Application: Save My Ship (SMS)

Description:

Save My Ship (SMS) is an application which helps users in emergency situations. The application requires the distressed user to just click a distress button (a signal signifying that the user is in trouble and needs help) and rest assured, having the faith that he/she will receive some kind of help.

Functionalities:

- After the distress button is clicked, the user will be geo-located using his IP Address and the exact location in the form of latitude and longitude will be retrieved.
- The location co-ordinates will be sent in a text message to a list of emergency contacts. (family and/or friends)
- The user will also be provided a list of nearby hospitals and pharmacies.

APIs Used:

- **Ipinfo.io API**

  Used For:
  This is a RESTful IP information web service that has been used to provide geolocation of the user.

  Link of API Homepage:
  http://ipinfo.io/developers

  Input and Output Parameters:
  The request is a GET Request. The URL - *http://ipinfo.io/json* is used to force a JSON response.

  It does not require any input parameters. It automatically finds out the user's location and gives the corresponding location information. The latitude and longitude co-ordinates were used for the purpose of the application.

- **Infobip API**

  Used For:
  This is a RESTful mobile solutions web service that has been used to for sending bulk SMS to the user's contacts.

Link of API Homepage:
http://www.infobip.com/messaging/wholesale/apis/

Input and Output Parameters:
The request is a POST Request.

The request header has the following fields-
authorization- Basic bW9oaXRhamV0aHdhbmk6U21ydXRpXzEyMw==
content-type- application/json
accept- application/json

Input parameters-
to: An array of Strings (message destination numbers). The numbers must be in international format.
text: The text message to be sent.

The request is a POST Request. The URL - *https://api.infobip.com/sms/1/text/single* is used to force a JSON response. The input parameters must be specified in the request.

- **Google Places API**

Used For:
This is a RESTful web service that returns the information about a particular place using an HTTP request.

Link of API Homepage:
https://developers.google.com/places/documentation/

Input and Output Parameters:

1. **To search for a place:**

Allows the user to search for a place nearby. The user can specify the type of place he is searching for.

The request is a GET HTTP Request. The URL - *https://maps.googleapis.com/maps/api/place/nearbysearch/json?parameters* is used to force a JSON response.

Input parameters-
key (required): The application API key.

location (required): Longitude and latitude of the place. It must be specified as latitude, longitude.
radius (required): The distance (in meters) within which the results need to be displayed. If rankby=distance is specified in optional parameters, then radius must not be specified.

type (optional): Determines the type of place to be searched.

rankby (optional): If value is set as distance, then it ranks the searches in ascending order of distance from the specified place.

Output parameters-

name: Place name

Place_id: Place id. The place_id is then used as input to get the details of the place like the contact number.

2. To get details of a place:

Allows the user to get details of a particular place using its place_id.

The request is a GET HTTP Request. The URL - *https://maps.googleapis.com/maps/api/place/details/output?parameters* is used to force a JSON response.

Input parameters-
key (required): The application API key.

place_id: Id of the place obtained as a response of the query to search nearby places.

Output parameters-

formatted_address: Address of the resulting place

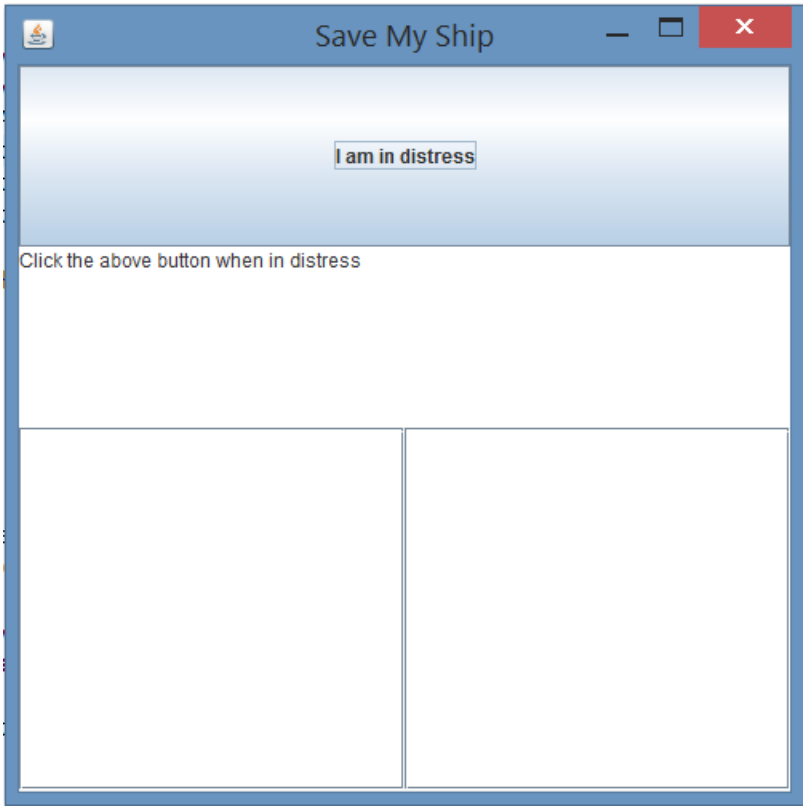
formatted_phone_number: contact number of the resulting place

