**Google Interview**

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Let's define a kind of message called "Broadcast & Shut Down."

When a router receives this message, it broadcasts the same message to all other routers within its wireless range.

Then, that router shuts down, and can no longer send or receive messages.

For example, Router A is at (0, 0); Router B is at (0, 8); Router C is at (0, 17); Router D is at (11, 0).

If the wireless range is 10, when Router A sends a message, it could first reach B; the message from Router B would further reach Router C but Router D would never receive this message.

Given a list of routers' locations (their names and the corresponding 2D coordinates), tell me whether a message from Router A can reach Router B.

Write a method / function with appropriate input and output arguments.

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router = [{name}, {x}, {y}]

routers = [] of router

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routers = [[“A”, 0, 0], [“B”, 0, 8], [“C”, 0, 17], [“D”, 11, 0]]; N 12, 4

/\* return boolean \*/

function canReach(routers, source, destination, wirelessRange) {

// Write code

// Input array list - routers

var n = routers.length;

for(let i=0; i<n; i++){

//check if source is reachable to destination

}

}

/\*

Test cases

1. limit range

2. source and destination are same or only one item in the router array

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canReach(routers, "A", "D", 10); // false

canReach(routers, "A", "B", 10); // true

canReach(routers, "A", "N", 10); // true

AB

AC

AD

AN

AX

AZ

Source : Router A

if a to b is possible, result = [[“A”, 0, 0], [“B”, 0, 8]]

//length and

check for a to d , if b to c is possible, result = [[“A”, 0, 0], [“B”, 0, 8], [“C”, 0, 17]]

at last, take the result array to check for messages possible or not

A B C D N X Z W Q