

Lets say you have two orders that are placed within a short span of each other (let's say 1 minute). The first order's pickup location is A, and destination D. The second order's pickup location is B, and destination is C. Assume that you've been provided with geo-polylines A-D and B-C representing the path between A and D, and B and C respectively. Come up with an algorithm that will efficiently determine whether the geo-polyline resulting from combining A-D and B-C has a negligible detour and thus warranting for the two orders to be done by one person.

Here are three visual examples:

EXAMPLE 1:

A-----D
 B-----C

Combining these two geo-polylines will result in:

A-B-----C--D

The resultant geo-polyline has no detours thus warranting for the two orders to be done by one person.

EXAMPLE 2:

A-----D
 B
 |
 |-----C

Combining these two geo-polylines will result in:

 B
 |
 A--|-----D-----C

The resultant geo-polyline has a negligible detour thus warranting for the two orders to be done by one person.

EXAMPLE 3:

A
 |
 |
 |
 |-----D
 B
 |
 |
 |
 |-----

|
|
|
|
|
C

Combining these two geo-polylines will result in:

A B
| |
| |
| |
| |
|-----|-----D
|
|
|
|
|
C

The resultant geo-polyline has a significant detour thus warranting for the two orders to be done by different people.