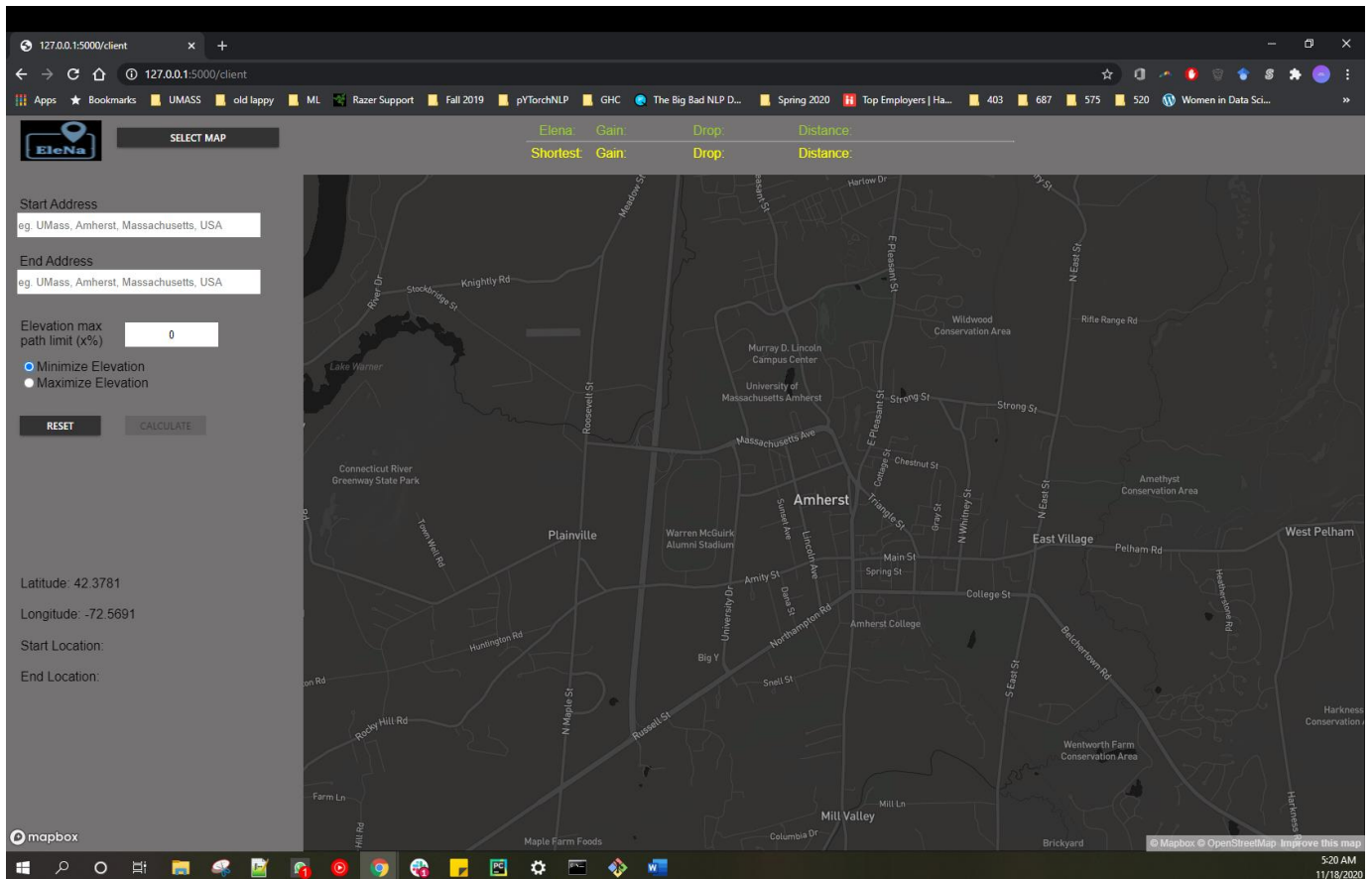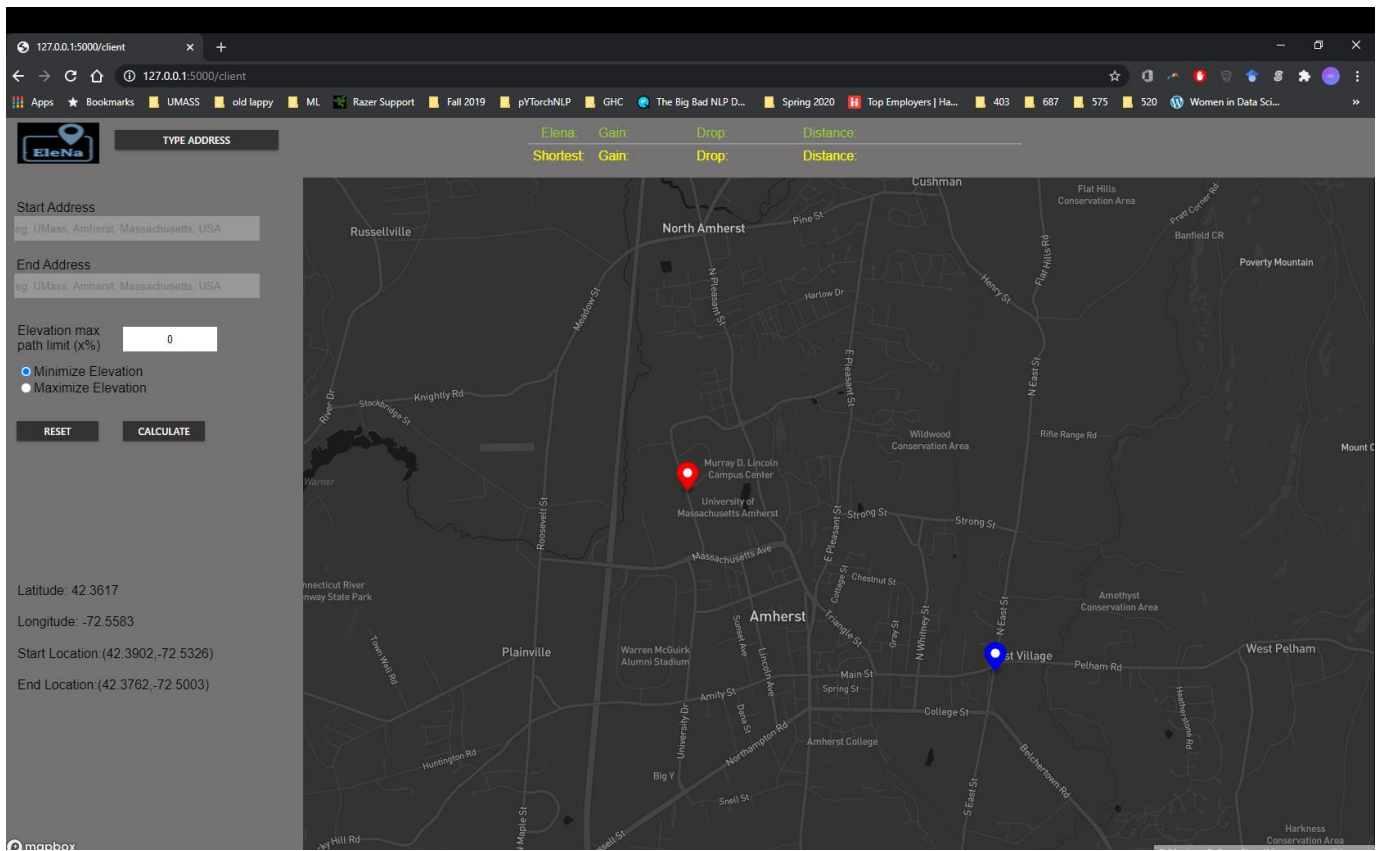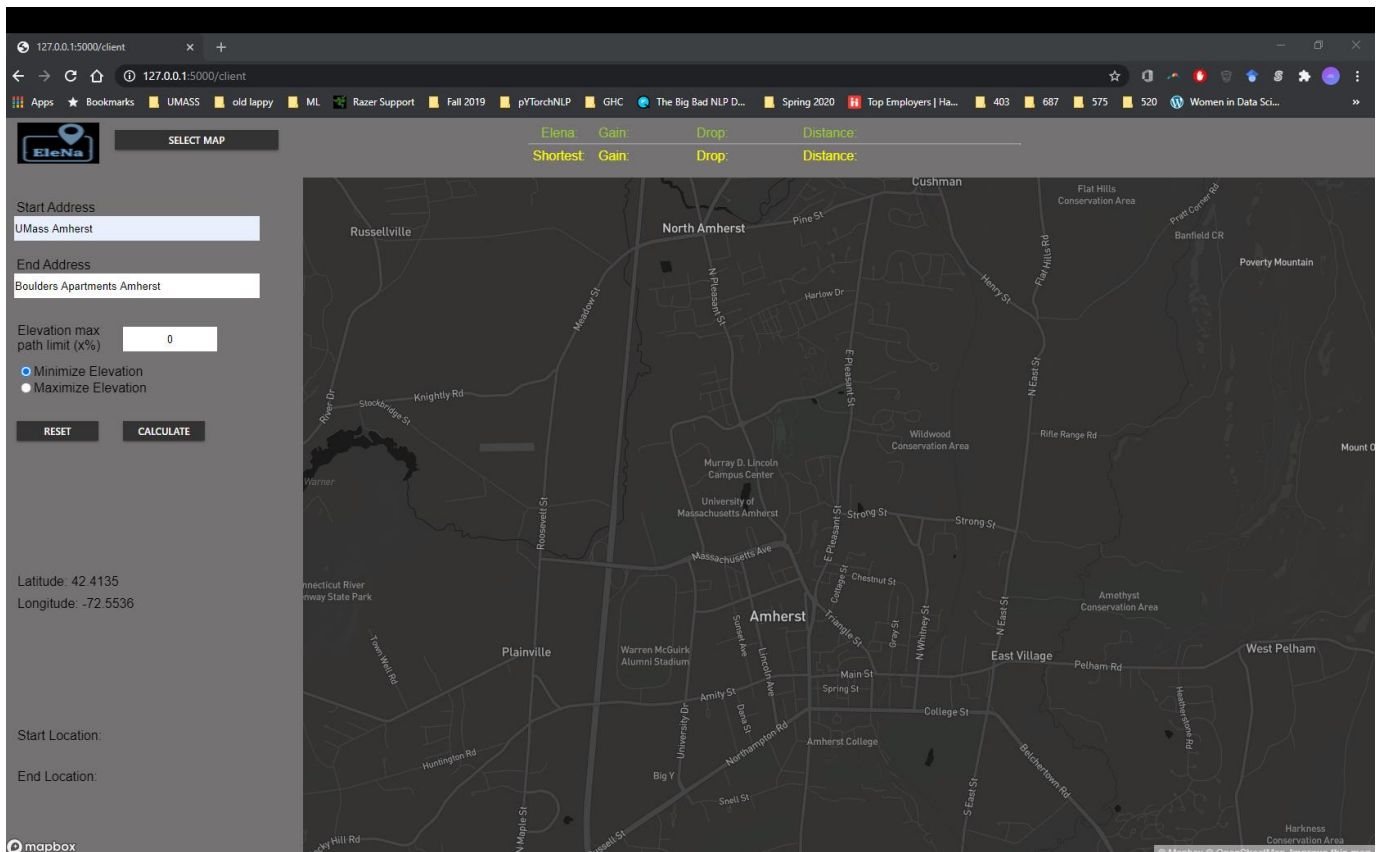# Final Project – EleNa

1. Testing the UI:
   a. Test that upon starting the software,
      i. The webpage displays the map correctly, centered at Amherst
      ii. Text boxes are blank and activated
