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CN Lab 4: Sliding Window Algorithm

Code:

# O(n) solution for finding

# maximum sum of a subarray of size k

def maxSum(arr, k): # length of the array n = len(arr)

# n must be greater than k if n < k:

print("Invalid") return -1

# Compute sum of first window of size k window\_sum = sum(arr[:k])

# first sum available

max\_sum = window\_sum

# Compute the sums of remaining windows by

# removing first element of previous # window and adding last element of # the current window. for i in range(n - k):

window\_sum = window\_sum - arr[i] + arr[i + k] max\_sum = max(window\_sum, max\_sum) return max\_sum

# Driver code arr = [1, 4, 2, 10, 2, 3, 1, 0, 20] k = 4 print(maxSum(arr, k))

Output:

