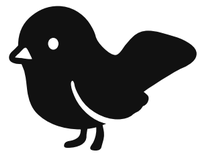
Automate the Boring Stuff with Slackbot

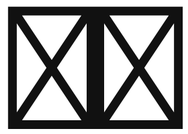
Takanori Suzuki

PyCon Taiwan / 2019 Sep 22

Agenda

- Background and Motivation for Slackbot
- How to create SIMPLE chatbot
- How to create INTERACTIVE bot
- How to EXTEND bot using libs and APIs

Photos  Tweets  

Notes  

#pycontw / @takanory

Who am I?

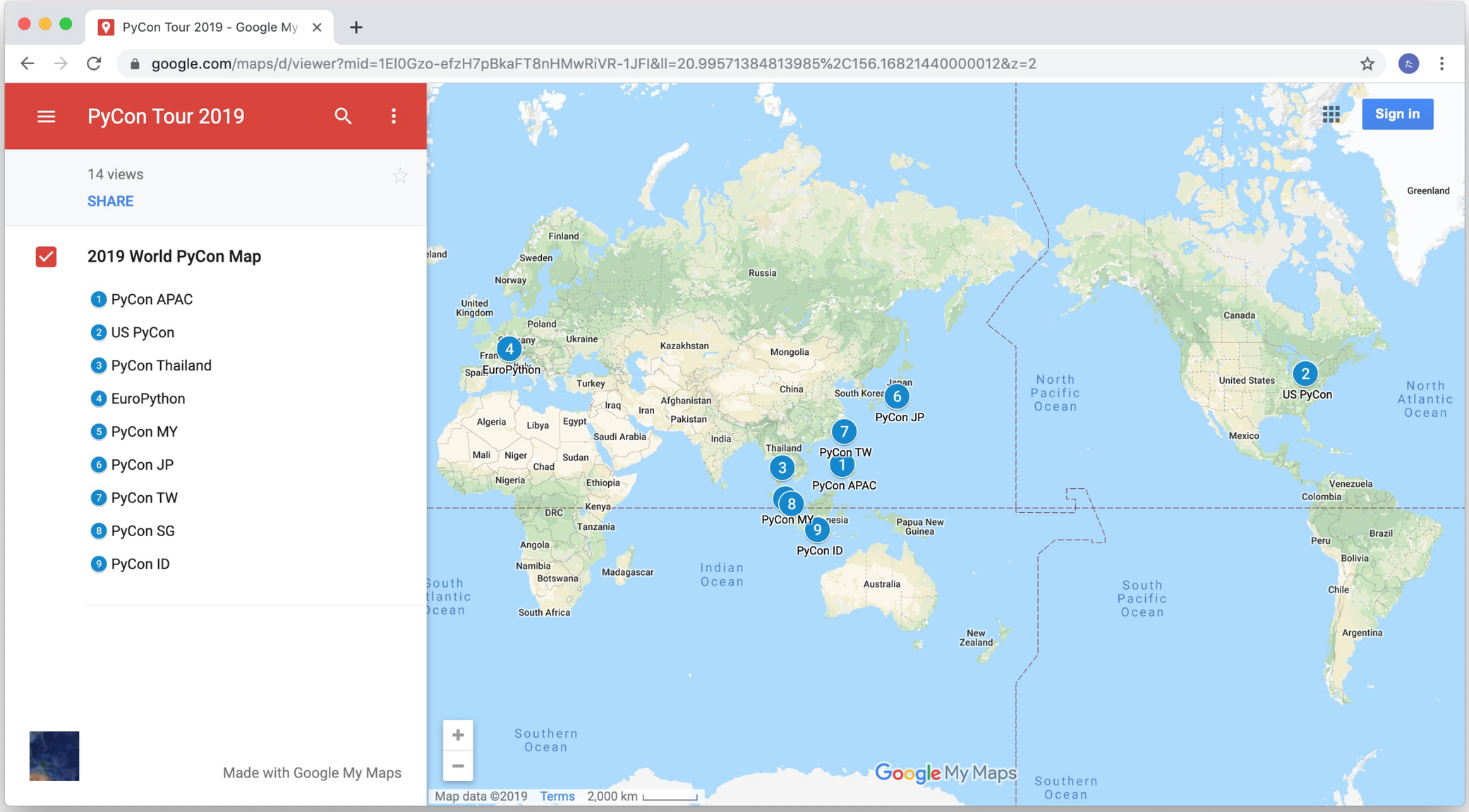
- Takanori Suzuki / 鈴木 たかのり / @takanory
- Vice-Chair of PyCon JP Committee: **#pyconjp**
- Director of BeProud Inc.
- Instructor of Python Boot Camp: **#pycamp**
- Organizer of Python mini Hack-a-thon: **#pyhack**
- Captain of Python Bouldering Club: **#kabepy**

Do you know PyCon JP?

PyCon JP ❤ PyCon TW

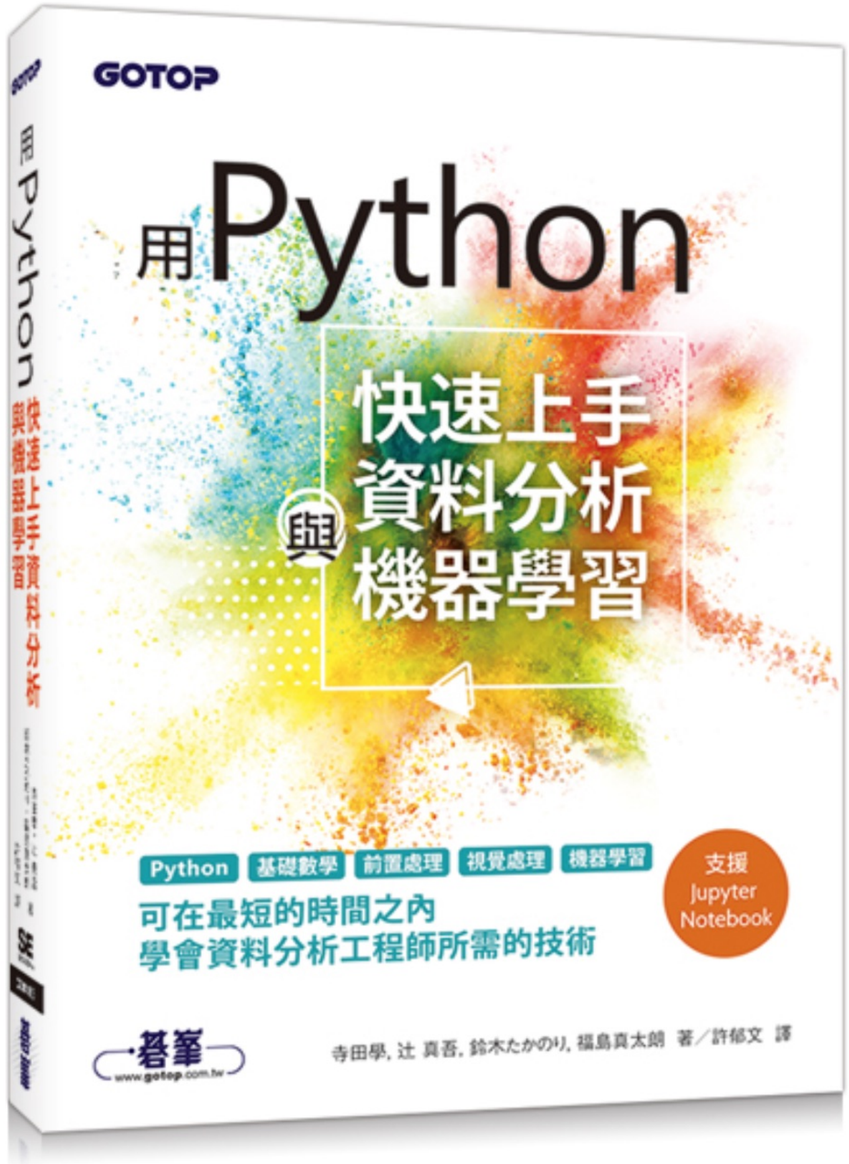

#PyCon Taiwan
Thank you Guido!!
SOFTWARE
Thank you
你今天py了嗎？
我沒使用分號
PYCON TW
PyCon Taiwan 2019
#又被空格搞死了

@takanory



www.google.com/maps/d/viewer

@takanory



用Python快速上手資料分析與機器學習

@takanory

Background and Motivation

Conference Tasks

- I held PyCon JP(2014-2016) as Chair
- Conference tasks:
  - 🧑💻 Keynotes, Talks and Trainings arrangement
  - 🎫 Ticket sales and reception
  - ⌨️ Venue and facility(WiFi, Video...) management
  - 🍱 Foods, ☕ Coffee, 🧁 Snacks and 🍺 Beers

Staff ask me the same things

- 40+ staff
-  NEW staff :  OLD staff = 50 : 50

Programmer is Lazy

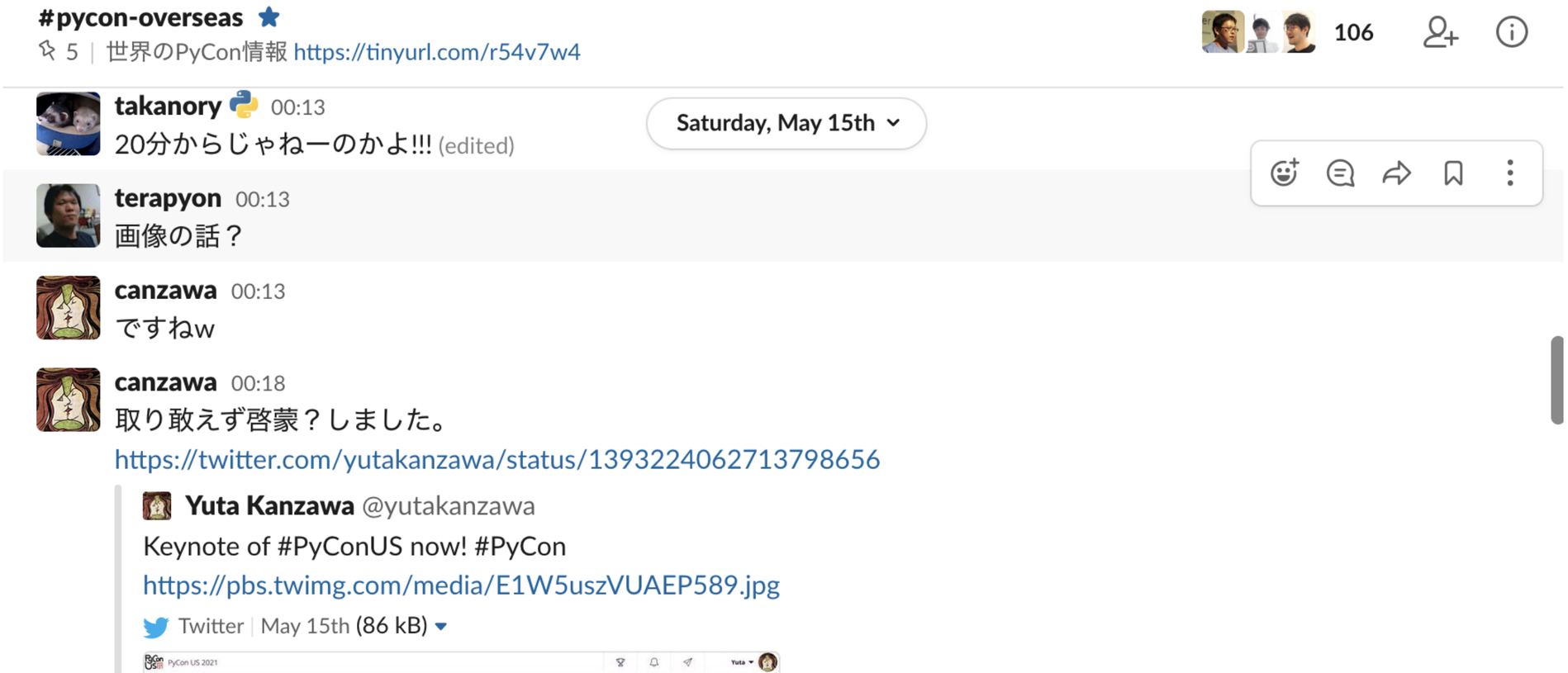
Let's create a secretary!!