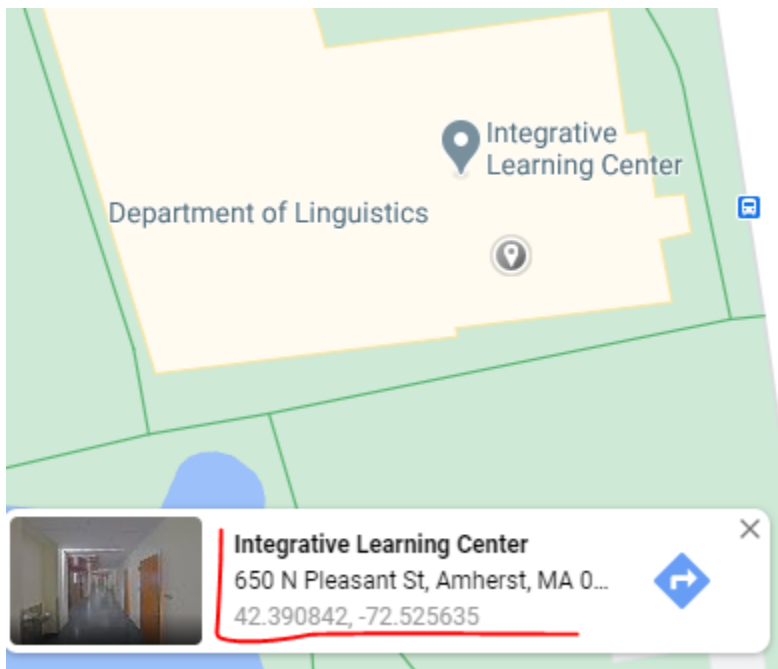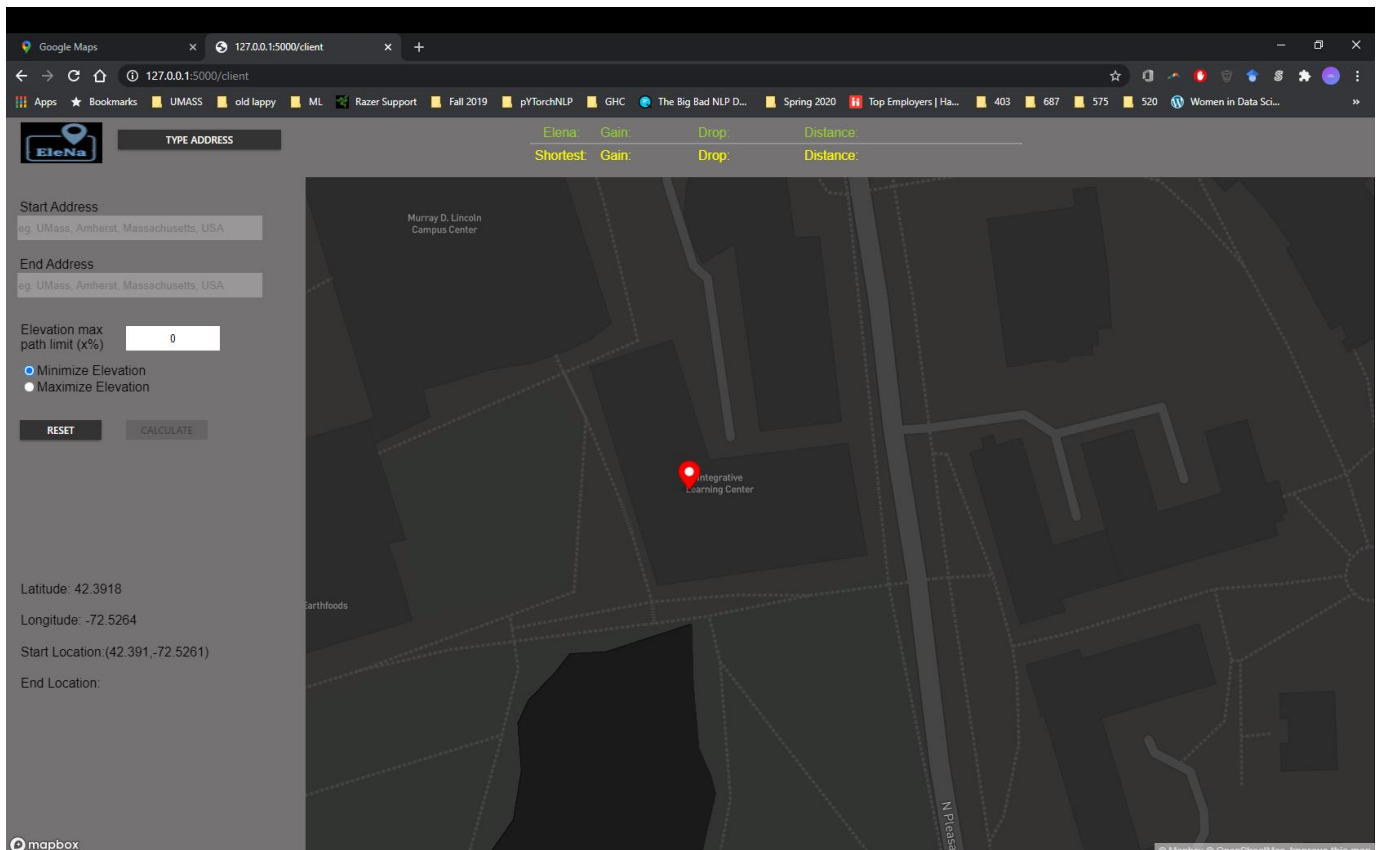   iii. Toggle button is at "Select Map"

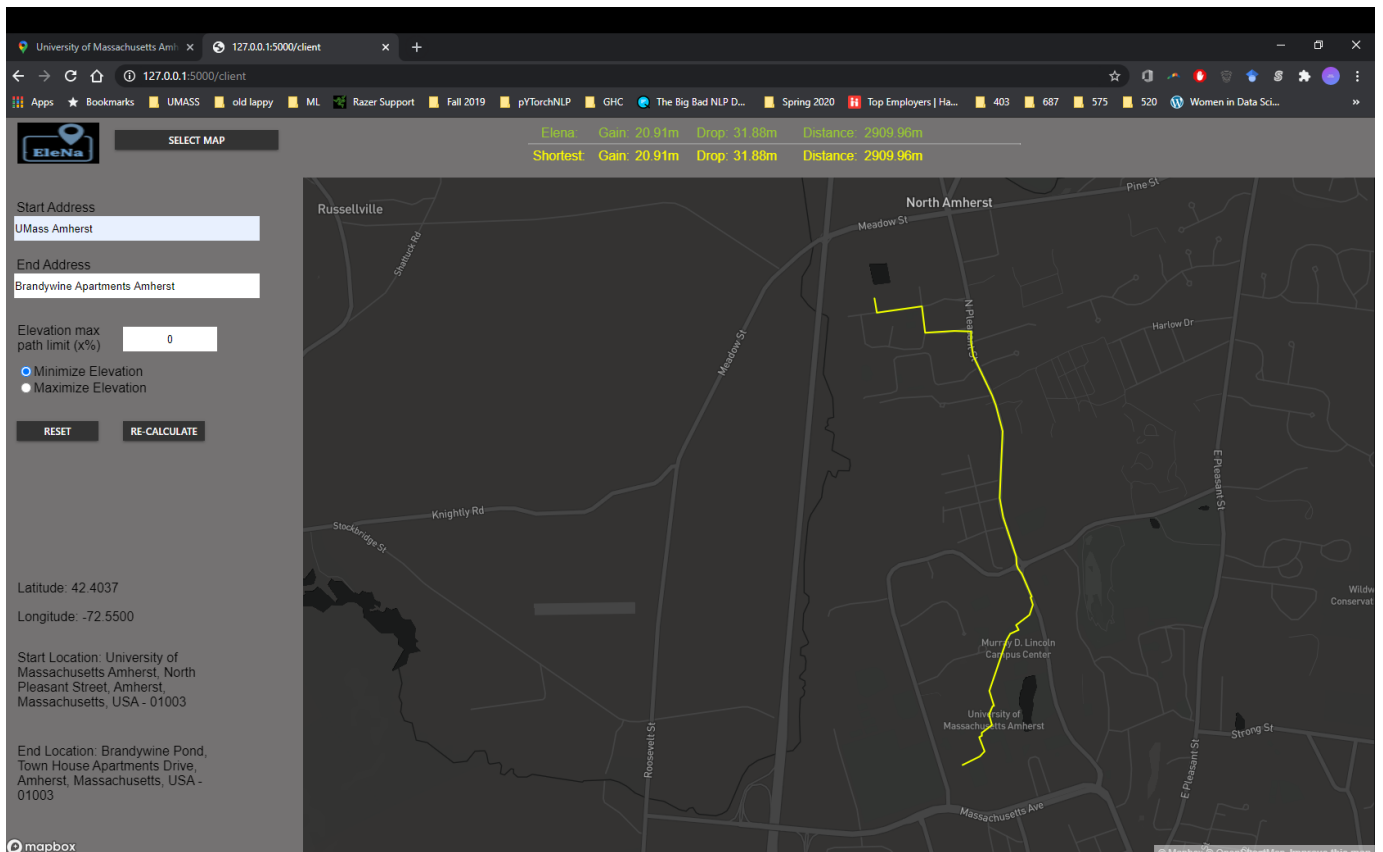2. Test that the map is clickable when toggle button is on "Type Address"

3. Test the text boxes are taking input when toggle button is on "Select Map"
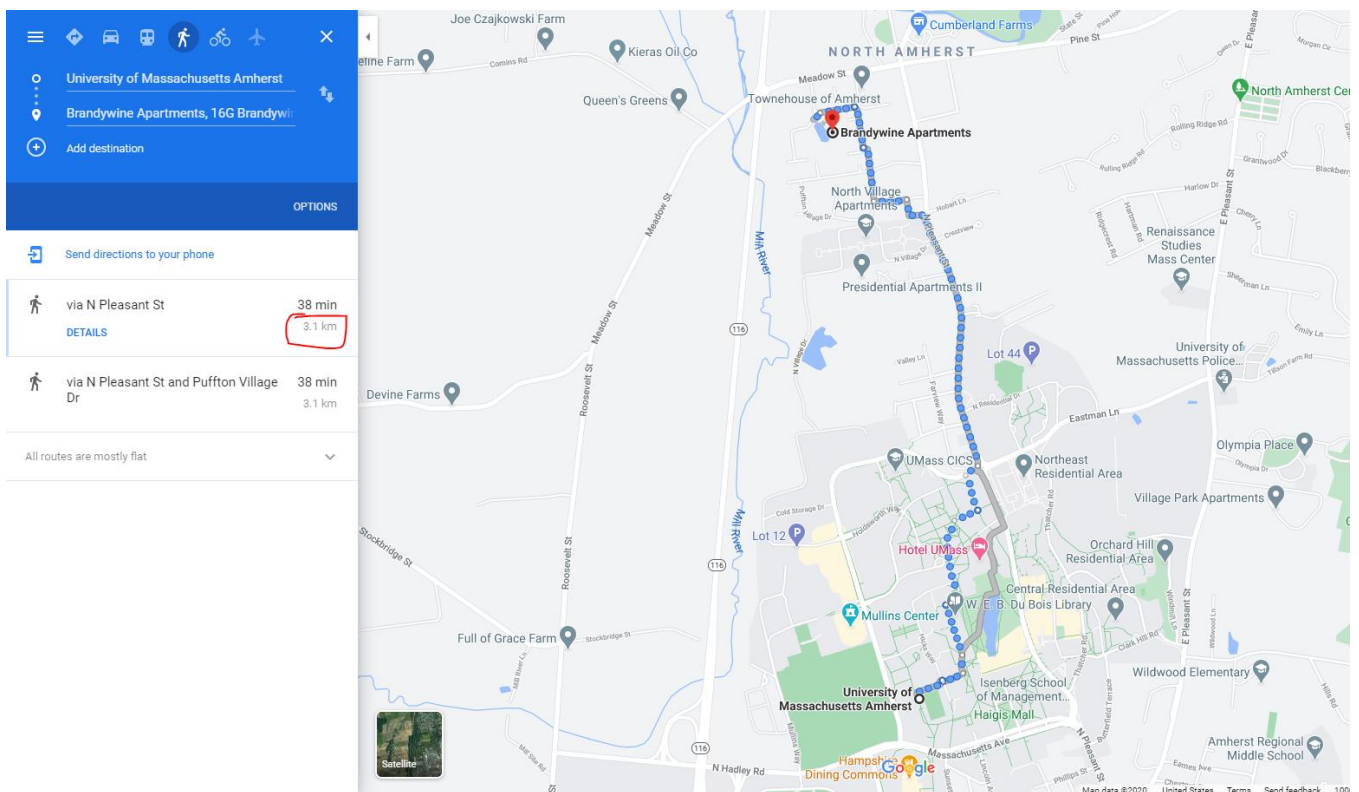
