Project 4 report

Big-O of the following methods:

MyMap:

* Associate()

Assume that MyMap class object has N nodes in it. Then the time complexity for associate() function is O(logN)

* Find()

Assume there are N nodes in MyMap class object. Then the time complexity for find() function is O(logN)

AttractionMapper:

* Init(const MapLoader& ml)

Assume there are in total N streetSegment in MapLoader and there are M attractions in the MapLoader object, then the time complexity for init() function is O(N + MlogM).

* getGeoCoord()

Assume there are in total N attractions stored in AttractionMapper object, then the time complexity for getGeoCoord() function is O(logN)

SegmentMapper:

* init(const MapLoader& ml)

Assume there are N StreetSegment in MapLoader object, and there are M attractions in MapLoader object, then the time complexity for init() function is O((M+N)log(M+N))

* getSegments()

Assume there are N StreetSegment in MapLoader object, and there are M attractions in MapLoader object, then the time complexity for getSegments() function is O(log(M+N))

Navigator:

* navigate()

Assume that there are N streetSegments and M attractions in the MapLoader. Then the time complexity for navigate() function is O((N+M)log(N+M))