Goal

- How to create SIMPLE bot
- How to create INTERACTIVE bot
- How to EXTEND bot using libs and APIs

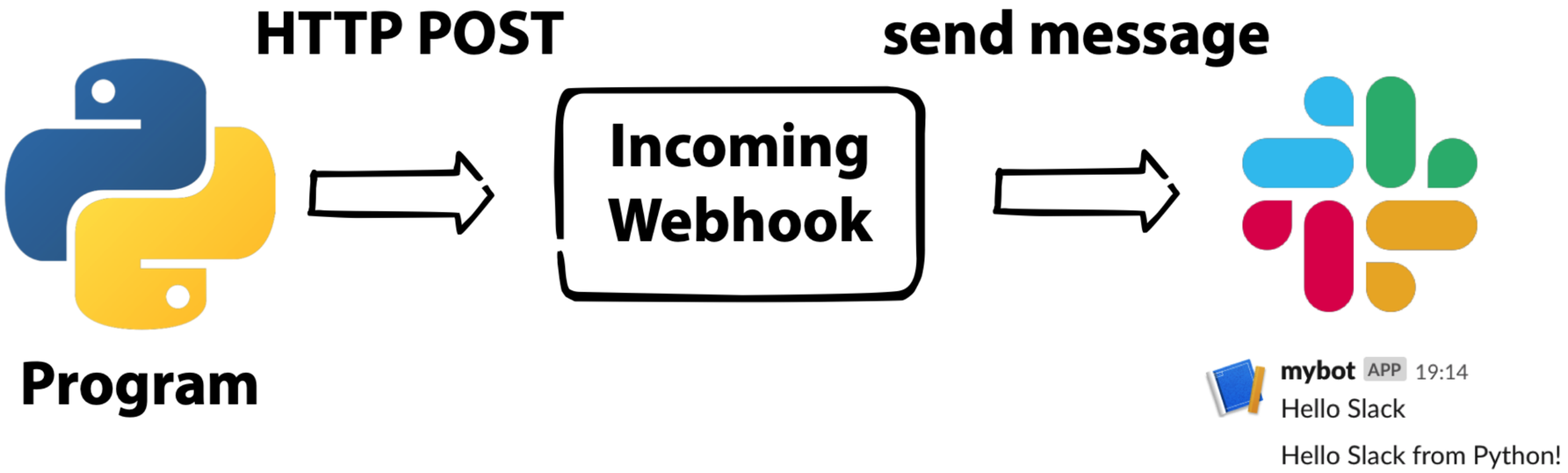
Why Slackbot

- Launching the Slack app at any time
- Easy to access Slack
- To do everything in Slack



Simple integration with Incoming Webhooks

System overview



Create Incoming Webhooks Integration

- Generate Webhook URL
  1. Create a Slack app
  2. Enable Incoming Webhooks in the app
  3. Create an Incoming Webhook
- Webhook URL:

`https://hooks.slack.com/services/T00000000/B00000000/XXXXXXXXXXXXXXXXXXXX`

- see: Incoming Webhooks

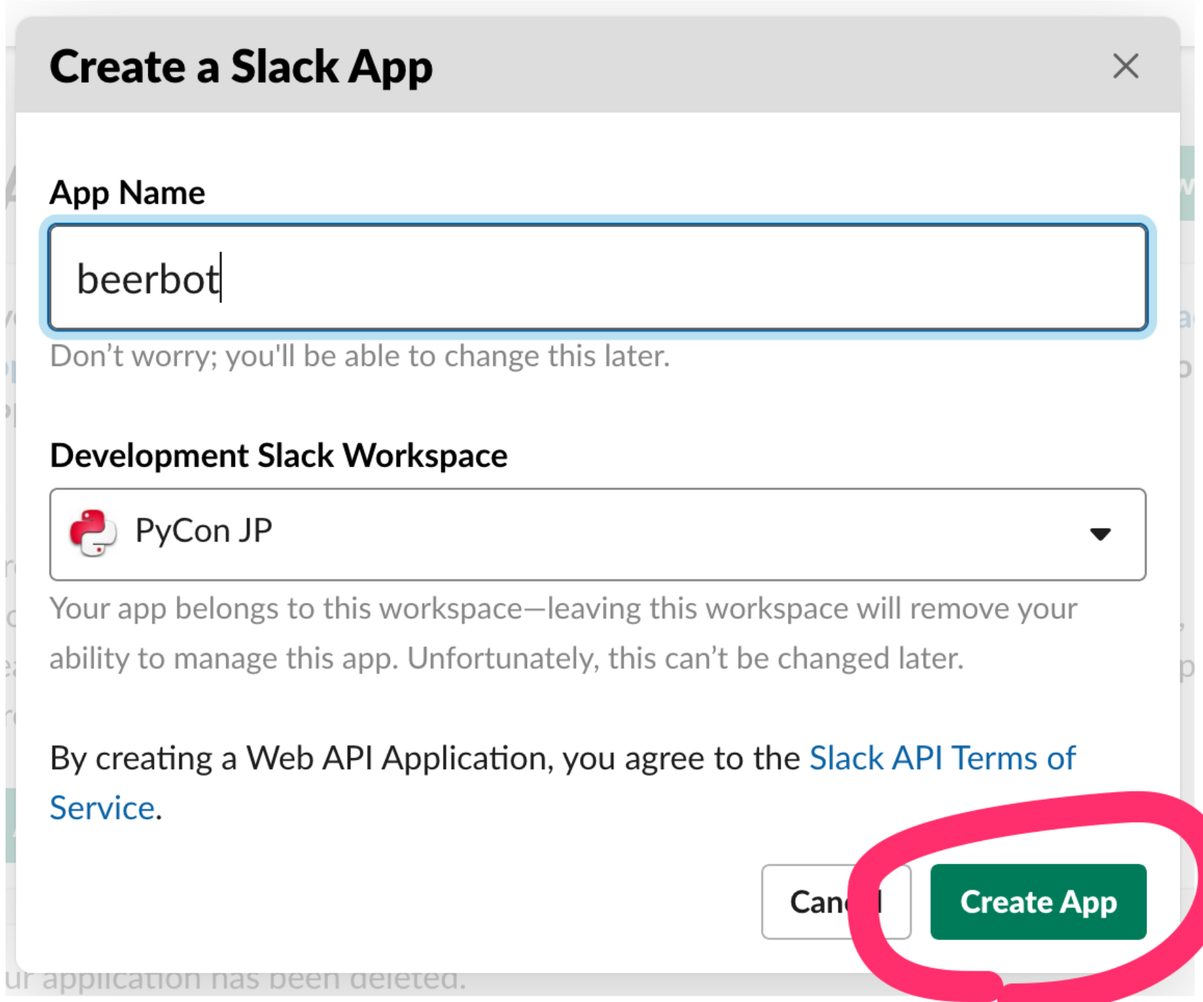
Your Apps

Create New App

If your app is (or will be) listed in the Slack App Directory, please review our [illegible] App Directory Agreement. These terms are in addition to the existing Developer Policy, API TOS, and Brand Guidelines.

By keeping your app in the App Directory or review process, you're confirming your agreement to the Slack App Directory Agreement and to providing additional information for security review, if requested. If you don't agree with this Agreement, please send an email to feedback@slack.com, and we'll remove your app from the App Directory or the review process.

I Agree


Create a Slack App
App Name
beerbot
Don’t worry; you'll be able to change this later.
Development Slack Workspace
PyCon JP
Your app belongs to this workspace—leaving this workspace will remove your ability to manage this app. Unfortunately, this can’t be changed later.
By creating a Web API Application, you agree to the Slack API Terms of Service.
Create App

Display Information

This information will be shown in the Slack App Directory and in the Slack App
For more information, view our App Detail Guidelines.

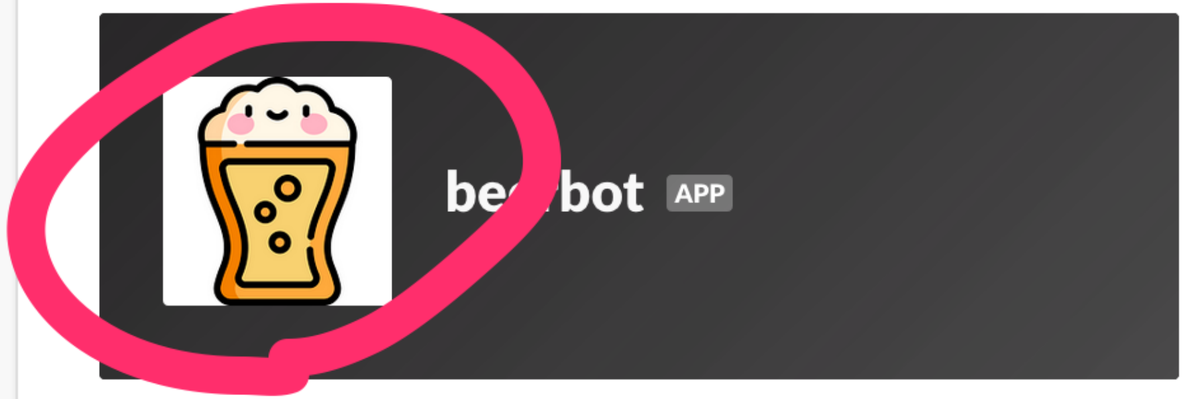
App name

beerbot

Short description

Add a short description...

