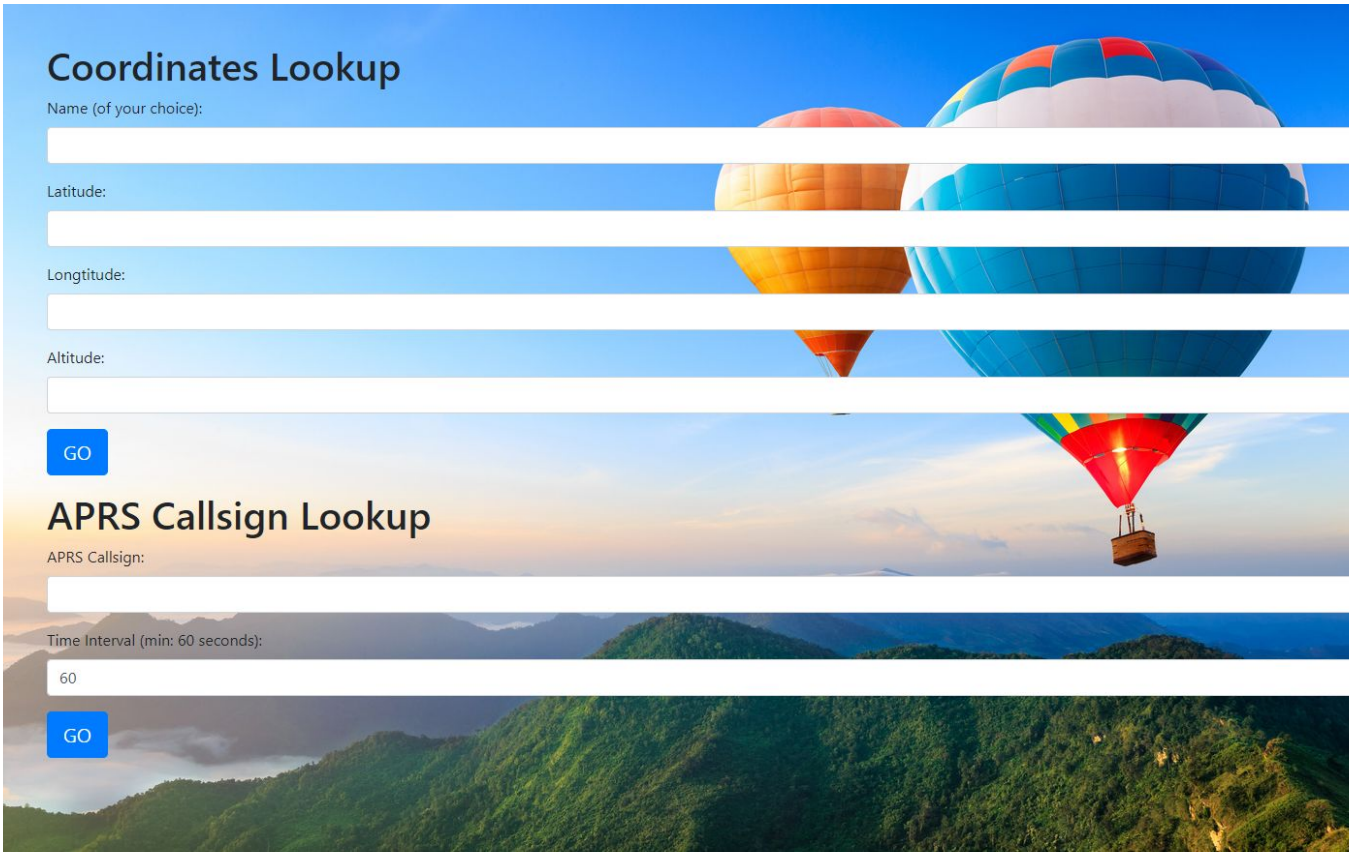
CS321 Flight Tracker User Manual

Our system will display location data on a map using a coordinate lookup or the data obtained from the APRS website. It can be accessed at: http://cs321-flight.tk:3000/.

