

116. Subset Sum Problem

Code:

```
def is_subset_sum(nums, target_sum):  
    n = len(nums)  
    dp = [[False] * (target_sum + 1) for _ in range(n + 1)]  
  
    for i in range(n + 1):  
        dp[i][0] = True  
  
    for i in range(1, n + 1):  
        for j in range(1, target_sum + 1):  
            if nums[i - 1] > j:  
                dp[i][j] = dp[i - 1][j]  
            else:  
                dp[i][j] = dp[i - 1][j] or dp[i - 1][j - nums[i - 1]]  
  
    return dp[n][target_sum]  
  
nums = [3, 34, 4, 12, 5, 2]  
target_sum = 9  
print(is_subset_sum(nums, target_sum))
```

output:

```
PS C:\Users\karth>  
PS C:\Users\karth> & c:/Users/karth/AppData/Local/Programs/Python/Python312/python.exe c:/Users/karth/OneDrive/Documents/OriginLab/problem.py  
True  
PS C:\Users\karth> █
```

Time complexity: $f(n) = O(n * n)$