App icon & Preview



Background color

#2C2D30

- credit: Icons made by Freepik from `www.flaticon.com`

Basic Information

Building Apps for Slack

Create an app that's just for your workspace (or build one that can be used by any workspace) by following the steps below.

Add features and functionality

Choose and configure the tools you'll need to create your app (or review all our docum

Incoming Webhooks
Post messages from external so es into Slack.

Interactive Components
Add buttons to your app's messages, and create an interactive experience for users.

Slash Commands
Allow users to perform app actions by typing commands in Slack.

Event Subscriptions
Make it easy for your app to respond to activity in Slack.

Bots
Add a bot to allow users to exchange messages with your app.

Permissions
Configure permissions to allow your app to interact with the Slack API.

Incoming Webhooks

Activate Incoming Webhooks

On

Incoming webhooks are a simple way to post messages from external sources into Slack. They make use of normal HTTP requests with a JSON payload, which includes the message and a few other optional details. You can include message attachments to display richly-formatted messages.

Each time your app is installed, a new Webhook URL will be generated.

If you deactivate incoming webhooks, new Webhook URLs will not be generated when your app is installed to your team. If you'd like to remove access to existing Webhook URLs, you will need to Revoke All OAuth Tokens.

Webhook URLs for Your Workspace

To dispatch messages with your webhook URL, send your message in JSON as the body of an `application/json` POST request.

Add this webhook to your workspace below to activate this curl example.

Sample curl request to post to a channel:

```
curl -X POST -H 'Content-type: application/json' --data '{"text":"Hello,
World!"}' YOUR_WEBHOOK_URL_HERE
```

Webhook URL	Channel	Added By

No webhooks have been added yet.

Add New Webhook to Workspace

This app was created by a member of your workspace, PyCon JP.

On PyCon JP, beerbot would like to:

Confirm your identity on PyCon JP

Post to #random

Cancel Allow

your app is installed to your team. If you'd like to remove access to existing Webhook URLs, you will need to Revoke All OAuth Tokens.

Webhook URLs for Your Workspace

To dispatch messages with your webhook URL, send your message in JSON as the body of an `application/json` POST request.

Add this webhook to your workspace below to activate this curl example.

Sample curl request to post to a channel:

```
curl -X POST -H 'Content-type: application/json' --data '{"text":"Hello,
World!"}' https://hooks.slack.com/services/T024G2ZE8/BNAFX3QGN
/[redacted]
```

Copy

Webhook URL	Channel	Added By
https://hooks.slack.com/services/T Copy	#pyconjpbot-test	Takanori Suzuki Sep 11, 2019

Add New Webhook to Workspace

message with cURL

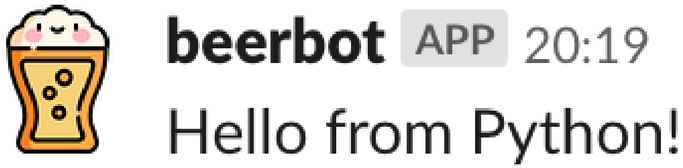
```
$ curl -X POST -H 'Content-type: application/json' \
> --data '{"text": "Hello Slack"}' \
> https://hooks.slack.com/services/T00000000/B00000000/XXXXXXXXXX
```

beerbot APP 20:17

Hello Slack

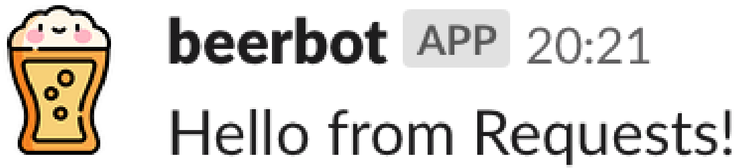
message with Python

```
import json
from urllib import request

URL = 'https://hooks.slack.com/services/T00000000/B00000000/XXXXXXXXXX'
data = {'text': 'Hello from Python!'}
jsoned = json.dumps(data)
req = request.Request(URL, data=jsoned, method='POST')
request.urlopen(req)
```



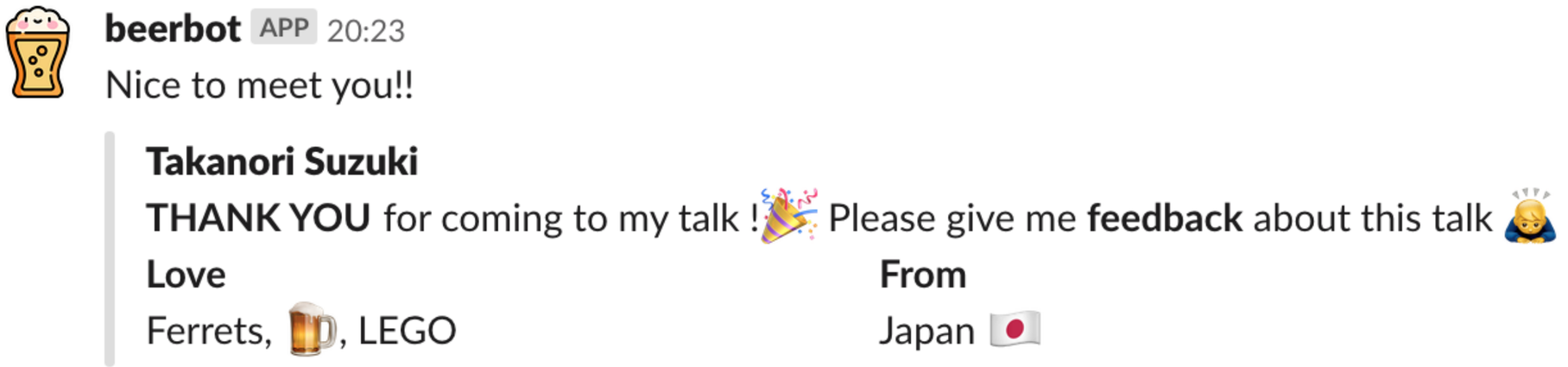
message with Requests

```
import requests

URL = 'https://hooks.slack.com/services/T00000000/B00000000/XXXXXXXXXX'
data = {'text': 'Hello from Requests!'}
requests.post(URL, json=data)
```



Complex message with Requests

```
fields = [{'title': 'Love', 'value': 'Ferrets, :beer:, LEGO', 'short': Tr
          {'title': 'From', 'value': 'Japan :jp:', 'short': True}]
data = {'attachments': [{
    'pretext': 'Nice to meet you!!',
    'author_name': 'Takanori Suzuki',
    'author_link': 'https://twitter.com/takanory/',
    'text': '*THANK YOU* for coming to my talk !:tada: Please give me *fe
    'fields': fields}]}
requests.post(URL, json=data)
```



More complex message

- Block-Kit: new UI framework
- Introducing Block Kit
- Block Kit Builder

slack Block Kit Builder

Copy Code | Clear Code | Send to Slack

- Section
- Image
- Context
- Divider
- Actions

Section with...

- Image
- Button
- Select
- Multi-Select
- Overflow
- Datepicker
- Fields

Message Preview | Desktop | Select a Template

Your App APP 2:37 AM

Hello, Assistant to the Regional Manager Dwight! **Michael Scott** wants to know where you'd like to take the Paper Company investors to dinner tonight.

Please select a restaurant:

Farmhouse Thai Cuisine

⭐⭐⭐⭐ 1528 reviews

They do have some vegan options, like the roti and curry, plus they have a ton of salad stuff and noodles can be ordered without meat!! They have something for everyone here

Kin Khao

⭐⭐⭐⭐ 1638 reviews

The sticky rice also goes wonderfully with the caramelized pork belly, which is absolutely melt-in-your-mouth and so soft.

Ler Ros

⭐⭐⭐⭐ 2082 reviews

I would really recommend the Yum Koh Moo Yang - Spicy lime dressing and roasted quick marinated pork shoulder, basil leaves, chili & rice powder.

Farmhouse | Kin Khao | Ler Ros


```
{
    "blocks": [
        {
            "type": "section",
            "text": {
                "type": "mrkdwn",
                "text": "Hello, Assistant to the Regional Manager Dwight! *Michael Scott* wants to know where you'd like to take the Paper Company investors to dinner tonight.\n\n *Please select a restaurant:*"
            }
        },
        {
            "type": "divider"
        },
        {
            "type": "section",
            "text": {
                "type": "mrkdwn",
                "text": "*Farmhouse Thai Cuisine*\n:star::star::star::star: 1528 reviews\n They do have some vegan options, like the roti and curry, plus they have a ton of salad stuff and noodles can be ordered without meat!! They have something for everyone here"
            },
            "accessory": {
                "type": "image",
                "image_url": "https://s3-media3.fl.yelpcdn.com/bphoto/c7ed05m9lC2EmA3Aruue7A/o.jpg",
                "alt_text": "alt text for image"
            }
        },
        {
            "type": "section",
            "text": {
                "type": "mrkdwn",
                "text": "*Kin Khao*\n:star::star::star::star: 1638 reviews\n The sticky rice also goes wonderfully with the caramelized pork belly, which is absolutely melt-in-your-mouth and so soft."
            },
            "accessory": {
                "type": "image",
                "image_url": "https://s3-media2.fl.yelpcdn.com/bphoto/korel-1YjNtFtJlMTaC26A/o.jpg",
                "alt_text": "alt text for image"
            }
        },
```

```
import requests

URL = 'https://hooks.slack.com/services/T0XXXXXX/YYYYYYYY/ZZZZZZZ'

bars = [{  # bar info
    'name': 'Zhang Men Brewing Company',
    'date': '19 Sep 2019',
    'address': '松山區復興南路一段39號',
    'tweet': 'https://twitter.com/takanory/status/1174640810991718400',
    'image': 'https://pbs.twimg.com/media/EE0pl9cW4AEokGj?format=jpg',
    'beers': ['Cream Ale', 'Seventy Four'],
},
{
    'name': 'Driftwood Ximending ',
    'date': '20 Sep 2019',
    'address': '萬華區昆明街46號',
    'tweet': 'https://twitter.com/takanory/status/1175034244328038400',
```

```
data = {'text': ''}
blocks = []
title = {
    'type': 'section',
    'text': {
        'type': 'mrkdwn',
        'text': 'My :beer: journey in :flag-tw:',
    }
}
blocks.append(title)  # add title
blocks.append({'type': 'divider'})  # add divider
```

```
for bar in bars:  # create all bar info
    s = {'type': 'section'}
    beers = ', '.join(bar['beers']
    s['text'] = {  # text
        'type': 'mrkdwn',
        'text': f"*{bar['name']}*\n{bar['tweet']}\n{beers}",
    }
    s['fields'] = [  # fields
        {'type': 'mrkdwn', 'text': f"*Date*: {bar['date']}"},
        {'type': 'mrkdwn', 'text': f"*Address*: {bar['address']}"},
    ]
    s['accessory'] = {  # image
        'type': 'image',
        'image_url': bar['image'],
        'alt_text': bar['name'],
    }
    blocks.append(s)
```

