COMP7940 Cloud Computing
Group project : Line bot
Milestones 3

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Function 1 : Extract latest statistic

In the Line Chatbot of my team, aparts from redis service, we would also use DATA.GOV.HK service to get the latest figures of reported cases of COVID-19 in Hong Kong. It is provided by the Department of Health, updated every night and the figures are up to 12:00 last day.

When user input text "HK Stat" or press the button "Latest Statistics" in buttons template, the bot will immediately get the data from DATA.GOV.HK and display the information about following items :
- Number of confirmed cases
- Number of probable cases
- Number of death cases
- Number of discharge cases
- Number of cases still hospitalised for investigation
- Number of ruled out cases
- Number of cases fulfilling the reporting criteria

Sample of Code:

```
# Latest COVID-19 Statistics in HK
url1="http://www.chp.gov.hk/files/misc/latest_situation_of_reported_cas
es_wuhan_eng.csv"
s=requests.get(url1).content
hk=pd.read_csv(io.StringIO(s.decode('utf-8')))

hk1=hk.iloc[-1]['As of date']
hk2=hk.iloc[-1]['Number of confirmed cases']
hk3=hk.iloc[-1]['Number of probable cases']
hk4=hk.iloc[-1]['Number of death cases']
hk5=hk.iloc[-1]['Number of discharge cases']
hk6=hk.iloc[-1]['Number of cases still hospitalised for investigation']
hk7=hk.iloc[-1]['Number of ruled out cases']
hk8=hk.iloc[-1]['Number of cases fulfilling the reporting criteria']
hk9=hk.iloc[-1]['As of time']
```

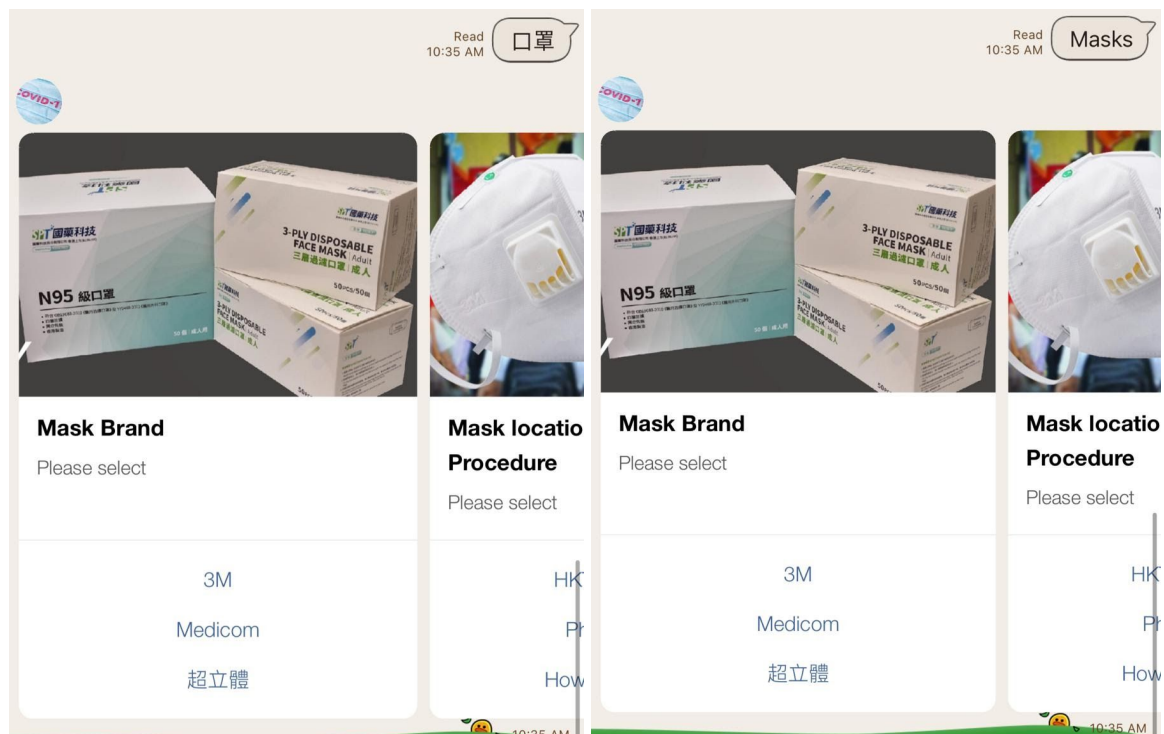**Example:**

Function 2 : Google Translation service

```
from googletrans import Translator
translator = Translator()
```

There are simple translations after users input. For example, users could input text "口罩" or "Masks" when they interested to search these information. If the text is "口罩", system would be convert the command as "Masks" automatically and run the related code with "Masks:. This simple translation also could be used in other functions of the Line Chatbot.

Sample of Code :

```
# Carousel Template (Mask Supply)
    if translator.translate(event.message.text).text == "Masks":
        try:
```

Example:

Besides, when a user input words in any other language, it would automatically translate to English.

Sample of Code :

```
X = redis1.incr((event.message.text))
        Y = translator.translate(event.message.text)
        line_bot_api.reply_message(
            event.reply_token,
            TextSendMessage(text=f'You said {event.message.text}
Translation: {Y.text} for {X} time.')
        )
```

Example: