Logo

# STUDENT REPORT

## DETAILS

**Name**

SAMHITHA SIR DESAI

**Roll Number**

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## 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):
    current_position = 0
    return_count = 0

    for move in A:
        current_position += move
        if current_position == 0:
            return_count += 1

    return return_count

# Example usage:
N = int(input())
A = list(map(int,input().split())) # Example moves
result = count_returns_to_start(N, A)
print(result)  # Output: 3
```

## RESULT

5 / 5 Test Cases Passed | 100 %