beerbot APP 13:00

My journey in 🇮🇩

Muguinbo

https://twitter.com/takanory/status/1197496680695943168

Curry Udon

Date: 21 Nov 2019

Address: Haneda airport2-6-5, Ota, Tokyo

Old Town White Coffee

https://twitter.com/takanory/status/1197743437833031680

Nasi remak with fried chicken

Date: 22 Nov 2019

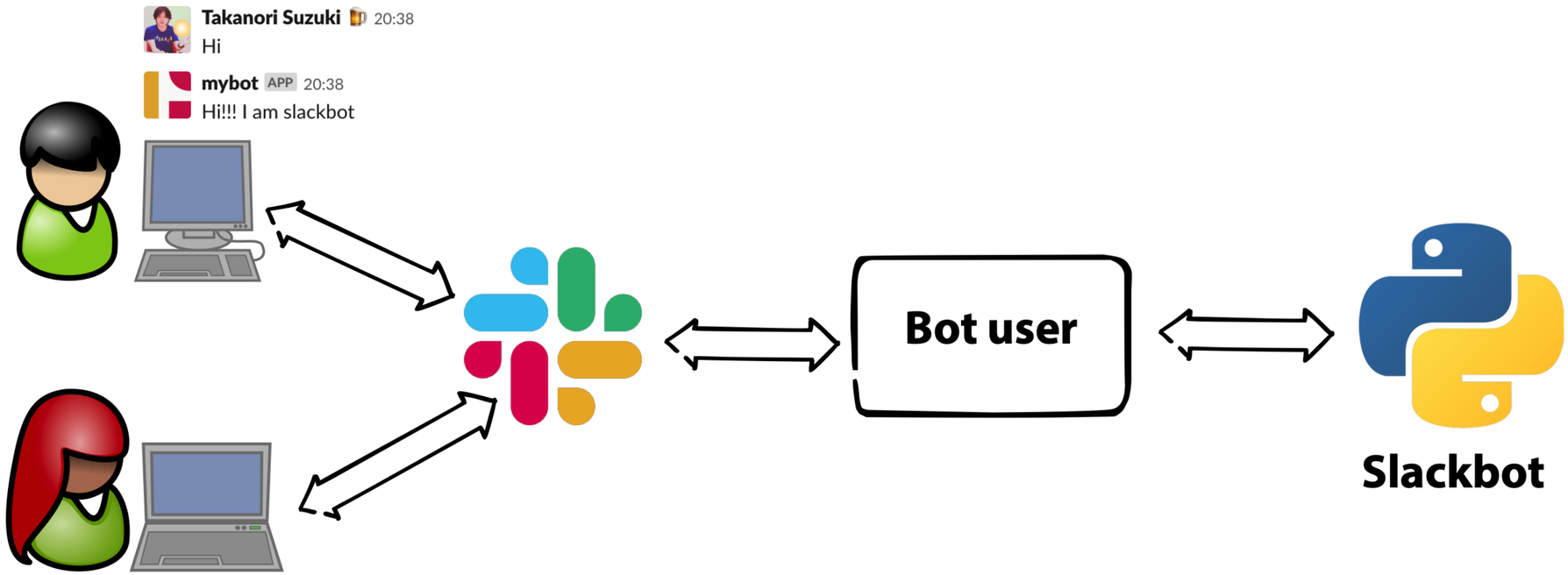
Address: Terminal 2, Sedati, East Java 61253

Summary of Incoming Webhooks

- EASY to send messages from programs ⚙️
- We can create COMPLEX messages 🛠️
- But ONE WAY only(program 👉 Webhook 👉 Slack)

How to create slackbot

System overview



Create bot user on Slack

- Create bot user 🤖
  1. Create a Slack app
  2. Enable Bots
  3. Add a "Bot User"
  4. Install App to Workspace -> Authorize
- "Bot User OAuth Access Token": `xoxb-123467890-XXXXXX-XXXXXXXXXXXX`
- Invite Bot User to Slack channels
- see: Creating a bot user

Basic Information

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Choose and configure the tools you'll need to create your app (or review all our documentation).

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Interactive Components
Add buttons to your app's messages, and create an interactive experience for users.

Slash Commands
Allow users to perform app actions by typing commands in Slack.

Event Subscriptions
Make it easy for your app to respond to activity in Slack.

Bots
Add a bot to allow users to exchan
messages with your app.

Permissions
Configure permissions to allow your app to interact with the Slack API.

Bot User

user with your app to interact with users in a more conversational manner. Learn more abo how bot users work.

Add a Bot User

Bot User

You can bundle a bot user with your app to interact with users in a more conversational manner. Learn more about how bot users work.

Display name

beerbot

Names must be shorter than 80 characters, and can't use punctuation (other than apostrophes and periods).

Default username

beerbot

If this username isn't available on any workspace that tries to install it, we will slightly change it to make it work. Usernames must be all lowercase. They cannot be longer than 21 characters and can only contain letters, numbers, periods, hyphens, and underscores.

Always Show My Bot as Online Off

When this is off, Slack automatically displays whether your bot is online based on usage of the RTM API.

Add Bot User

This app was created by a member of your workspace, PyCon JP.

On PyCon JP, beerbot would like to:

Confirm your identity on PyCon JP

Post to #random

Add a bot user with the username @beerbot

ncel Allow

@takanory

Installed App Settings

OAuth Tokens for Your Team

These tokens were automatically generated when you installed the app to your team. You can use these to authenticate your app. Learn more.

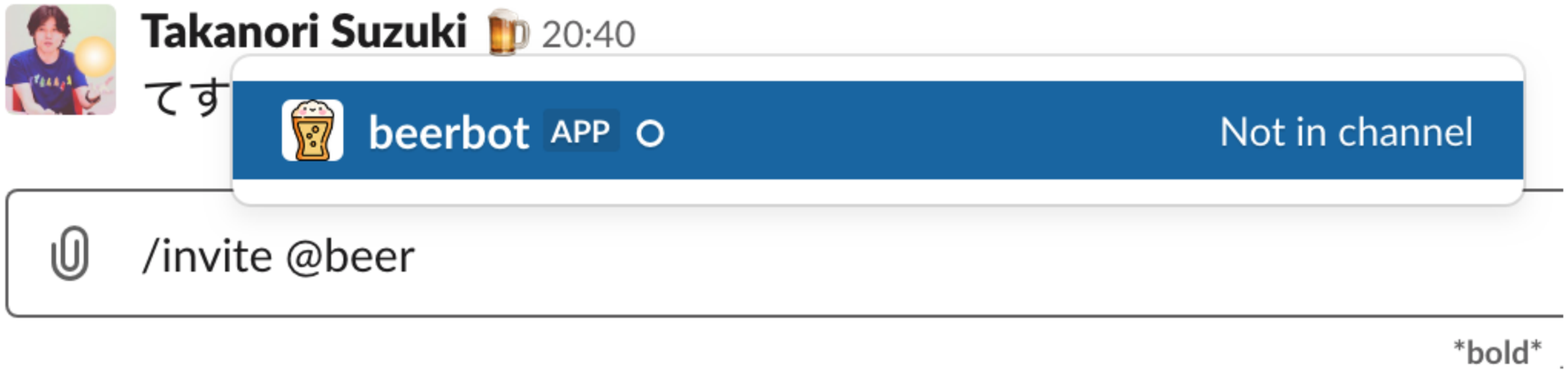
OAuth Access Token

xoxp-2152101484-2152107267-756333156709 Copy

Bot User OAuth Access Token

xoxb-2152101484-756349000160-EKav7m VP Copy

Reinstall App


Takanori Suzuki 20:40
beerbot APP
Not in channel
/invite @beer
bold

`slackbot` package

- A simple chat bot for Slack
- Python 3.4+
- `github.com/lins05/slackbot`
- `pip install slackbot`

Install slackbot with venv

```
$ mkdir beerbot
$ cd beerbot
$ python3.7 -m venv env
$ . env/bin/activate
(env) $ pip install slackbot
```

Create a simple bot with slackbot

- slackbot_settings.py

```
API_TOKEN = "xoxb-123467890-XXXXXX-XXXXXXXXXXXXXX"  # Bot token
PLUGINS = ['beerbot.plugins']  # Plugin packages
```

- run.py

```
from slackbot.bot import Bot

def main():
    bot = Bot()
    bot.run()

if __name__ == "__main__":
    main()
```

Simple Plugin

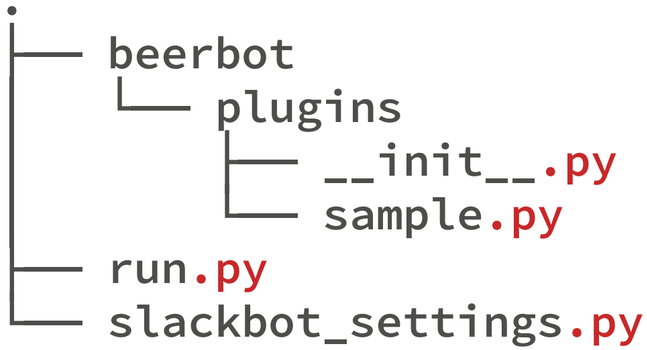
- beerbot/plugins/__init__.py

```
(env) $ mkdir -p beerbot/plugins
(env) $ touch beerbot/plugins/__init__.py  # empty file
```

- beerbot/plugins/sample.py

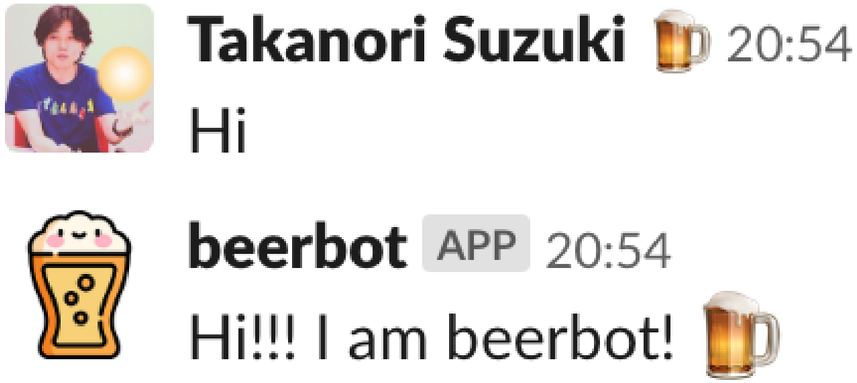
```
from slackbot.bot import listen_to

@listen_to('Hi')
def hello(message):
    message.send('Hi!!! I am beerbot! :beer:')
```

File structure



Run slackbot

- `(env) $ python run.py`



Extend slackbot

decorator

- `listen_to`: message sent on a channel
- `respond_to`: message sent to the bot

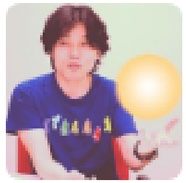
```
from slackbot.bot import listen_to, respond_to

@listen_to('Hi')
def hello(message):
    message.send('Hi!!! I am beerbot! :beer:')

@respond_to('cheers')  # mention
def ping(message):
    message.send('Cheers! :beers:')
```

Takanori Suzuki 14:40

Hi

beerbot APP 14:40

Hi!!! I am beerbot! 🍺



Takanori Suzuki 14:40

cheers

@beerbot cheers!