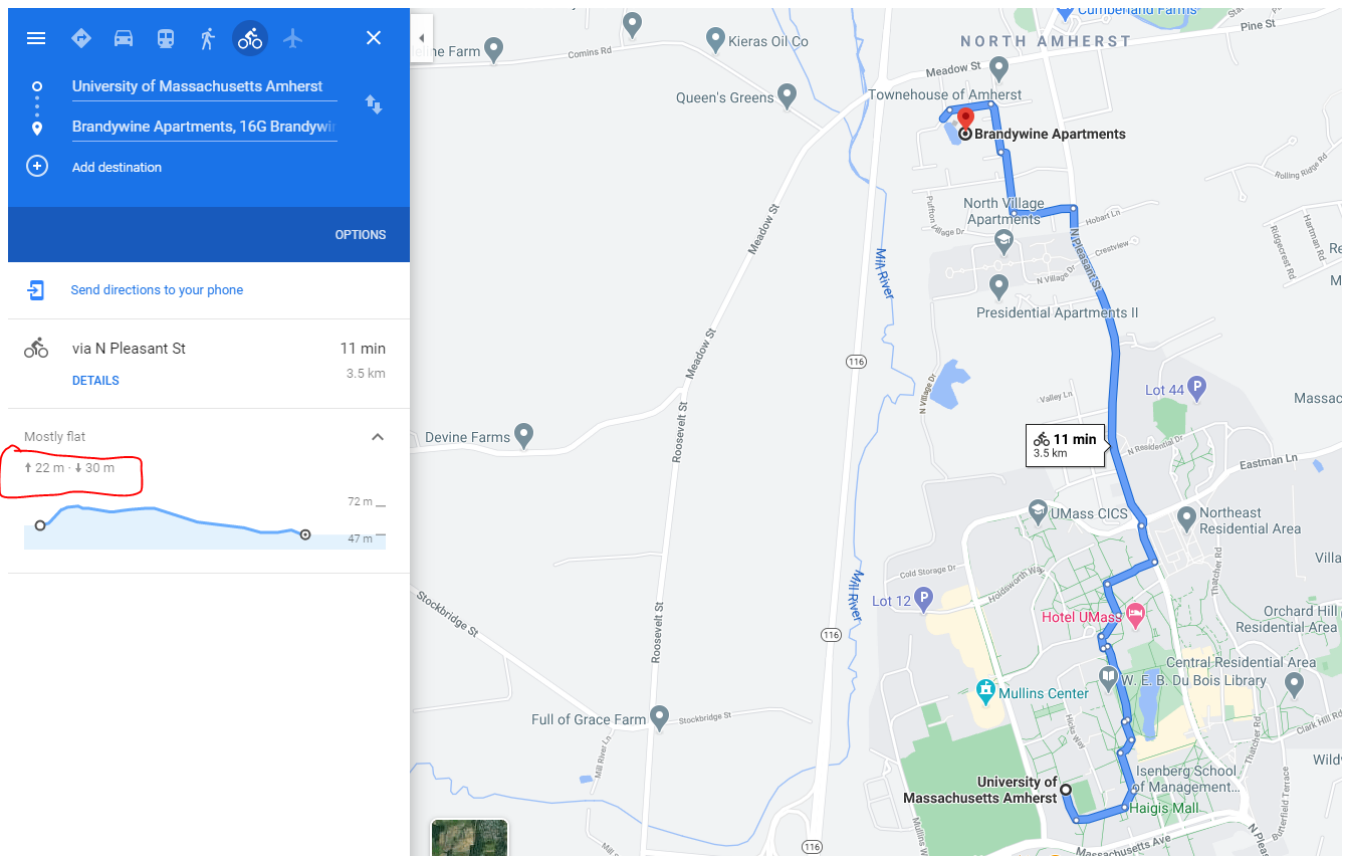4. Test if we are getting correct coordinates from pin dropping

5. Test if we are getting correct address from text box input

6. Test that the shortest distance (without considering the elevation) found by EleNa

7. Performance of the two algorithms

   a. A-star performs better


```
"POST /route HTTP/1.1" 200 -