This is our main page:



Coordinates Lookup

Name (of your choice):

Latitude:

Longtitude:

Altitude:

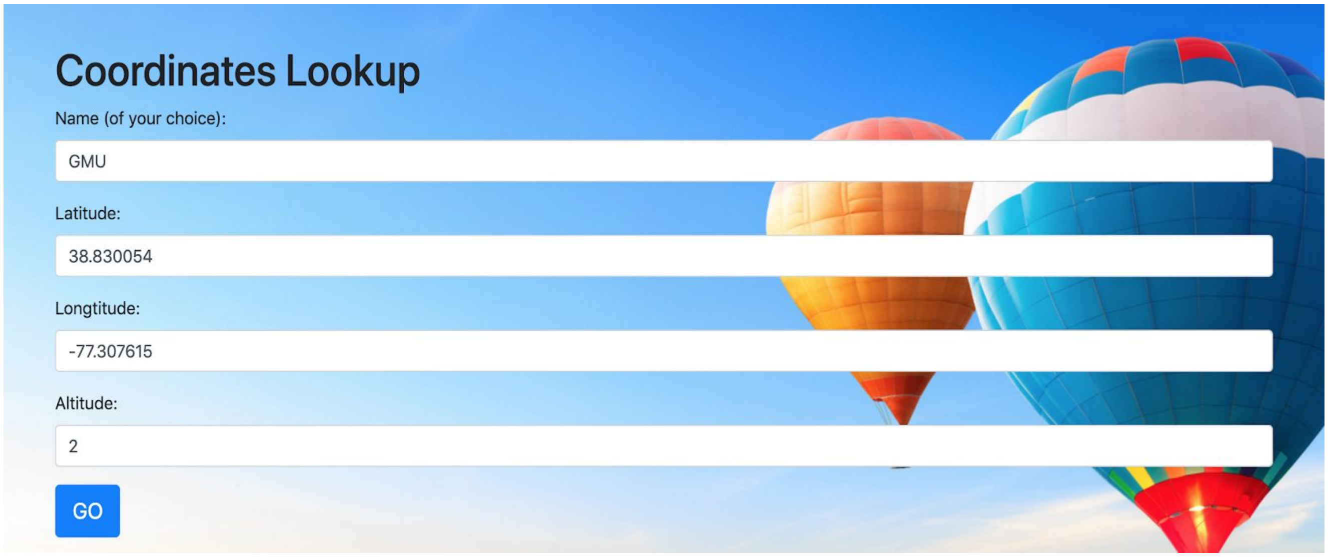
APRS Callsign Lookup

APRS Callsign:

Time Interval (min: 60 seconds): 60

The program accepts the name of the object, longitude, latitude, and altitude. It will also accept the name of an APRS callsign and retrieve the data from aprs.fi, as well as a time interval (entered in seconds). After inputting the data, click GO and it will redirect the webpage to the map. The data will be stored in a mongoDB database after each request.

For example, let’s enter the coordinates of GMU as the following, and click GO:



Coordinates Lookup

Name (of your choice):

GMU

Latitude:

