
Your Ultimate Guide To Landing
Top AI roles
DECODE
AiML

CTQ-1

Q. Input : array = [2, 4, 5, 16]
Target = 9

Output : return [i1, i2]

Constraints

$2 <= array.size <= 10^4$

Brute Force

Target = 9

[4, 5]
[5, 4]

2 → 4, 5, 16
4 → 2, 5, 16
5 → 2, 4, 16
16 → 2, 4, 15

Brute force

```
for i in range(n):
    for j in range(i+1):
        if arr[i]+arr[j]==Target:
            return [i, J]
    return []
```

2 → 4, 5, 16
4 → 5, 16
5 → 16

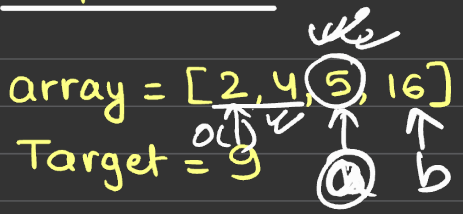
[4, 5]

return [1, 2]

Optimal

Hash Table

↳ O(1) Search



[4, 5]

a + b = Target

a = Target - b

no of times = n × O(1)

Total search = O(n)

⇒ hashDict = { }

n = len(arr)

for i in range(n): ← O(n)

dict ⟨arr[i], i⟩

arr_value, index

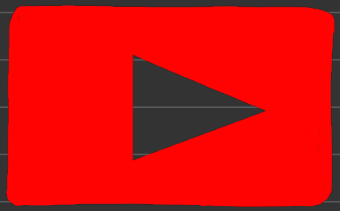
if Target - arr[i] in hashDict: ← O(1)

return { i, hashDict[Target - arr[i]] }

hashDict[arr[i]] = i ← O(1)

return [ ];

T(n) = O(n)

Like  Subscribe