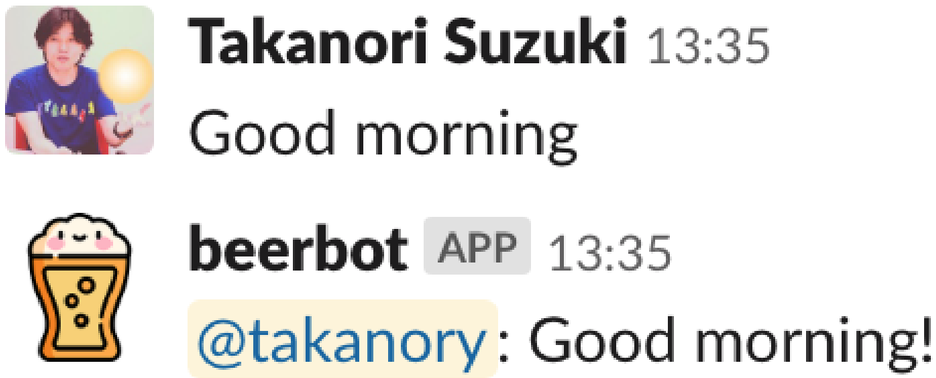
beerbot APP 14:40

Cheers! 🍻

mention

- `message.reply()`

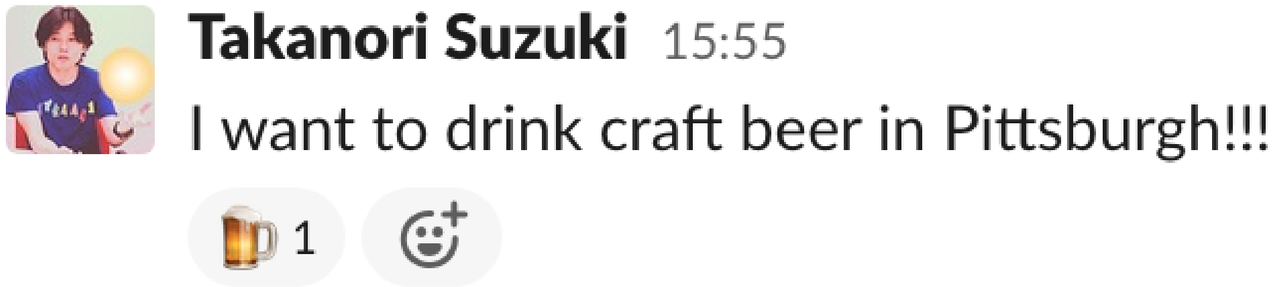
```
@listen_to('morning')
def morning(message):
    message.reply('Good morning!')  # reply to me
```



emoji reaction

- `message.react()`

```
@listen_to('beer')
def hungry(message):
    message.react('beer')  # react beer emoji
```

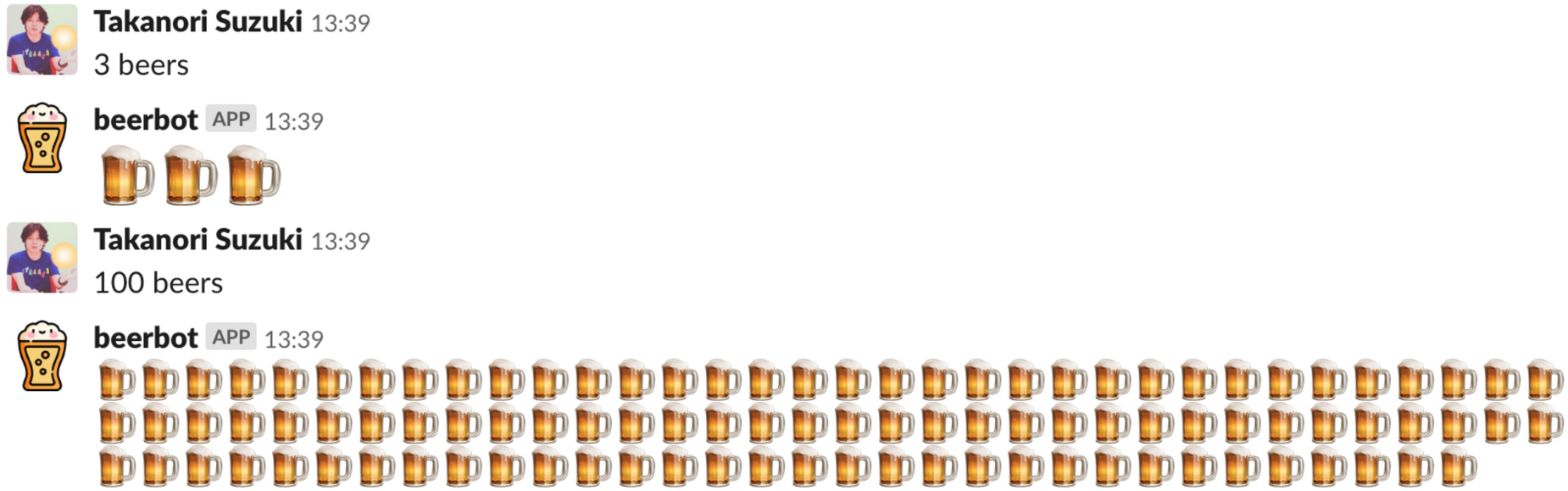


Extract parameters on message

- Use regular expressions

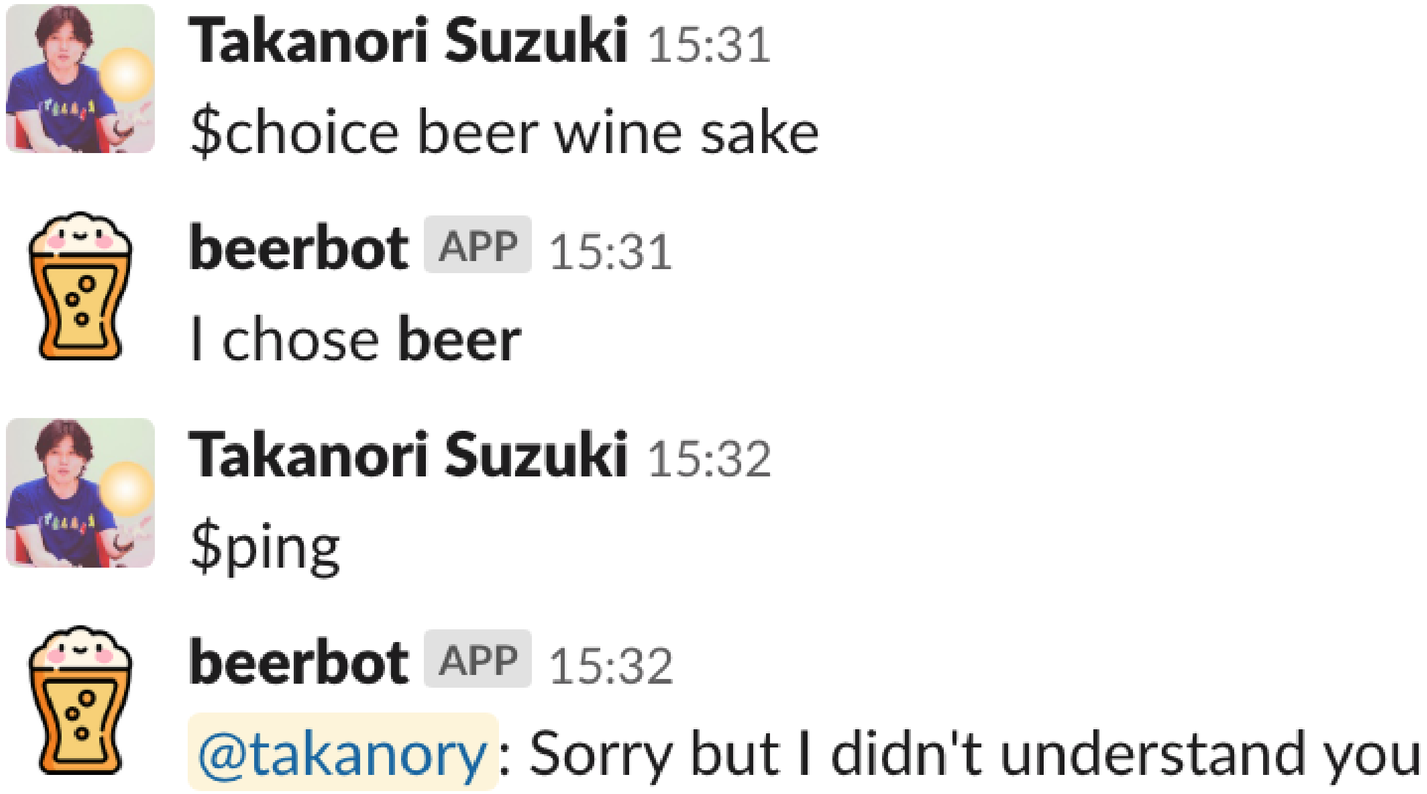
```
@respond_to('choice (.*)')  # choice pizza beer sushi
def choice(message, words):  # -> words='pizza beer sushi'
    word = random.choice(words.split())
    message.send('I chose *{}*'.format(word))
```

```python
@listen_to('(\d+)\s*beers')  # 3 beers, 100beers
def bees(message, num):  # num='3' or '100'
    beers = ':beer:' * int(num)
    if beers:
        message.send(beers)
```



slackbot_settings.py

```
ALIASES = '$'  # Prefix instead of mention (@mybot ping -> $ping)
ERRORS_TO = 'mybot-error'  # Error reporting channel
DEFAULT_REPLY = "Sorry but I didn't understand you"
PLUGIN = ['mybot.plugins', 'other.plugins',]  # Pluing packages
```



