STUDENT REPORT

DETAILS

Name

SRINIVAS RAO B

Roll Number

3BR23AI156

EXPERIMENT

Title

ANT ON RAIL

Description

There is a ant on your balcony.It wants to leave the rail so sometimes it moves right and sometimes it moves left until it gets exhausted.Given an integer array A of size N which consists of integer 1 and -1 only representing ant's moves.

Where 1 means ant moved unit distance towards the right side and -1 means it moved unit distance towards the left .Your task is to find and return the integer value representing how many times the ant reaches back to original starting position.

Note:

- Assume 1-based indexing
- Assume that the railing extends infinitely on the either sides

Input Format:

input1 : An integer value N representing the number of moves made by the ant.

input2 : An integer array A consisting of the ant's moves towards either side

Sample Input

5

1 -1 1 -1 1

Sample Output

2

Source Code:

```
def count_returns_to_start(N, A):
    position = 0  # Starting position
    count = 0     # Count of returns to starting position

    for move in A:
        position += move  # Update position based on move
        if position == 0:  # Check if back at starting position
            count += 1

    return count

# Input handling
N = int(input())
A = list(map(int, input().strip().split()))

# Output the result
print(count_returns_to_start(N, A))
```

RESULT

5 / 5 Test Cases Passed | 100 %