```
class Solution:
    def subarraySum(self, nums: List[int], k: int) -> int:
        prefix_sum = 0
        count = 0
        sum_map = {0 : 1}
        for num in nums:
            prefix_sum += num

            if prefix_sum - k in sum_map:
                count += sum_map[prefix_sum - k]
            if prefix_sum in sum_map:
                sum_map[prefix_sum] += 1
            else:
                sum_map[prefix_sum] = 1
        return count
```