Attachments support

```
import json

@respond_to('follow me')
def followme(message):
    attachments = [{
        'author_name': 'Takanori Suzuki',
        'text': 'Follow me! <https://twitter.com/takanory|@takanory>',
        'color': '#59afe1'
    }]
    message.send_webapi('', json.dumps(attachments))
```

Takanori Suzuki 15:34

$follow me

beerbot APP 15:34

> **Takanori Suzuki**
>
> Follow me! @takanory

Summary of Slackbot

- We can COMMUNICATE with Slackbot
- Slackbot can handle PARAMETERS in messages
- Slackbot can send messages in VARIOUS formats

Case studies

Calculator function using SymPy

Calculator function using SymPy

- Motivation
  - I feel heavy to call a calculator app on my smartphone
  - It seems useful if Slack as a calculator

about SymPy

- SymPy: Python library for symbolic mathematics
  - www.sympy.org
- `$ pip install sympy`

• calc.py

```
from slackbot.bot import listen_to
from sympy import sympify, SympifyError

@listen_to(r'^([-+*/^%!().\d\s]+)$')  # Formula like pattern
def calc(message, formula):
    try:
        result = sympify(formula)  # Simplifies the formula
        if result.is_Integer:
            answer = int(result)  # Convert to interger value
        else:
            answer = float(result)  # Convert to float value
        message.send(f'{answer:,}')
    except SympifyError:
        pass
```

Takanori Suzuki 15:45

1 + 1

beerbot APP 15:45

2

Takanori Suzuki 15:45

9500 / 3

beerbot APP 15:45

3,166.6666666666665

Takanori Suzuki 15:45

10^2 + 11^2 + 12^2

beerbot APP 15:45

365

Takanori Suzuki 15:45

10!

beerbot APP 15:45

3,628,800

Plusplus function using Peewee ORM

Plusplus function using Peewee ORM

- Motivation
  - In PyCon JP, I want to make a culture that appreciates each other staff 👍

about Peewee

- Simple and small ORM.
  - a small, expressive ORM
  - python 2.7+ and 3.4+ (developed with 3.6)
  - supports sqlite, mysql and postgresql
- `docs.peewee-orm.com`
- `$ pip install peewee`

plusplus_model.py

```
from pathlib import Path
from peewee import SqliteDatabase, Model, CharField, IntegerField

dbpath = Path(__file__).parent / 'plusplus.db'  # db file
db = SqliteDatabase(dbpath)

class Plusplus(Model):
    name = CharField(primary_key=True)  # fields
    counter = IntegerField(default=0)

    class Meta:
        database = db

db.connect()
db.create_tables([Plusplus], safe=True)
```

plusplus.py

```
from slackbot.bot import listen_to

from .plusplus_model import Plusplus

@listen_to(r'^(\w+)\+\+')
def plusplus(message, name):
    target = name.lower()
    # Get or create object
    plus, created = Plusplus.get_or_create(
        name=target, defaults={'counter': 0})
    plus.counter += 1
    plus.save()
    message.send(f'Thank you {name}! (count: {plus.counter})')
```

Takanori Suzuki 15:56

staff++

beerbot APP 15:56

Thank you staff! (count: 1)

Takanori Suzuki 15:56

Staff++

beerbot APP 15:56

Thank you Staff! (count: 2)

Takanori Suzuki 15:56

beer++

beerbot APP 15:56

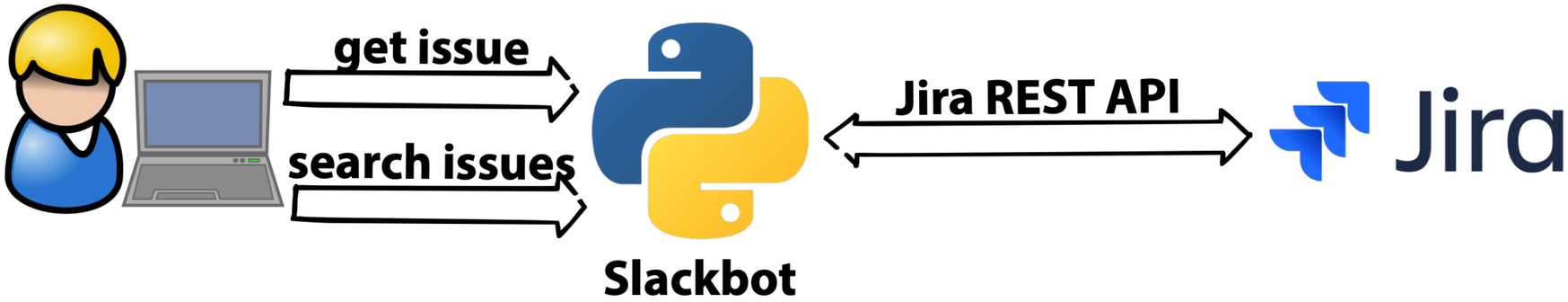
Thank you beer! (count: 1)

Display JIRA issue and Search issues

Display JIRA issue and Search issues

- Motivation
  - JIRA is very useful
  - JIRA Web is Very heavy
  - I want to check issue details without JIRA Web

System Overview



about Python JIRA

- Python library to work with JIRA APIs
- `jira.readthedocs.io`
- `$ pip install jira`

Authentication

```
from jira import JIRA

URL = 'https://jira.atlassian.com/'
jira = JIRA(URL, basic_auth=('user', 'pass'))
```

- see: 2.1.2. Authentication

Get Issue object

```
@listen_to(r'(ISSHA-[\d]+)')  # Issue id pattern
def jira_issue(message, issue_id):
    issue = jira.issue(issue_id)
    summary = issue.fields.summary
    status = issue.fields.status.name
    assignee = issue.fields.assignee.name
    issue_url = issue.permalink()
    attachments = [{
        'pretext': f'<{issue_url}|{issue_id}> {summary}',
        'fields': [{'title': 'Assignee', 'value': assignee},
                   {'title': 'Status', 'value': status}],
    }]
    message.send_webapi('', json.dumps(attachments))
```

- see: 2.1.3 Issues

Takanori Suzuki 🍺 11:06

ISSHA-1484

mybot APP 11:06

ISSHA-1484 bot: amesh command

> **Assignee**
>
> takanory
>
> **Status**
>
> オープン

Search issues

```
@respond_to('jira (.*)')
def jira_search(message, keywords):
    # make JQL query string
    jql = f'project=ISSHA and text ~ "{keywords}" order by created desc'
    text = ''
    # get 5 recent issues
    for issue in jira.search_issues(jql, maxResults=5):
        id = issue.key
        url = issue.permalink()
        summary = issue.fields.summary
        text += f'- <{url}|{id}> {summary}\n'
    message.send(text)
```

- see: 2.1.5 Searching
- JQL: JIRA Query Language
- see: Advanced searching - Atlassian Documentation

Takanori Suzuki 🍺 19:31

$jira pycon apac

mybot APP 19:31

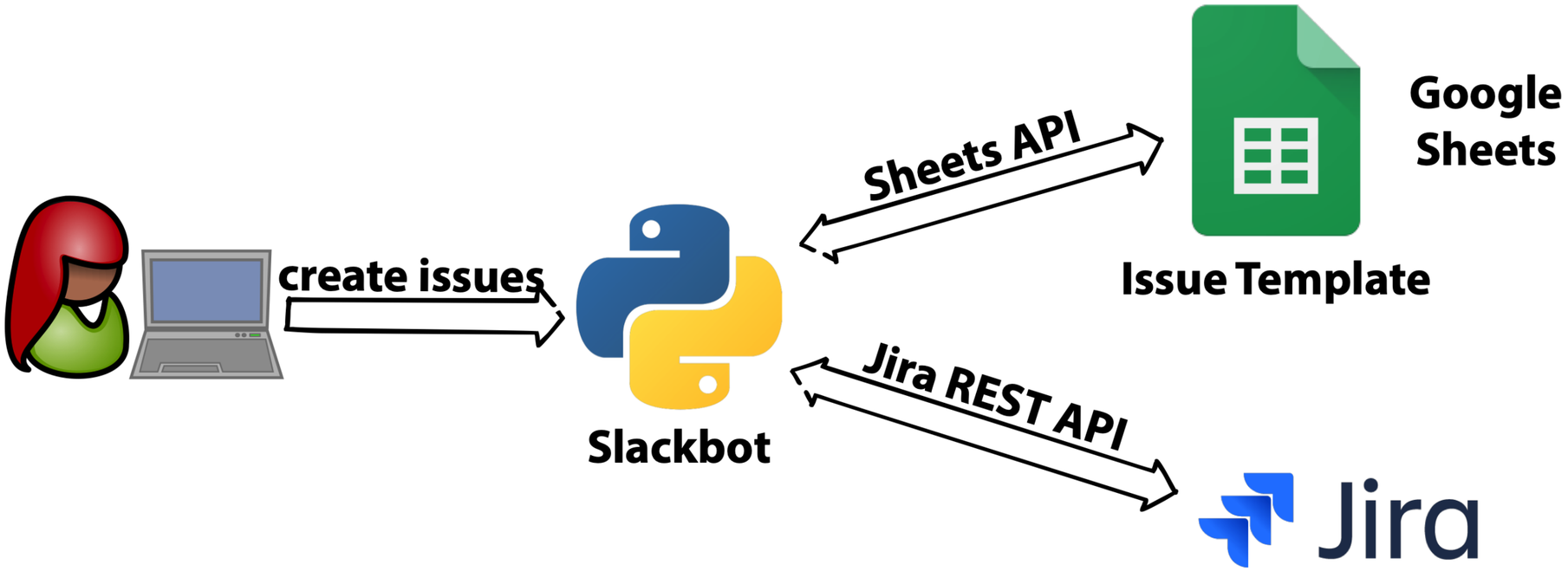
- ISSHA-1549 OSC沖縄申込み
- ISSHA-1457 運営会議#26 (2018年12月) の準備
- ISSHA-1301 PyCon JP 2019 座長募集を行う
- ISSHA-1031 PyCon APAC 2018 シンガポール参加ツアーの段取り
- ISSHA-1024 一般社団法人PyCon JPの2017年の会計について報告する

Create multiple issues from a template

Create multiple issues from a template

- Motivation
  - In pycamp event, **20+ issues** are required for each event
  - Copying issues by hand is painful
  - JIRA Web is Very Heavy(again)