38.830054

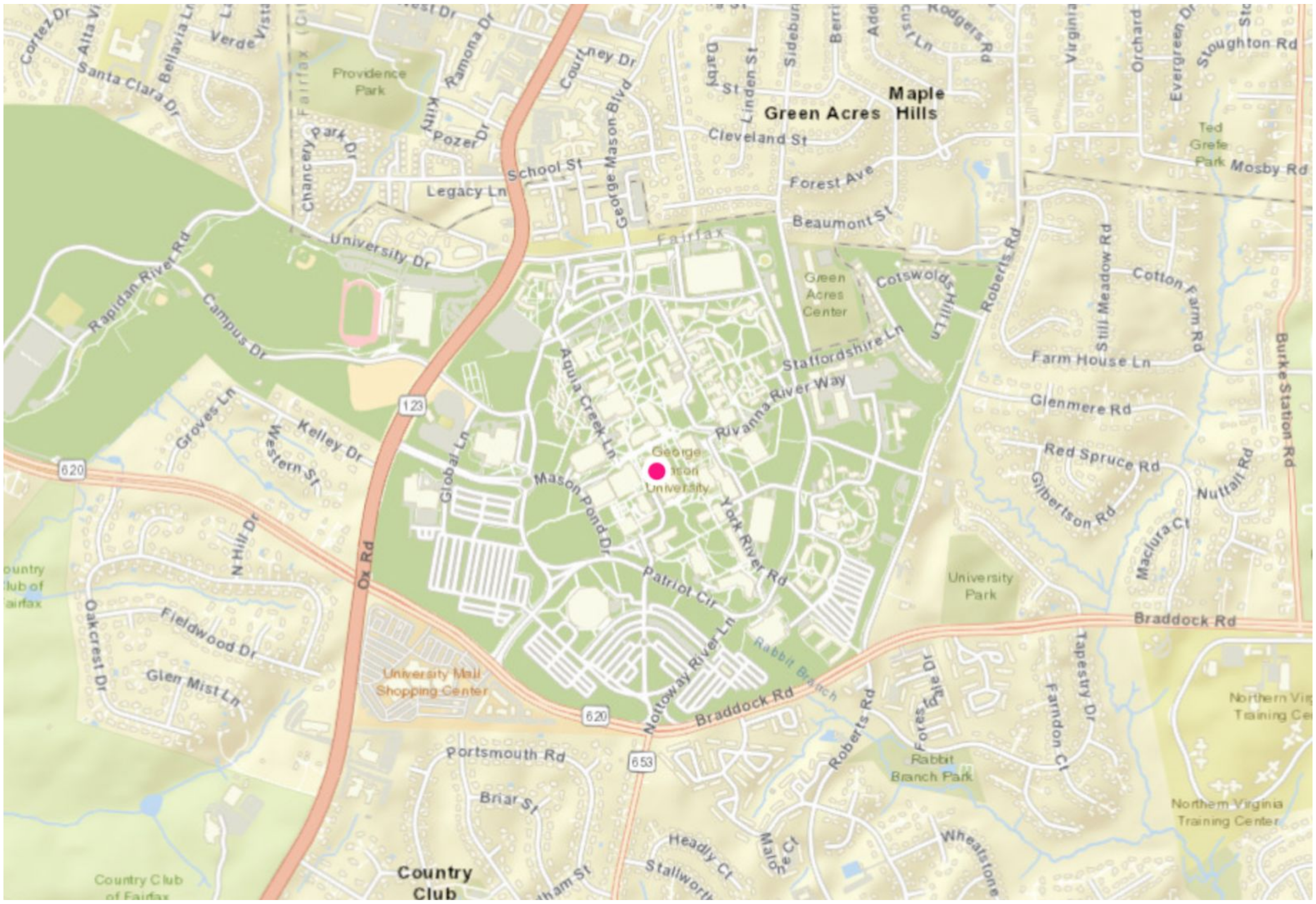
Longtitude:

-77.307615

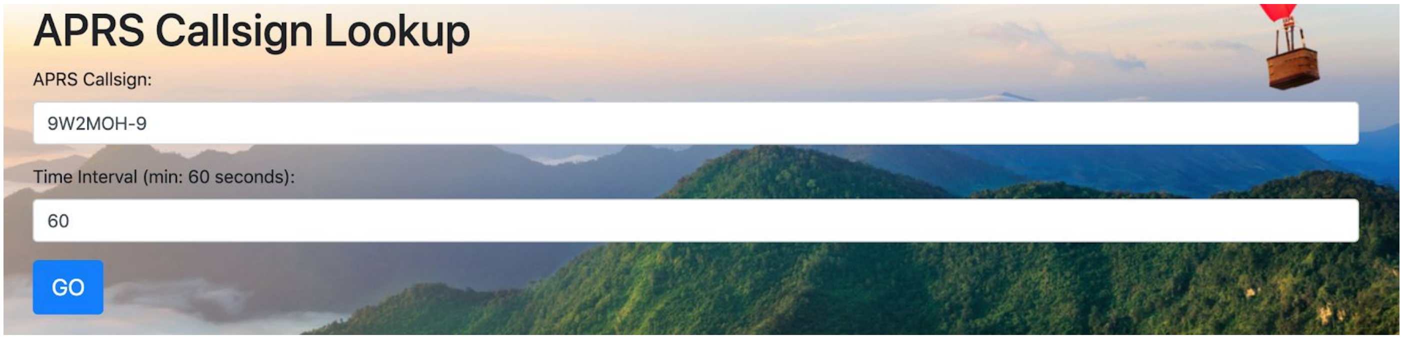
Altitude:

