Problem – 4 : Kadane's Algorithm

```python
def max_subarray_sum(arr):
    if not arr:
        return 0

    currentMax = arr[0]
    globalMax = arr[0]
    start, end = 0, 0
    subarray = [arr[0]]

    for i in range(1, len(arr)):
        if arr[i] > arr[i] + currentMax:
            currentMax = arr[i]
            start = i
        else:
            currentMax += arr[i]
        if currentMax > globalMax:
            globalMax = currentMax
            end = i
            subarray = arr[start:end+1]

    print("Subarray:", subarray)
    return globalMax
arr = [-2, 1, -3, 4, -1, 2, 1, -5, 4]
max_sum = max_subarray_sum(arr)
print("Maximum subarray sum:", max_sum)
```

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14 ▾              else:
15               currentMax = arr[i]
```

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input

```
Subarray: [4, -1, 2, 1]
Maximum subarray sum: 6


...Program finished with exit code 0
Press ENTER to exit console.
```