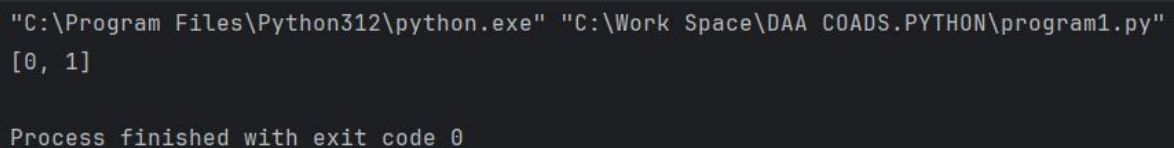


Program1: Write a program to find the sum of the target in the given array and show and which index the numbers are present at:

**Program:**

```
def two_sum(nums, target):
    num_index_map = {}
    for i, num in enumerate(nums):
        complement = target - num
        if complement in num_index_map:
            return [num_index_map[complement], i]
        num_index_map[num] = i
nums = [2, 7, 11, 15]
target = 9
print(two_sum(nums, target))
```

Output:



```
"C:\Program Files\Python312\python.exe" "C:\Work Space\DAA COADS.PYTHON\program1.py"
[0, 1]

Process finished with exit code 0
```

Time complexity for program 1: