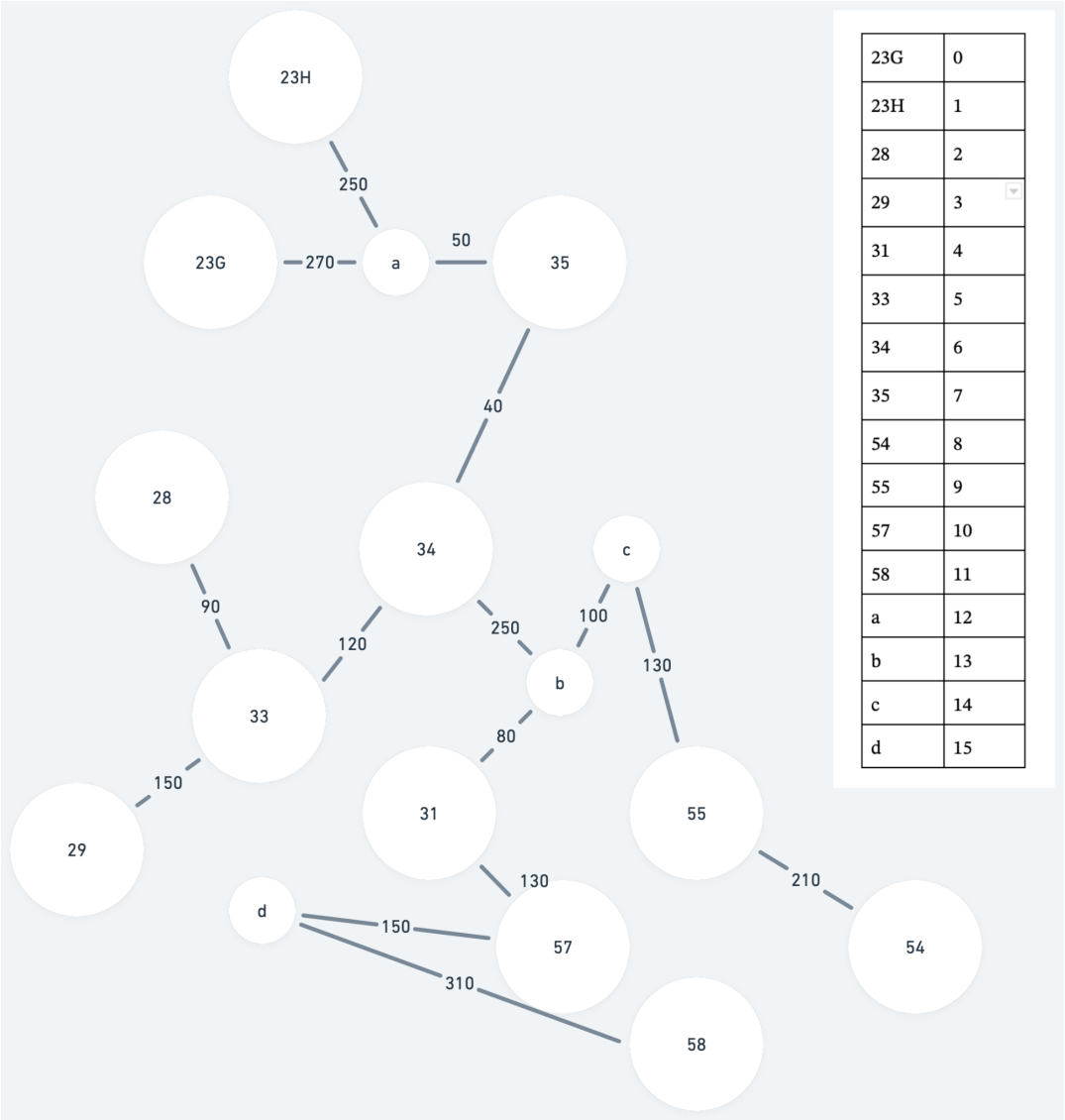
Homework05

Hwijong Im

Problem 01



23G	0
23H	1
28	2
29	3
31	4
33	5
34	6
35	7
54	8
55	9
57	10
58	11
a	12
b	13
c	14
d	15

This is the Graph of School campus and enumerates each of the buildings. I created the distances(Edge) in txt file and produced an adjacency matrix to use as the algorithm, and Dijkstra Algorithm are built as following steps. First, made funciton of read txt data file of all distances of two buildings. Secondly, made the function of minimum distance and index in the distances list of current node. Then, main Dijkstra alogirhtm calculate the shortest path from start node to end node(Destination). There are result of code and the text data of graph on down below.

```
Enter start building: 23G
Enter end building: 54
Shortest Distance between the two buildings: 1050
```

<Algorithm Result>

```
1,12,250
12,0,270
12,7,50
7,6,40
6,5,120
5,2,90
5,3,150
6,13,250
13,4,80
4,10,130
10,15,150
15,11,310
13,14,100
14,9,130
9,8,210
```

<Graph Data>