2

The app will take us to the map, with a symbol marked at GMU:



We can also track objects by entering the APRS callsign and time interval, let’s enter an object that is actually moving in Singapore:



APRS Callsign Lookup

APRS Callsign:

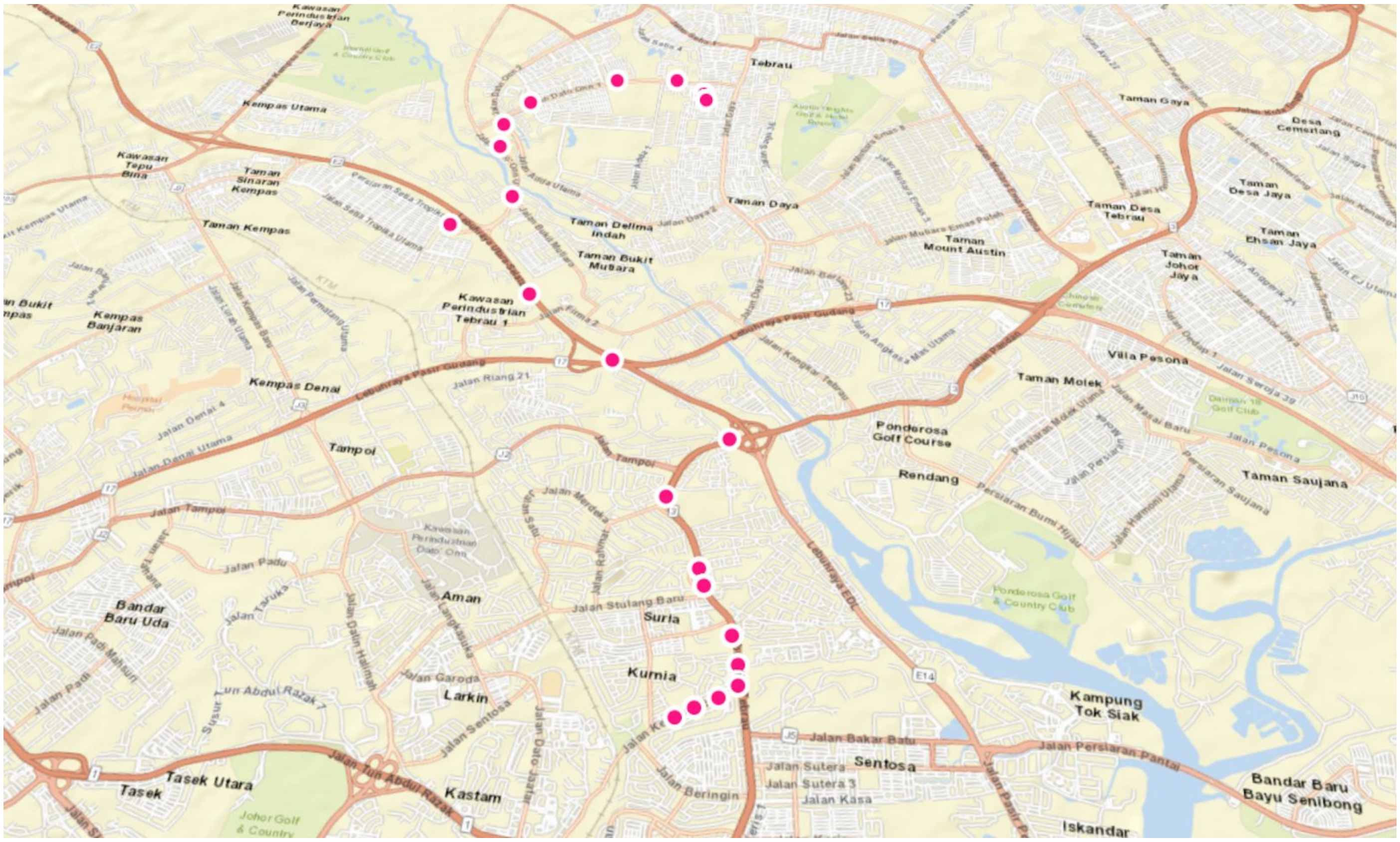
9W2MOH-9

Time Interval (min: 60 seconds):

