Problem #238: Product of Array Except Self. (Medium)

<https://leetcode.com/problems/product-of-array-except-self/>

My Solution:

1. Initialize an array called products to hold the result array, nums.
2. Initialize left running product to 1, i.e., leftProd = 1
3. Traverse through nums and get the left products. Update the products array with the left products.
4. Initialize right running product to 1, i.e., rightProd = 1
5. Traverse through nums in the reverse direction and get the right products. Update the products array with the right running product.
6. Finally return the products array.

class Solution:

def productExceptSelf(self, nums: List[int]) -> List[int]:

n = len(nums)

products = [1] \* n # initialize the array

leftProd = 1

# get the left products and put them in products array

for i in range(n):

products[i] = leftProd

leftProd \*= nums[i]

# get the products and multiply the elements in products

rightProd = 1

for i in range(n - 1, -1, -1):

products[i] \*= rightProd

rightProd \*= nums[i]

return products