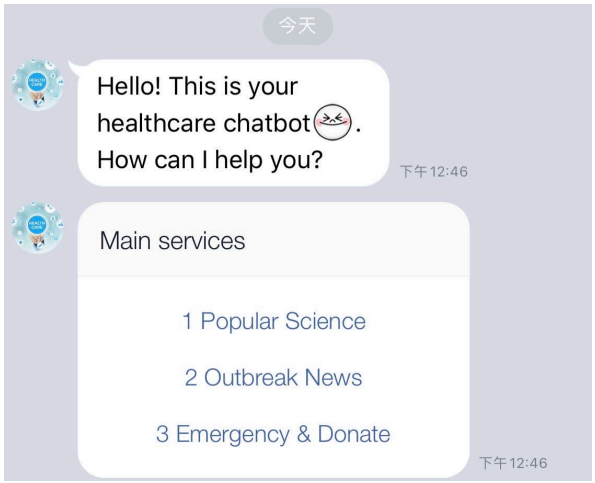
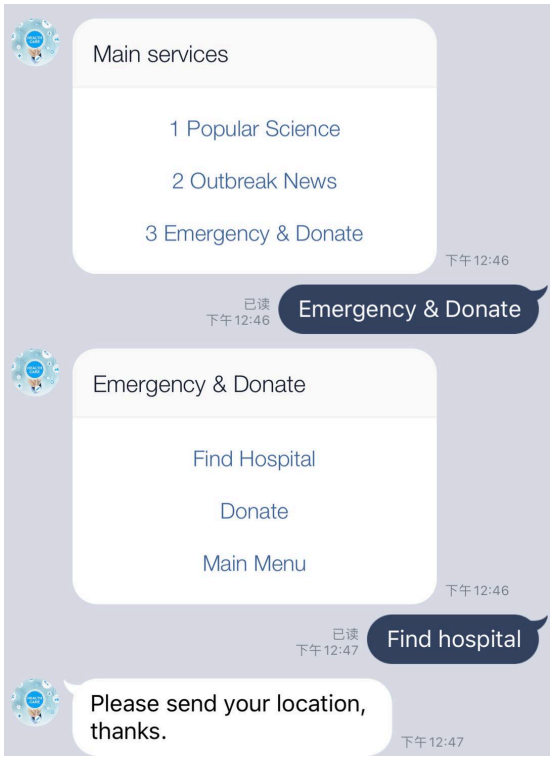
External service about “Find Hospital”

This process is to teach users how to use Healthcare Chatbot to find the the nearest hospital around you. The detailed functions are shown below：

1.When you scan QR code and add the Healthcare Chatbot, the robot will greet you and ask how to help you. And provide you with main services navigation bar in the interface



2.Select the third item “Emergency & Donate” and it will jump to another interface, and choose the “Find Hospital”.The Chatbot will reply you and ask you to provide your location.



3.When you send your location, the Chatbot show you the nearest hospital name and specific address.

The link of operation of Healthcare Chatbot：
https://www.youtube.com/watch?v=HrNFMlGAwoo&feature=youtu.be

Sample code:

We use googlemaps and google API as a service to achieve the above function. Here are the sample code:

1. Get the API key from Heroku:

```
google_api_key = os.getenv('GOOGLE_API_KEY')
gmaps = googlemaps.Client(key=google_api_key)
```

2. Use Redis to get the user's location information, like latitude and longitude.
3. And then googlemaps to get the 'hospital' type places around the user.
4. Sort the places by distance and get the nearest one and give it back to user.

```python
def handle_LocationMessage(event):
    r.set('my_lat', event.message.latitude)  # use redis to set the user's latitude
    r.set('my_lon', event.message.longitude)  # use redis to set the user's longitude
    mylat = float(r.get('my_lat'))
    mylng = float(r.get('my_lon'))
    mylocation = '{}, {}'.format(mylat, mylng)
    # get the all places results around user's location within 10000m:
    places_results = gmaps.places_nearby(location=mylocation, type='hospital', radius=10000)
    # sort the hospital by distance:
    list = []
    for place in places_results['results']:
        name = place['name']
        lat = place['geometry']['location']['lat']
        lng = place['geometry']['location']['lng']
        address = place['vicinity']
        distance = ((lat - mylat) ** 2 + (lng - mylng) ** 2) ** 0.5
        info = distance, name, lat, lng, address
        list.append(info)
    list.sort()
    # get the nearest one:
    name_ = list[0][1]
    lat_ = list[0][2]
    lng_ = list[0][3]
    address_ = list[0][4]
    result_text = 'The nearest hospital around you is ' + name_ + '.'
    result = [TextSendMessage(text=result_text),
              LocationSendMessage(
                  title=name_, address=address_,
                  latitude=lat_, longitude=lng_)]
    line_bot_api.reply_message(event.reply_token, result)
```

Reference:

1.https://blog.csdn.net/menpizzer/article/details/92019959

2.https://pypi.org/project/googlemaps/