MY MAP: associate()

If the MyMap holds N items (keys and values), then associate() is O(log N) as it’s the same as adding something to a binary tree.

MY MAP: find()

If the MyMap holds N items (keys and values), then find() is O(log N) as it’s the same as finding something in a binary tree.

ATTRACTION MAPPER: init()

If the MapLoader holds N geo-segments and there are A attractions, then init() is O(N + A log A).

ATTRACTION MAPPER: getGeoCoord()

If the MyMap holds N nodes, then getGeoCoord() is O(log N) because it is the same as a binary tree search

SEGMENT MAPPER: init()

If there are N total street segments in the mapLoader, and A total attractions

dispersed throughout the streets, then init() runs in O((N+A)\*log(N+A)) which is equal to Nlog(N+A) + Alog(N+A).

SEGMENT MAPPER: getSegments()

If there are N total street segments in the input mapping data, and A total attractions

dispersed throughout the streets, getSegments() runs in O(log(2N+A)) which is equal to O(log(N+A))

NAVIGATOR: navigate()

N total segments and A total attractions in our mapping data, our navigate() method runs in O((A+N)\*log(A+N)) time