B. Wait? Why there is a plane infront me?!

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Do you know that there is a system that most of the plane flying in the air nowadays have some sort of traffic collision avoidance system? It is called as TCAS. It work by transmitting a radar signal around the plane itself where its range can conver upwards 40 miles radius. When other airplane detect the signal, the system will run its algorithm to avoid that collision and immediately notify the pilot whether to climb up or decent. One will receive climbing instruction, another would be decend instruction.

Your task is you need to build a similar system, but only in two 2D space and only telling there's a plane near us. No need to be complicated, just need to check whether there is a plane or not within the specified radius and alert if there is. If not, just proceed as usual.

Input

'n' number of plane, followed by 1 line of plane coordinate in Cartesian coordinate system that we need to ensure that the plane is not in-course toward a collision and last digit of the line is the radius of detection. After that, there is 'n' number of line which specify the coordinate of other plane around it.

Output

Print a string "ALERT" if there is a plane around us, else do nothing

Sample Input / Output:

Input	Output
3	
475	
-4 0	
10 4	
-1 5	ALERT