Logo

STUDENT REPORT

DETAILS

Name

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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 retum 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):
    num_to_index = {}  # Dictionary to hold number and its index

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

        # Check if the complement is in the dictionary
        if complement in num_to_index:
            return [num_to_index[complement], index]  # Return the indices

        # Store the number and its index in the dictionary
        num_to_index[num] = index

# Example usage
if __name__ == "__main__":
    import sys

    nums = list(map(int, sys.stdin.readline().strip().split()))  # Read the list of integers
    target = int(sys.stdin.readline().strip())  # Read the target sum

    result = two_sum(nums, target)
    print(result)
```

RESULT

5 / 5 Test Cases Passed | 100 %