

Problem 1

For this problem, my approach was to first map the buildings on campus that I wanted to include. I then created a CSV file containing all the vertex data. Next, I created a generic function to read that CSV file and produce an adjacency matrix to be use in the algorithm. When implementing the algorithm, I simply calculated all the shortest paths from the source vertex to all vertices, then pulled the vertex which was the indicated destination building. I took the building number from the user, then found to vertex in the unordered map I created to store the keys and values of the building numbers to vertex number. My largest challenge was print the path, which I gave up on. I almost got it but segmentation fault kept reoccurring. The following is a sample of input and output of my program:

```
Enter start building: 23G
Enter end building: 34
Shortest Distance between the two buildings: 360
```