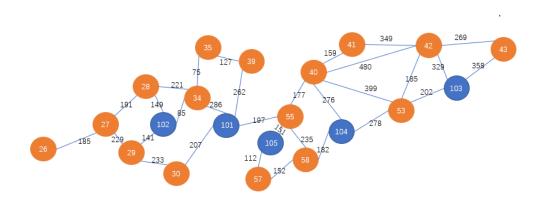
#### CONTENT

Problem 1	
I build vertices map	
II read vertices from the file	
II find the path	

## **Problem 1**

### I build vertices map

Vertices named with three digits such as 101,102 represent the intersections. There are 16 buildings and 5 intersections.



#### Il read vertices from the file

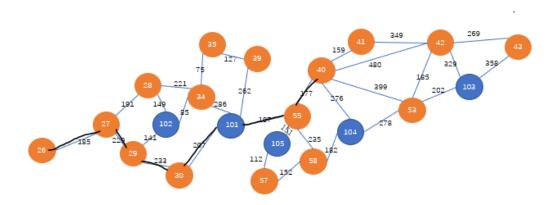
Initialize a two-dimension array named graph to sort the data. Graph[v1][v2] represents the weight of edge from v1 to v2. If there is no edges between v1 and v2, the weight should be inf.

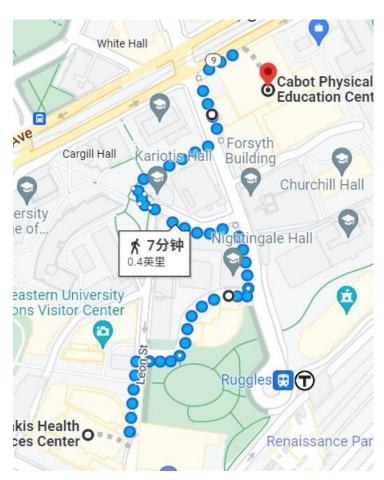
All the vertices in the edges will be sorted in an array, and the index of the array will be used to search.

# II find the path

From 26 to 40, the result is

Input Start Building: 26
Input Destination Building: 40
From building 26 to building 40
The shortest distance is: 1228
The shortest path is:
26->27->29->30->101->55->40





From 35 to 53, the result is

Input Start Building: 35
Input Destination Building: 53
From building 35 to building 53
The shortest distance is: 1162
The shortest path is:
35->39->101->55->40->53

