

Team ID	PNT2022TMID30529
Project Name	Plasma Donor Application

SENDGRID INTERGATION WITH PYTHON CODE

```

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()

    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()

    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

def build_multiple_emails_personalized():

    # Note that the domain for all From email addresses must match

    message = Mail(from_email=From('from@example.com', 'Example From 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>'))

    mock_personalization = Personalization()

    mock_personalization.add_to(To('test@example.com', 'Example User 1'))

    mock_personalization.add_cc(Cc('test1@example.com', 'Example User 2'))

    message.add_personalization(mock_personalization)

    mock_personalization_2 = Personalization()

```

```

mock_personalization_2.add_to(To('test2@example.com', 'Example User 3'))

mock_personalization_2.set_from(From('from@example.com', 'Example From Name 2'))

mock_personalization_2.add_bcc(Bcc('test3@example.com', 'Example User 4'))

message.add_personalization(mock_personalization_2)

try:

    print(json.dumps(message.get(), sort_keys=True, indent=4))

    return message.get()

except SendGridException as e:

    print(e.message)

    return message

def build_attachment1():

    """Build attachment mock. Make sure your content is base64 encoded before passing into
    attachment.content.

    Another example: https://github.com/sendgrid/sendgrid-
    python/blob/HEAD/use\_cases/attachment.md"""

    attachment = Attachment()

    attachment.file_content = ("TG9yZW0gaXBzdW0gZG9sb3Igc2l0IGFtZXQsIGNvb3Ih
        "Y3RldHVylGFkaXBo2NpbmcgZWxpdC4gQ3Jhc3BwdW12")

    attachment.file_type = "application/pdf"

    attachment.file_name = "balance_001.pdf"

    attachment.disposition = "attachment"

    attachment.content_id = "Balance Sheet"

    return attachment

def build_attachment2():

    """Build attachment mock."""

```

```

attachment = Attachment()

attachment.file_content = "BwdW"

attachment.file_type = "image/png"

attachment.file_name = "banner.png"

attachment.disposition = "inline"

attachment.content_id = "Banner"

return attachment

def build_kitchen_sink():

    """All settings set"""

    from sendgrid.helpers.mail import (

        Mail, From, To, Cc, Bcc, Subject, PlainTextContent,

        HtmlContent, SendGridException, Substitution,

        Header, CustomArg, SendAt, Content, MimeType, Attachment,

        FileName, FileContent, FileType, Disposition, ContentId,

        TemplateId, Section, ReplyTo, Category, BatchId, Asm,

        GroupId, GroupsToDisplay, IpPoolName, MailSettings,

        BccSettings, BccSettingsEmail, BypassListManagement,

        FooterSettings, FooterText, FooterHtml, SandBoxMode,

        SpamCheck, SpamThreshold, SpamUrl, TrackingSettings,

        ClickTracking, SubscriptionTracking, SubscriptionText,

        SubscriptionHtml, SubscriptionSubstitutionTag,

        OpenTracking, OpenTrackingSubstitutionTag, Ganalytics,

        UtmSource, UtmMedium, UtmTerm, UtmContent, UtmCampaign)

    import time

    import datetime

```

```
message = Mail()

# Define Personalizations

message.to = To('test1@sendgrid.com', 'Example User1', p=0)

message.to = [

    To('test2@sendgrid.com', 'Example User2', p=0),

    To('test3@sendgrid.com', 'Example User3', p=0)

]

message.cc = Cc('test4@example.com', 'Example User4', p=0)

message.cc = [

    Cc('test5@example.com', 'Example User5', p=0),

    Cc('test6@example.com', 'Example User6', p=0)

]

message.bcc = Bcc('test7@example.com', 'Example User7', p=0)

message.bcc = [

    Bcc('test8@example.com', 'Example User8', p=0),

    Bcc('test9@example.com', 'Example User9', p=0)

]

message.subject = Subject('Sending with SendGrid is Fun 0', p=0)

message.header = Header('X-Test1', 'Test1', p=0)

message.header = Header('X-Test2', 'Test2', p=0)

message.header = [

    Header('X-Test3', 'Test3', p=0),

    Header('X-Test4', 'Test4', p=0)

]

message.substitution = Substitution('%name1%', 'Example Name 1', p=0)
```

```
message.substitution = Substitution('%city1%', 'Example City 1', p=0)

message.substitution = [

    Substitution('%name2%', 'Example Name 2', p=0),

    Substitution('%city2%', 'Example City 2', p=0)

message.custom_arg = CustomArg('marketing1', 'true', p=0)

message.custom_arg = CustomArg('transactional1', 'false', p=0)

message.custom_arg = [

    CustomArg('marketing2', 'false', p=0),

    CustomArg('transactional2', 'true', p=0)

]

message.send_at = SendAt(1461775051, p=0)

message.to = To('test10@example.com', 'Example User10', p=1)

message.to = [

    To('test11@example.com', 'Example User11', p=1),

    To('test12@example.com', 'Example User12', p=1)

]

message.cc = Cc('test13@example.com', 'Example User13', p=1)

message.cc = [

    Cc('test14@example.com', 'Example User14', p=1),

    Cc('test15@example.com', 'Example User15', p=1)

]

message.bcc = Bcc('test16@example.com', 'Example User16', p=1)

message.bcc = [

    Bcc('test17@example.com', 'Example User17', p=1),

    Bcc('test18@example.com', 'Example User18', p=1)
```

```

]

message.header = Header('X-Test5', 'Test5', p=1)

message.header = Header('X-Test6', 'Test6', p=1)

message.header = [
    Header('X-Test7', 'Test7', p=1),
    Header('X-Test8', 'Test8', p=1)
]

message.substitution = Substitution('%name3%', 'Example Name 3', p=1)

message.substitution = Substitution('%city3%', 'Example City 3', p=1)

message.substitution = [
    Substitution('%name4%', 'Example Name 4', p=1),
    Substitution('%city4%', 'Example City 4', p=1)
]

message.custom_arg = CustomArg('marketing3', 'true', p=1)

message.custom_arg = CustomArg('transactional3', 'false', p=1)

message.custom_arg = [
    CustomArg('marketing4', 'false', p=1),
    CustomArg('transactional4', 'true', p=1)
]

message.send_at = SendAt(1461775052, p=1)

message.subject = Subject('Sending with SendGrid is Fun 1', p=1)

# The values below this comment are global to entire message

message.from_email = From('help@twilio.com', 'Twilio SendGrid')

message.reply_to = ReplyTo('help_reply@twilio.com', 'Twilio SendGrid Reply')

message.subject = Subject('Sending with SendGrid is Fun 2')

