CREATE SENDGRID INTEGRATION WITH PYTHON CODE

Date	16/ 11/ 2022
Team ID	PNT2022TMID26204
Project Name	Project – Personal Expense Tracker Application

Sendgrid integration

```python
import os
 import json


from sendgrid import SendGridAPIClient

from sendgrid.helpers.mail import *



# NOTE: you will need move this file to the root

# directory of this project to execute properly.



def build_hello_email():
    ## Send a Single Email to a Single Recipient


    message = Mail(from_email=From('from@example.com', 'Example From Name'),
        to_emails=To('to@example.com', 'Example To Name'),
        subject=Subject('Sending with SendGrid is Fun'),
        plain_text_content=PlainTextContent('and easy to do anywhere, even with Python'),
        html_content=HtmlContent('<strong>and easy to do anywhere, even with
Python</strong>'))


    try:
        print(json.dumps(message.get(), sort_keys=True, indent=4))
        return message.get()
```

```python
        except SendGridException as e:
            print(e.message)

        mock_personalization = Personalization()
        personalization_dict = get_mock_personalization_dict()

        for cc_addr in personalization_dict['cc_list']:
            mock_personalization.add_to(cc_addr)

        for bcc_addr in personalization_dict['bcc_list']:
            mock_personalization.add_bcc(bcc_addr)

        for header in personalization_dict['headers']:
            mock_personalization.add_header(header)

        for substitution in personalization_dict['substitutions']:
            mock_personalization.add_substitution(substitution)

        for arg in personalization_dict['custom_args']:
            mock_personalization.add_custom_arg(arg)

        mock_personalization.subject = personalization_dict['subject']
        mock_personalization.send_at = personalization_dict['send_at']

        message.add_personalization(mock_personalization)

        return message

def get_mock_personalization_dict():
    """Get a dict of personalization mock."""
    mock_pers = dict()
```

```python
    mock_pers['to_list'] = [To("test1@example.com",
                               "Example User"),
                            To("test2@example.com",
                               "Example User")]

    mock_pers['cc_list'] = [To("test3@example.com",
                               "Example User"),
                            To("test4@example.com",
                               "Example User")]

    mock_pers['bcc_list'] = [To("test5@example.com"),
                             To("test6@example.com")]

    mock_pers['subject'] = ("Hello World from the Personalized "
                            "SendGrid Python Library")

    mock_pers['headers'] = [Header("X-Test", "test"),
                            Header("X-Mock", "true")]

    mock_pers['substitutions'] = [Substitution("%name%", "Example User"),
                                  Substitution("%city%", "Denver")]

    mock_pers['custom_args'] = [CustomArg("user_id", "343"),
                                CustomArg("type", "marketing")]

    mock_pers['send_at'] = 1443636843
    return mock_pers
```