Start Address:  University of Massachusetts Amherst, North Pleasant Street, Amherst, Massachusetts, USA -  01003
End Address:  Williston Hall, 3, Mill Valley, Hampshire County, USA -  Massachusetts
Percent of Total path:  50
Elevation:  minimize
Shortest path fetched
*************************************************
Algorithm :djikstra
Total Distance: 2270.3069999999993
Elevation Gain: 51.60899999999997
Elevation Drop: 5.657999999999973
*************************************************
Algorithm :A-star
Total Distance: 3265.138999999999
Elevation Gain: 7.785000000000011
Elevation Drop: 53.73600000000001
2020-11-23 22:56:17,183 - src.server.shortestPath - INFO - Best selected route is A-star
127.0.0.1 - - [23/Nov/2020 22:56:18] "POST /route HTTP/1.1" 200 -
2020-11-23 22:56:18,008 - werkzeug - INFO - 127.0.0.1 - - [23/Nov/2020 22:56:18] "POST /route HTTP/1.1" 200 -
```

   b. Djikstra performs better

```
Start Address:  Massachusetts Avenue, North Amherst, Amherst, Massachusetts, USA -  01003
End Address:  324, Northampton Road, Amherst, Massachusetts, USA -  01004
Percent of Total path:  30
Elevation:  minimize
Shortest path fetched
*****************************************************
Algorithm :djikstra
Total Distance: 2816.5789999999993
Elevation Gain: 13.694999999999993
Elevation Drop: 34.051999999999985
*****************************************************
Algorithm :A-star
Total Distance: 3037.19
Elevation Gain: 48.08999999999998
Elevation Drop: 27.73299999999999
2020-11-23 23:01:45,556 - src.server.shortestPath - INFO - Best selected route is djikstra
127.0.0.1 - - [23/Nov/2020 23:01:46] "POST /route HTTP/1.1" 200 -
2020-11-23 23:01:46,379 - werkzeug - INFO - 127.0.0.1 - - [23/Nov/2020 23:01:46] "POST /route HTTP/1.1" 200 -
```