```



```

message.content = Content(MimeType.text, 'and easy to do anywhere, even with Python')

message.content = Content(MimeType.html, '<strong>and easy to do anywhere, even with
Python</strong>')

message.content = [
    Content('text/calendar', 'Party Time!!'),
    Content('text/custom', 'Party Time 2!!')
]

message.attachment = Attachment(FileContent('base64 encoded content 1'),
    FileName('balance_001.pdf'),
    FileType('application/pdf'),
    Disposition('attachment'),
    ContentId('Content ID 1'))

message.attachment = [
    Attachment(FileContent('base64 encoded content 2'),
        FileName('banner.png'),
        FileType('image/png'),
        Disposition('inline'),
        ContentId('Content ID 2')),
    Attachment(FileContent('base64 encoded content 3'),
        FileName('banner2.png'),
        FileType('image/png'),
        Disposition('inline'),
        ContentId('Content ID 3'))
]

message.template_id = TemplateId('13b8f94f-bcae-4ec6-b752-70d6cb59f932')

message.section = Section('%section1%', 'Substitution for Section 1 Tag')

```

```
message.section = [  
    Section('%section2%', 'Substitution for Section 2 Tag'),  
    Section('%section3%', 'Substitution for Section 3 Tag')  
]
```

```
message.header = Header('X-Test9', 'Test9')
```

```
message.header = Header('X-Test10', 'Test10')
```

```
message.header = [  
    Header('X-Test11', 'Test11'),  
    Header('X-Test12', 'Test12')  
]
```

```
message.category = Category('Category 1')
```

```
message.category = Category('Category 2')
```

```
message.category = [  
    Category('Category 1'),  
    Category('Category 2')  
]
```

```
message.custom_arg = CustomArg('marketing5', 'false')
```

```
message.custom_arg = CustomArg('transactional5', 'true')
```

```
message.custom_arg = [  
    CustomArg('marketing6', 'true'),  
    CustomArg('transactional6', 'false')  
]
```

```
message.send_at = SendAt(1461775053)
```

```
message.batch_id = BatchId("HkJ5yLYULb7Rj8GKSx7u025ouWVIMgAi")
```

```
message.asm = Asm(GroupId(1), GroupsToDisplay([1,2,3,4]))

message.ip_pool_name = IpPoolName("IP Pool Name")

mail_settings = MailSettings()

mail_settings.bcc_settings = BccSettings(False, BccSettingsTo("bcc@twilio.com"))

mail_settings.bypass_list_management = BypassListManagement(False)

mail_settings.footer_settings = FooterSettings(True, FooterText("w00t"),
FooterHtml("<string>w00t!<strong>"))

mail_settings.sandbox_mode = SandBoxMode(True)

mail_settings.spam_check = SpamCheck(True, SpamThreshold(5), SpamUrl("https://example.com"))

message.mail_settings = mail_settings


tracking_settings = TrackingSettings()

tracking_settings.click_tracking = ClickTracking(True, False)

tracking_settings.open_tracking = OpenTracking(True,
OpenTrackingSubstitutionTag("open_tracking"))

tracking_settings.subscription_tracking = SubscriptionTracking(
    True,
    SubscriptionText("Goodbye"),
    SubscriptionHtml("<strong>Goodbye!</strong>"),
    SubscriptionSubstitutionTag("unsubscribe"))

tracking_settings.ganalytics = Ganalytics(
    True,
    UtmSource("utm_source"),
    UtmMedium("utm_medium"),
    UtmTerm("utm_term"),
    UtmContent("utm_content"),
```

```
        UtmCampaign("utm_campaign"))

    message.tracking_settings = tracking_settings

    return message

def send_multiple_emails_personalized():

    # Assumes you set your environment variable:

    # https://github.com/sendgrid/sendgrid-python/blob/HEAD/TROUBLESHOOTING.md#environment-variables-and-your-se...
```