

Here is the problem statement:

You are a stranger to a place and came to a T junction. You know that one branch leads to a crawfish boil and the other branch leads to alligator farm.

You would like to enjoy the feast instead of being a feast to alligator. Luckily there was a person standing at the T junction helping the people, but he can either say Yes or No answer to your question. Further, you also know that he is either a truth teller or a liar. What single question you can ask the person that leads to the crawfish boil.

Strategy to solve the problem given the information offered to you:

You may want to formulate the query such that the person at the T junction will say Yes if and only if the right-hand branch leads to crawfish boil.

Assume the person is a truth teller:

P is a Truth Teller	Right Branch leads to crawfish boil
T	T
T	F

The query would be: You are a truth teller, and the right branch leads to crawfish boil (based on the assumption that the person is a truth teller)

The person P could be a liar.

P is a liar	Right Branch leads to crawfish boil	P's Response
T	T	No
T	F	Yes

The query that will satisfy our intension would be: You are a liar, and the left branch leads to crawfish boil (based on the assumption that the person is a liar)

Combining these two distinct possibilities, the correct query would be

Either you are a truth teller, and the right branch leads to crawfish boil, or you are a liar, and the left branch leads to crawfish boil.