Description   Solution   Submissions   Discuss (32)

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This problem is more difficult to understand than to solve. Use a state variable `self.green` to record which road has green light now. If `roadId != self.green`, turn light to green (also remember to update `self.green`).

Implementation (40ms, 89.51%):

```python
class TrafficLight:
    def __init__(self):
        self.green = 1

    def carArrived(
        self,
        carId: int,                      # ID of the car
        roadId: int,                     # ID of the road the car travels on. Can be 1 (road A) or 2 (road B)
        direction: int,                  # Direction of the car
        turnGreen: 'Callable[[], None]', # Use turnGreen() to turn light to green on current road
        crossCar: 'Callable[[], None]'   # Use crossCar() to make car cross the intersection
    ) -> None:
        if roadId != self.green:
            turnGreen()
            self.green = roadId
        crossCar()
```

Analysis:
Time complexity `O(N)`
Space complexity `O(1)`

python 3

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