Running sum

Running Sum of 1D Array

Given an array nums. We define a running sum of an array as runningSum[i] = sum(nums[0]…nums[i]).

Return the running sum of nums.

Example 1:

Input: nums = [1,2,3,4] Output: [1,3,6,10] Explanation: Running sum is obtained as follows: [1, 1+2, 1+2+3, 1+2+3+4].

Example 2:

Input: nums = [1,1,1,1,1] Output: [1,2,3,4,5] Explanation: Running sum is obtained as follows: [1, 1+1, 1+1+1, 1+1+1+1, 1+1+1+1+1].

Example 3:

Input: nums = [3,1,2,10,1] Output: [3,4,6,16,17]

Constraints:

1 <= nums.length <= 1000 -10^6 <= nums[i] <= 10^6

In [1]:
```
# Example 1...
num = [1,2,3,4]
def runningSum(num):
    result = []
    x = 0

    for z in num:
        x += z
        result.append(x)
    print(result)

runningSum(num)
```

```
[1, 3, 6, 10]
```

In [2]:
```
# Example 2...
numbers = [1,1,1,1,1]
def runningsum(numbers):
    result = []
    p = 0

    for nums in numbers:
        p += nums
        result.append(p)
    print(result)

runningsum(numbers)
```

```
[1, 2, 3, 4, 5]
```

In [3]:
```
# Example 3...
nums = [3,1,2,10,1]

def RunningSum(nums):
    result = []
    a = 0

    for c in nums:
        a += c
        result.append(a)

    print(result)

RunningSum(nums)
```

```
[3, 4, 6, 16, 17]
```

Suffle the array

Given the array nums consisting of 2n elements in the form [x1,x2,...,xn,y1,y2,...,yn].

Return the array in the form [x1,y1,x2,y2,...,xn,yn].

Example 1:

Input: nums = [2,5,1,3,4,7], n = 3 Output: [2,3,5,4,1,7] Explanation: Since x1=2, x2=5, x3=1, y1=3, y2=4, y3=7 then the answer is [2,3,5,4,1,7].

Example 2:

Input: nums = [1,2,3,4,4,3,2,1], n = 4 Output: [1,4,2,3,3,2,4,1]

Example 3:

Input: nums = [1,1,2,2], n = 2 Output: [1,2,1,2]

Constraints:

1 <= n <= 500 nums.length == 2n 1 <= nums[i] <= 10^3

In [4]:
```
# Example 1:

nums = [2,5,1,3,4,7]
n = 3

ans = []
for i in range(n):
    ans.append(nums[i])
    ans.append(nums[i+n])

print(ans)
```

```
[2, 3, 5, 4, 1, 7]
```

In [5]:
```
# Example 2...

nums = [1,2,3,4,4,3,2,1]
n = 4

ans = []
for i in range(n):
    ans.append(nums[i])
    ans.append(nums[i+n])

print(ans)
```

```
[1, 4, 2, 3, 3, 2, 4, 1]
```

In [6]:
```
# Example 3...

nums = [1,1,2,2]
n = 2

result = []
for i in range(n):
    result.append(nums[i])
    result.append(nums[i+n])

print(result)
```

```
[1, 2, 1, 2]
```

Kids With the Greatest Number of Candies

Example 1:

Input: candies = [2,3,5,1,3], extraCandies = 3 Output: [true,true,true,false,true] Explanation: If you give all extraCandies to:

- Kid 1, they will have 2 + 3 = 5 candies, which is the greatest among the kids.

- Kid 2, they will have 3 + 3 = 6 candies, which is the greatest among the kids.
- Kid 3, they will have 5 + 3 = 8 candies, which is the greatest among the kids.
- Kid 4, they will have 1 + 3 = 4 candies, which is not the greatest among the kids.
- Kid 5, they will have 3 + 3 = 6 candies, which is the greatest among the kids.

Example 2:

Input: candies = [4,2,1,1,2], extraCandies = 1 Output: [true,false,false,false,false] Explanation: There is only 1 extra candy. Kid 1 will always have the greatest number of candies, even if a different kid is given the extra candy.

Example 3:

Input: candies = [12,1,12], extraCandies = 10 Output: [true,false,true]

Constraints:

n == candies.length 2 <= n <= 100 1 <= candies[i] <= 100 1 <= extraCandies <= 50

In [7]:
```
# Example 1...

candies = [2,3,5,1,3]
extraCandies = 3

result = []
maximum_candies = max(candies)

for i in range(len(candies)):
    if candies[i] + extraCandies >= maximum_candies:
        result.append(True)
    else:
        result.append(False)

print(result)
```

```
[True, True, True, False, True]
```

In [8]:
```
# Example 2...

candies = [4,2,1,1,2]
extraCandies = 1

result = []
maximum_candies = max(candies)

for i in range(len(candies)):
    if candies[i] + extraCandies >= maximum_candies:
        result.append(True)
    else:
        result.append(False)

print(result)
```

```
[True, False, False, False, False]
```

In [9]:
```
# Example 3...

candies = [12,1,12]
extraCandies = 10

result = []
maximum_candies = max(candies)

for i in range(len(candies)):
    if candies[i] + extraCandies >= maximum_candies:
        result.append(True)
    else:
        result.append(False)

print(result)
```

```
[True, False, True]
```