To Achieve the shortest path distance, I’ve decided to use an efficient algorithm: A\* algorithm that can efficiently calculate distance between any two nodes.

Motivation:

Since there are 2 main algorithm that are mostly common used for shortest path finding

1: Bellman Ford Algorthm- This algorithm finds shortest general case when edges are allowed to be negative

2: Dijkstra’s Algorithm only works on non-negative weight edges, it has better performance as result of this condition.

3: Since C# offer no library collection of priority queue data structure, which are essential for building dijkstra’s algorithm. I have written my own pq data class.

Since it does not make sense for any edge weight to be negative in my model, I will use Djikstra’s algorithm which are more efficient than bellman ford given this known condition.