STUDENT REPORT

DETAILS

Name

H RAJASHEKARA

Roll Number

TEMPBTech-ECE013

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:

```python
def two_sum(nums, target):



    index_map = {}  # Dictionary to store number and its index


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

        # Check if the complement exists in the dictionary
        if complement in index_map:
            return [index_map[complement], index]  # Return the indices

        # Store the current number with its index
        index_map[num] = index

    return []  # Return an empty list if no solution is found (should not happen)

# Input reading
input_numbers = list(map(int, input().strip().split()))  # Read list of integers
target_sum = int(input().strip())  # Read target sum

# Calculate and print the result
result = two_sum(input_numbers, target_sum)
print(result)
```

RESULT

5 / 5 Test Cases Passed | 100 %