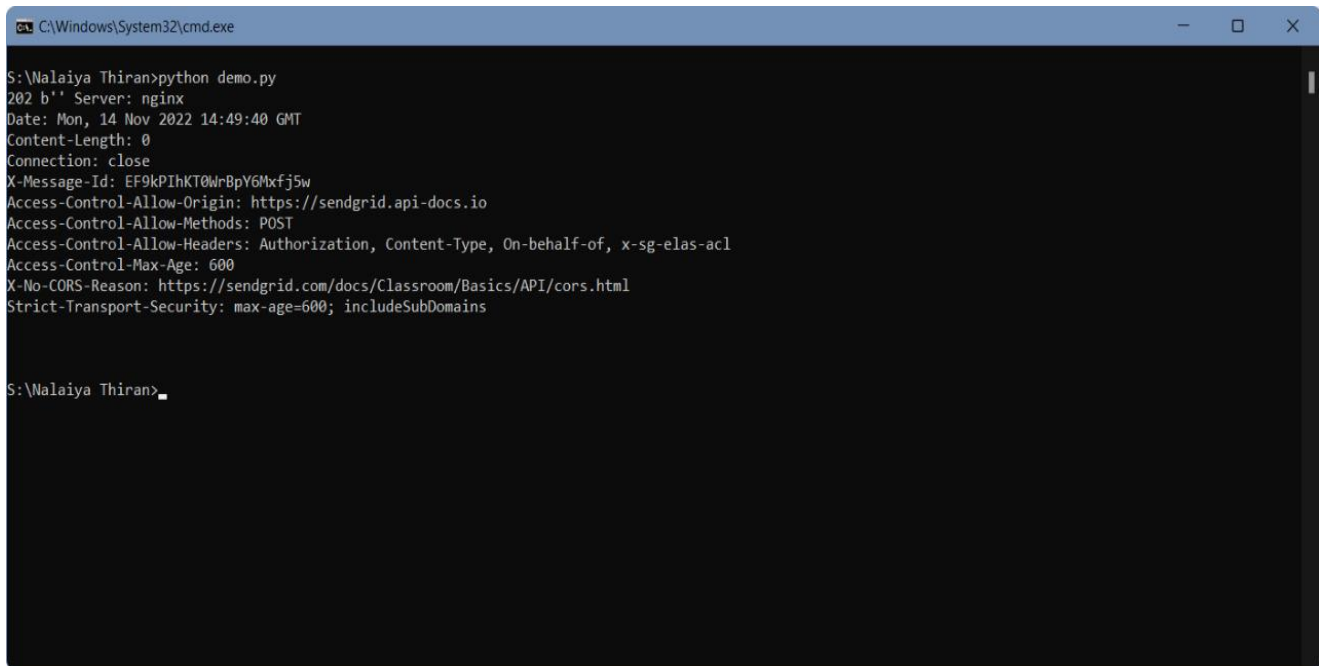


STEP 5: SendGrid Integration with Python code

```
*S:\Nalaya Thiran\demo.py - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
demo.py
1 import os
2 from sendgrid import SendGridAPIClient
3 from sendgrid.helpers.mail import Mail
4
5 message = Mail(
6     from_email='joselouieshereenk.ug19.it@franciscxavier.ac.in',
7     to_emails='nandithasreeb@gmail.com',
8     subject='Successfully Registered',
9     html_content='<strong>Welcome to Purple Sparks...<br>Your account has been successfully registered...</strong>')
10
11 try:
12     sg = SendGridAPIClient(os.environ.get('SENDGRID_API_KEY'))
13     response = sg.send(message)
14     print(response.status_code)
15     print(response.body)
16     print(response.headers)
17 except Exception as e:
18     print(e.message)
```

Python file length: 611 lines: 17 Ln: 17 Col: 21 Pos: 612 Windows (CR LF) UTF-8 INS

STEP 6: Run Python Code on Command Prompt



```
C:\Windows\System32\cmd.exe

S:\Walaia Thiran>python demo.py
202 b'' Server: nginx
Date: Mon, 14 Nov 2022 14:49:40 GMT
Content-Length: 0
Connection: close
X-Message-Id: EF9kPIhKT0WrBpY6Mxfj5w
Access-Control-Allow-Origin: https://sendgrid.api-docs.io
Access-Control-Allow-Methods: POST
Access-Control-Allow-Headers: Authorization, Content-Type, On-behalf-of, x-sg-elas-acl
Access-Control-Max-Age: 600
X-No-CORS-Reason: https://sendgrid.com/docs/Classroom/Basics/API/cors.html
Strict-Transport-Security: max-age=600; includeSubDomains

S:\Walaia Thiran>
```

STEP 7: Output as Mail Successfully Send

