



# STUDENT REPORT

## DETAILS

Name

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Roll Number

3BR23EE083

## EXPERIMENT

Title

TARGET SUM

Description

You are given a list of integers, and your task is to write a function that finds the two numbers in the list that add up to a specific target sum. You need to return the indices of these two numbers.

Write a function that takes a list of Integers and a target sum as input and returns a list of two indices (0-based) of the numbers that add up to the target sum. Assume that there is exactly one solution, and you cannot use the same element twice

Sample Input:

2 7 11 15

9

Sample Output:

[0, 1]

Source Code:

```
def two_sum(nums, target):
    # Dictionary to store the number and its index
    num_to_index = {}

    for index, num in enumerate(nums):
        # Calculate the complement that would make up
        the target
        complement = target - num

        # Check if the complement is already in the di
        ctionary
        if complement in num_to_index:
            # If found, return the indices as a list
            return [num_to_index[complement], index]

        # Store the index of the current number
        num_to_index[num] = index

    # If no solution is found (this shouldn't happen a
    ccording to the problem statement)
    return []

# Input reading
input_nums = list(map(int, input().strip().split()))
target_sum = int(input().strip())

# Get the result
result = two_sum(input_nums, target_sum)

# Output the result
print(result)
```

## RESULT

5 / 5 Test Cases Passed | 100 %