System Overview



Google Authorization is VERY Complex(1/2)

- create Google Cloud Platform project
  - enable API(in this case: Google Sheets API)
  - download `credentials.json`
- Install Google Client Library
  - `pip install google-api-python-client google-auth-oauthlib`

Google Authorization is VERY Complex(2/2)

- download `quickstart.py` on GitHub
- run **`quickstart.py`**
  - select your Google account in Web browser
  - Click the Accept button
  - get **`token.pickle`** file(finish!!)

```
(env) $ python quickstart.py
Please visit this URL to authorize this application: https://accounts.goc
Name, Major:
Alexandra, English
:
```

- see: Python Quickstart | Sheets API | Google Developers

Get Spreadsheet Data

```
from googleapiclient.discovery import build
SHEET_ID = '1LEtpNewhAFSXXXXXXXXXXXXX'

creds = None
if os.path.exists('token.pickle'):
    with open('token.pickle', 'rb') as token:
        creds = pickle.load(token)
# build service
service = build('sheets', 'v4', credentials=creds)
# get data from Spreadsheet
result = service.spreadsheets().values().get(
    spreadsheetId=SHEET_ID, range='sheet_name!A:G').execute()
for row in result.get('value', []):
    print(row[0], row[1])  # Cell A and B
```

- see: Method: spreadsheets.values.get

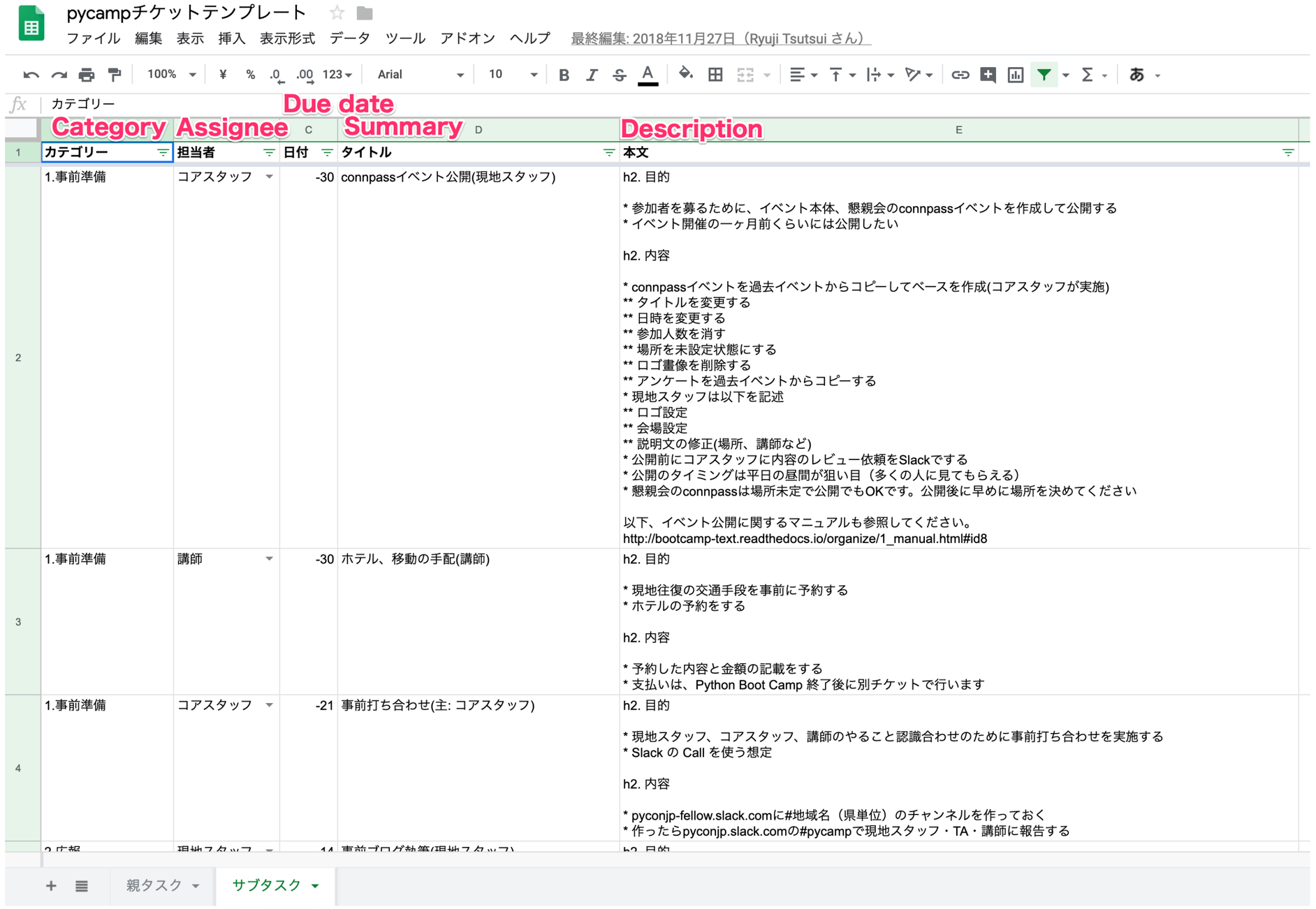
Create JIRA Issue

```
duedate = datetime.date.today + datetime.timedelta(days + 14)
issue_dict = {
    'project': {'key': PROJECT},
    'components': [{'name': COMPONENT}],
    'summary': SUMMARY_TEXT,
    'description': LONG_DESCRIPTION,
    'assignee': {'name': NAME_OF_ASSIGNEE},
    'reporter': {'name': NAME_OF_REPORTER},
    'duedate': f'{duedate:%Y-%m-%d}'
}
issue = jira.create_issue(fields=issue_dict)  # create issue
```

- see: 2.1.3 Issues

Sample of template command

- `$pycamp create`: Create issues for pycamp event


pycampチケットテンプレート
ファイル 編集 表示 挿入 表示形式 データ ツール アドオン ヘルプ 最終編集: 2018年11月27日（Ryuji Tsutsui さん）
Category
Assignee
Due date
Summary
Description
カテゴリー
担当者
日付
タイトル
本文
1.事前準備 コアスタッフ -30 connpassイベント公開(現地スタッフ)
h2. 目的
* 参加者を募るために、イベント本体、懇親会のconnpassイベントを作成して公開する
* イベント開催の一ヶ月前くらいには公開したい
h2. 内容
* connpassイベントを過去イベントからコピーしてベースを作成(コアスタッフが実施)
** タイトルを変更する
** 日時を変更する
** 参加人数を消す
** 場所を未設定状態にする
** ロゴ畫像を削除する
** アンケートを過去イベントからコピーする
* 現地スタッフは以下を記述
** ロゴ設定
** 会場設定
** 説明文の修正(場所、講師など)
* 公開前にコアスタッフに内容のレビュー依頼をSlackでする
* 公開のタイミングは平日の昼間が狙い目（多くの人に見てもらえる）
* 懇親会のconnpassは場所未定で公開でもOKです。公開後に早めに場所を決めてください
以下、イベント公開に関するマニュアルも参照してください。
http://bootcamp-text.readthedocs.io/organize/1_manual.html#id8
1.事前準備 講師 -30 ホテル、移動の手配(講師)
h2. 目的
* 現地往復の交通手段を事前に予約する
* ホテルの予約をする
h2. 内容
* 予約した内容と金額の記載をする
* 支払いは、Python Boot Camp 終了後に別チケットで行います
1.事前準備 コアスタッフ -21 事前打ち合わせ(主: コアスタッフ)
h2. 目的
* 現地スタッフ、コアスタッフ、講師のやること認識合わせのために事前打ち合わせを実施する
* Slack の Call を使う想定
h2. 内容
* pyconjp-fellow.slack.comに#地域名（県単位）のチャンネルを作っておく
* 作ったらpyconjp.slack.comの#pycampで現地スタッフ・TA・講師に報告する
親タスク
サブタスク

ISSHA-1521

Python Boot Camp in 和歌山を開催

編集 コメント 割り当て 処理中止 課題の解決 課題のクローズ 管理

タイプ:	タスク	ステータス:	進行中 (ワークフローを表示)
優先度:	重度	解決状況:	未解決
コンポーネント:	Python Boot Camp		
ラベル:	なし		

説明

目的

- Python Boot Camp in 和歌山を開催するのに必要なタスクとか情報をまとめる親タスク

内容

- 日時: 2019-04-20(Sat)
- 会場: T-LABO
- 現地スタッフ: 落合大輔
- 講師: Masataka Arai
- TA: 堀口日向, Shimasan
- イベントconnpass: https://pyconjp.connpass.com/event/120116/
- 懇親会connpass: https://pyconjp.connpass.com/event/120117/

JIRAの使い方については以下マニュアルを参照してください。
http://bootcamp-text.readthedocs.io/organize/1_manual.html#id28

1.事前準備

- ISSHA-1522 CLOSED connpassイベント公開(現地スタッフ)
- ISSHA-1523 OPEN ホテル、移動の手配(講師)
- ISSHA-1524 IN PROGRESS 事前打ち合わせ(主: コアスタッフ)

2.広報

- ISSHA-1525 CLOSED 事前ブログ執筆(現地スタッフ)
- ISSHA-1526 IN PROGRESS メディアスポンサー経由での告知(コアスタッフ)
- ISSHA-1527 CLOSED Twitter定期通知(コアスタッフ)
- ISSHA-1528 IN PROGRESS 現地メディア経由での告知(現地スタッフ)

3.イベント直前、当日

- ISSHA-1529 OPEN 参加者への事前連絡(現地スタッフ)
- ISSHA-1530 OPEN お茶、お菓子購入(現地スタッフ)
- ISSHA-1531 OPEN 案内スライド作成(現地スタッフ)
- ISSHA-1532 OPEN 座席表作成、印刷(現地スタッフ)
- ISSHA-1533 IN PROGRESS ランチミーティング(主: 現地スタッフ)
- ISSHA-1534 OPEN 参加者アンケート実施(現地スタッフ)

4.事後処理

- ISSHA-1535 OPEN 精算処理(現地スタッフ)
- ISSHA-1536 OPEN 精算処理(講師)

