You must submit a brief (you're welcome!) report that presents the Big-O for the average case of the following methods. Be sure to make clear the meaning of the variables in your Big-O expressions, e.g., "If the GeoDatabase holds N GeoPoints, and each GeoPoint is associated with P other GeoPoints on average, get\_connected\_points() is O(P 2 log N)." Give the Big-O for these methods in your report:

● GeoDatabase: load(), get\_connected\_points(), get\_street\_name()

● Router: route()

load(): if geodatabase has n streets and p points of interests, then the Big-O is (n+p)

get\_connected\_points(): if geodatabase has N geopoints, and each geopoint is associated with P other GeoPoints on average, get\_connected\_points should return O(1) on average.

get\_street\_name(): it should also be O(1) on average

route(): if the geodatabase has N points, then the Big-O of route() is O(N \* logN)