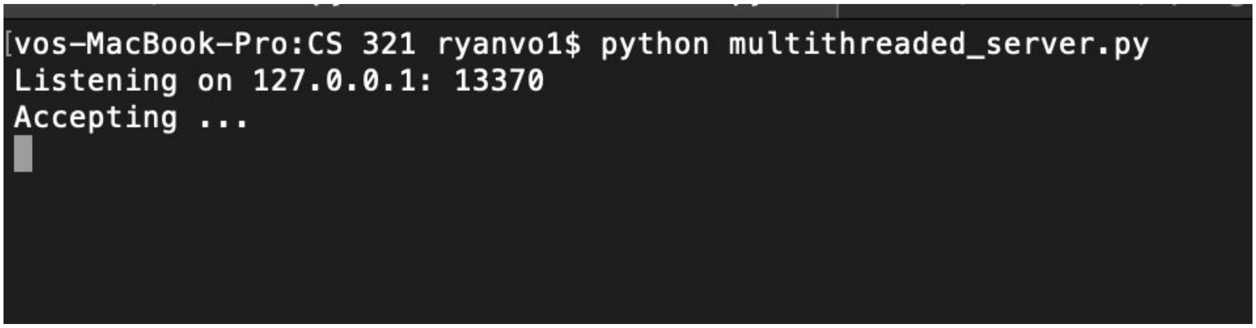
60

GO

Click GO and the map will automatically open and update every time a request is made to arps.fi, which created a path on the map like this (after few minutes):

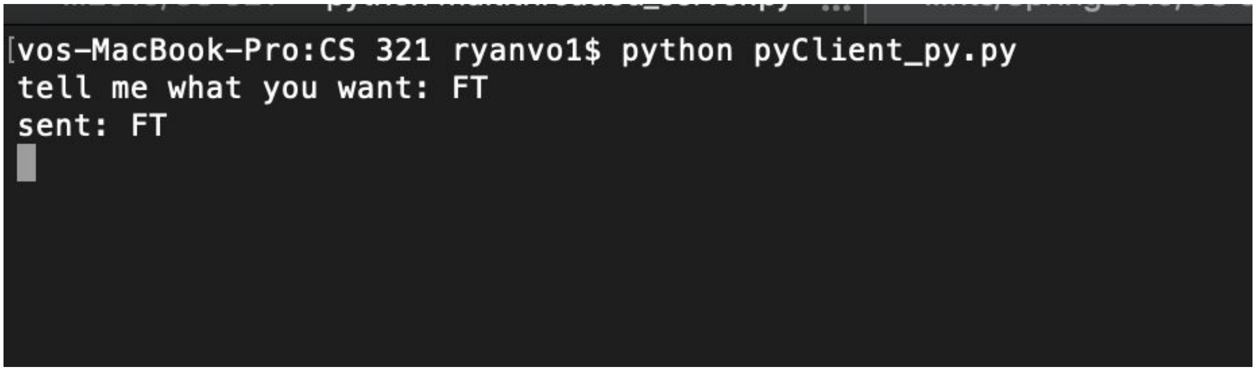


In order to receive the coordinates (longitude, latitude, altitude) primarily from Ground Command and Telemetry group, they will run this python file on the terminal:



```
[vos-MacBook-Pro:CS 321 ryanvo1$ python multithreaded_server.py
Listening on 127.0.0.1: 13370
Accepting ...
```

Then our group, Flight Tracker, will request the coordinates from them by running another python file on the terminal, and type the command “FT”, the Ground CT group will send us a string with the coordinates. After that, we can manually enter the coordinates to our app to track the balloon:



```
[vos-MacBook-Pro:CS 321 ryanvo1$ python pyClient_py.py
tell me what you want: FT
sent: FT
```

Note: both python files are on our GitHub.