**MyMap:**

associate(): If there are N key-value pairs in a map, then associate() is O(logN), since we are adding a node to a BST.

find(): If there are N key-value pairs in a map, to find a certain value associated with a key (find() function) is O(logN), since we are searching within a BST.

**AttractionMapper:**

init(): If there are N total street segments in the input mapping data, and A total attractions dispersed throughout the streets, init() is O(N+AlogA), since we must traverse each segment and add each of its attractions and coordinates using our associate() function in MyMap.

getGeoCoord(): If there are A total attractions in the input mapping data, then getGeoCoord() is O(logA) because we are searching for an attraction within a BST sorted by attraction name using the MyMap() find function. (There are A key-value pairs in the map).

**SegmentMapper:**

init(): If there are N total street segments in the input mapping data, and A total attractions dispersed throughout the streets, init() is O((N+A)log(N+A)), since we are traversing each segment and attraction and adding its respective coordinates and updating its vector of segments(O(1)) using our associate() function in MyMap.

getSegments(): If there are N total street segments in the input mapping data, and A total attractions, then getSegments() is O(log(N+A)) because we are searching through the map of coordinates of street segment start/ends and attractions, to find a certain coordinate using the MyMap find() function. (There are ~N+A key-value pairs in the map).

**Navigator:**

navigate(): If there are N total segments and A total attractions in our mapping data, and we go through S segments before finding (or not finding) our route(where S <= N), then navigate() is O(SlogS). We implement a priority queue and a MyMap data structure to traverse and hold our path. A priority queue has O(logS) for its push function as well as its pop function, and MyMap has O(logS) for its push function. To add all the segments we need to find our route, our function is then O(SlogS). When we backtrack through the function, we implement a stack. When adding to the stack(O(1)), we use MyMap’s find function to connect all the points(O(logS)) and add it into the stack, so O(SlogS). Thus, navigate() is O(SlogS).