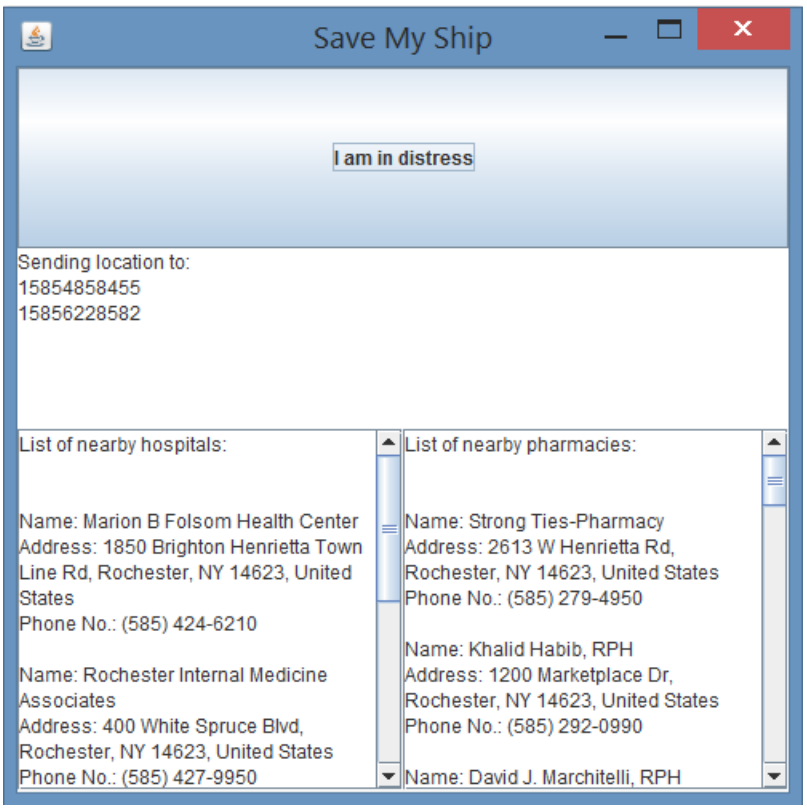
Future work:

The project can further be extended by adding the following functionalities:

- A functionality of calling 911.
- By providing the user an option of getting the directions to the nearby hospital or pharmacy.

Screenshots:




Save My Ship
I am in distress
Sending location to:
15854858455
15856228582
List of nearby hospitals:
Name: Marion B Folsom Health Center
Address: 1850 Brighton Henrietta Town Line Rd, Rochester, NY 14623, United States
Phone No.: (585) 424-6210
Name: Rochester Internal Medicine Associates
Address: 400 White Spruce Blvd, Rochester, NY 14623, United States
Phone No.: (585) 427-9950
List of nearby pharmacies:
Name: Strong Ties-Pharmacy
Address: 2613 W Henrietta Rd, Rochester, NY 14623, United States
Phone No.: (585) 279-4950
Name: Khalid Habib, RPH
Address: 1200 Marketplace Dr, Rochester, NY 14623, United States
Phone No.: (585) 292-0990
Name: David J. Marchitelli, RPH