Source code of pycamp command

- see: github.com/pyconjp/pyconjpbot/blob/master/py

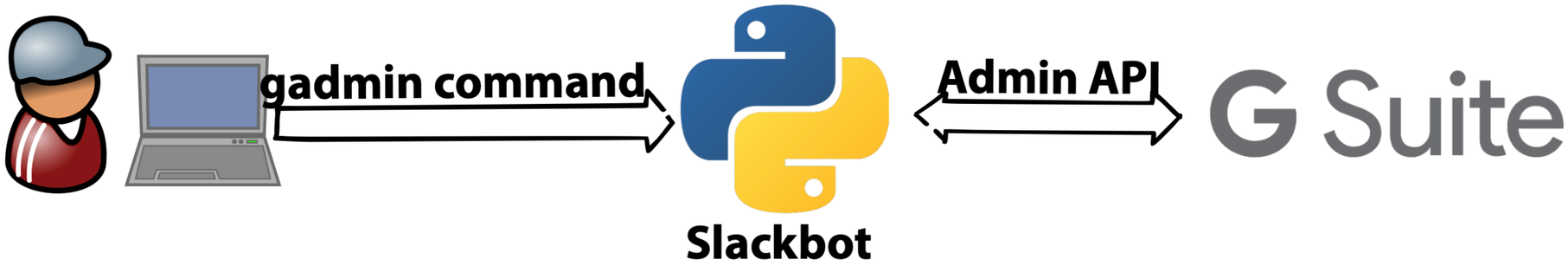
I never have to copy issues again

Account management of G Suite

Account management of G Suite

- Motivation
  - PyCon JP use **`pycon.jp`** domain with G Suite
  - I only use Google Admin web occasionally
  - I forgot to use admin screen

System Overview



Update Google Authorization

- update Google Cloud Platform project
  - add G Suite Admin API
  - re-download `credentials.json`
- re-run `quickstart.py`
  - get new `token.pickle`

```
(env) $ python quickstart.py
Please visit this URL to authorize this application: https://accounts.goc
Name, Major:
Alexandra, English
:
```

Get user list

```
# build service
DOMAIN = 'pycon.jp'
service = build('admin', 'directory_v1', credentials=creds)

# get user list
users_list = service.users().list(orderBy='email', domain=DOMAIN).execute
for user in users_list.get('users', []):
    email = user['primaryEmail']
    fullname = user['name']['fullName']
    print(f'{email} {fullname}')
```

- see: Users: list | Directory API

Insert user

```
body = {
    'primaryEmail': EMAIL_ADDRESS,
    'password': PASSWORD,
    'name': {
        'givenName': FIRST_NAME,
        'familyName': LAST_NAME,
    },
}
try:
    service.users().insert(body=body).execute()
except:
    pass  # fail
```

- see: Users: insert | Directory API

Suspend, Resume, Delete user

```
suspend = {'suspended': True}
service.users().update(userKey=EMAIL, body=suspend).execute()

resume = {'suspended': False}
service.users().update(userKey=EMAIL, body=resume).execute()

service.users().delete(userKey=email).execute()
```

- see: Users: update | Directory API
- see: Users: delete | Directory API

Takanori Suzuki 11:25
$gadmin help

pyconjpbot APP 11:25
ユーザー管理

- `$gadmin user list`: ユーザーの一覧を返す
- `$gadmin user insert (ユーザー) (名前) (名字)`: ユーザーを追加する
- `$gadmin user delete (ユーザー)`: ユーザーを削除する(停止中のみ削除可)
- `$gadmin user reset (ユーザー)`: ユーザーのパスワードをリセットする
- `$gadmin user suspend (ユーザー)`: ユーザーを停止する(停止中にする)
- `$gadmin user resume (ユーザー)`: ユーザーを再開する(アクティブにする)

メールのエイリアス管理

- `$gadmin alias list (ユーザ)`: ユーザーのエイリアスの一覧を返す
- `$gadmin alias insert (ユーザ) (エイリアス)`: ユーザーにエイリアスを追加する
- `$gadmin alias delete (ユーザ) (エイリアス)`: ユーザーからエイリアスを削除する

グループ管理

- `$gadmin group list`: グループの一覧を返す
- `$gadmin group insert (グループ) (グループ名)`: 指定したグループを追加する
- `$gadmin group delete (グループ)`: 指定したグループを削除する

グループのメンバー管理

- `$gadmin member list (グループ)`: 指定したグループのメンバー一覧を返す
- `$gadmin member insert (グループ) (メール1) [(メール2...)]`: 指定したグループにメンバーを追加する
- `$gadmin member delete (グループ) (メール1) [(メール2...)]`: 指定したグループからメンバーを削除する

Takanori Suzuki 11:27
$gadmin user list

pyconjpbot APP 11:27
pycon.jpドメインのユーザー一覧(39ユーザー)
- 20[redacted]con.jp PyCon JP 2015事務局
- 20[redacted]con.jp PyCon JP 2016
- 20[redacted]con.jp PyCon JP 2017
- ac[redacted]ssociation@pycon.jp 一般社団法人会計
- ac[redacted]event@pycon.jp イベント会計
- ac[redacted]ycon.jp user admin
- an[redacted]@pycon.jp Ai[redacted]
- ar[redacted]on.jp Masatak[redacted]
- co[redacted]pycon.jp JP P[redacted]
- ha[redacted]o@pycon.jp Y[redacted]SHIMOTO
- ia[redacted]s@pycon.jp Ia[redacted]
- iq[redacted]con.jp Iqbal A[redacted]
- ki[redacted]ycon.jp Mak[redacted]a
- ki[redacted]ycon.jp Fumik[redacted]a
- ko[redacted]@pycon.jp To[redacted]obayashi
- ko[redacted]pycon.jp Kao[redacted]oto
- m[redacted]ent@pycon.jp [redacted]ーム
- m[redacted]noda@pycon[redacted] Manami
- m[redacted]@pycon.jp Ry[redacted]u
- m[redacted]ycon.jp メディ[redacted]
- pr[redacted]@pycon.jp プロ[redacted]ーム
- py[redacted]pycon.jp Boo[redacted]ython
- py[redacted]pycon.jp pyc[redacted]
- ry[redacted]kamiya@pycc[redacted]chiro Kamiya
- sh[redacted]wa@pycon.jp[redacted] Shimizukawa
- sp[redacted]pycon.jp スポ[redacted]当
- su[redacted]@pycon.jp Suy[redacted]
- sy[redacted]@pycon.jp Ac[redacted]ka
- sy[redacted]n@pycon.jp V[redacted]管理用2016以降用
- sy[redacted]@pycon.jp Shu[redacted]shida
- ta[redacted]@pycon.jp Tak[redacted]uki
- te[redacted]@pycon.jp Yuy[redacted]
- te[redacted]ycon.jp Mana[redacted]
- ts[redacted]ycon.jp Mamik[redacted]

Takanori Suzuki 11:30
$gadmin group list

pyconjpbot APP 11:30
pycon.jpドメインのグループ一覧(21グループ)
- 20[redacted]@pycon.jp 2015グループ(2ユーザー)
- 20[redacted]@pycon.jp 2016グループ(9ユーザー)
- 20[redacted]@pycon.jp 2017グループ(6ユーザー)
- 20[redacted]day-staff@pycon.jp 2018当日スタッフDocs権限用(16ユーザー)
- 20[redacted]staff@pycon.jp 2019コアスタッフDocs権限用(11ユーザー)
- acc[redacted]min@pycon.jp 一般社団法人会計責任者グループ(2ユーザー)
- acc[redacted]ociation-group@pycon.jp 一般社団法人会計用グループアドレス(5ユーザー)
- acc[redacted]ent-group@pycon.jp イベント会計用グループアドレス(3ユーザー)
- app[redacted]n.jp AppleDeveloperProgram管理(2ユーザー)
- boa[redacted]n.jp 法人理事会(7ユーザー)
- cor[redacted]up@pycon.jp contactグループ(4ユーザー)
- des[redacted]on.jp デザイン(5ユーザー)
- hir[redacted]pycon.jp PyCon mini Hiroshima(1ユーザー)
- ma[redacted]t-group@pycon.jp 事務局グループ(8ユーザー)
- me[redacted]@pycon.jp メディアグループ(6ユーザー)
- pro[redacted]oup@pycon.jp プログラムグループ(6ユーザー)
- pycamp-[redacted]@pycon.jp Python Boot Camp(4ユーザー)
- pyco[redacted]@pycon.jp pyconjp@pycon.jpの転送用グループ(3ユーザー)
- spon[redacted]up@pycon.jp スポンサーグループ(4ユーザー)
- sym[redacted]roup@pycon.jp 2016(以降)のWebsiteのアラート送付先(4ユーザー)
- ven[redacted]@pycon.jp 会場グループ(15ユーザー)

Takanori Suzuki 11:30
$gadmin member list pycamp-[redacted]

pyconjpbot APP 11:30
pycamp-[redacted]@pycon.jp グループのメンバー(4ユーザー)
- ko[redacted]@pycon.jp
- o6z[redacted]@pyconjp.slack.com
- ry[redacted]@gmail.com
- tak[redacted]@pycon.jp

I can completely forget Google Admin 🎉 🎉

Source code of gadmin command

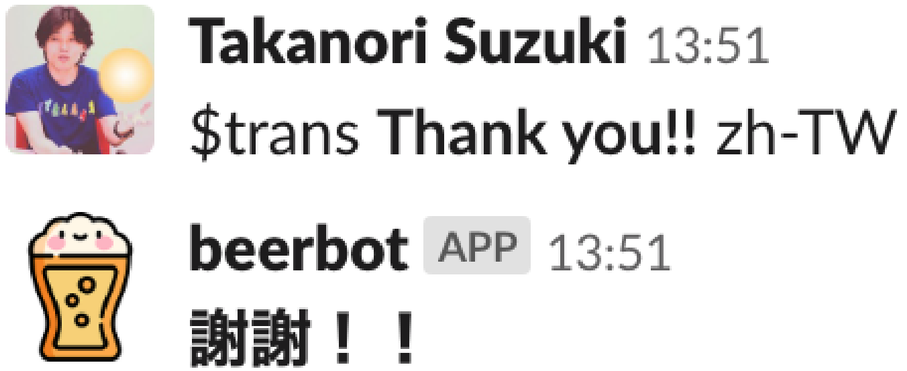
- see:
  github.com/pyconjp/pyconjpbot/blob/master/py

Summary

- Incoming Webhooks
- `slackbot`
- `slackbot` with Libraries
- `slackbot` with APIs

Next steps

- Let's make YOUR own Slackbot
- Let's connect with libraries and APIs
- Automate your Boring Stuff with Slackbot



- Twitter: @takanory
- Slides: `github.com/takanory/slides`

$trans command

- pip install googletrans

```
from googletrans import Translator
from slackbot.bot import respond_to

@respond_to('^trans\s+(.+)\s+([\w-]+)$')
def trans(message, text, dest):
    translator = Translator()
    t = translator.translate(text, dest=dest)
    message.send(t.text)
```