

Program 55. Check If All 1's Are at Least Length K Places Away

Given an binary array `nums` and an integer `k`, return true if all 1's are at least `k` places away from each other, otherwise return false.

Example 1:

Input: `nums = [1,0,0,0,1,0,0,1]`, `k = 2`

Output: true

Explanation: Each of the 1s are at least 2 places away from each other.

Program:

```
def kLengthApart(nums, k):
    prev_index = -1

    for i, num in enumerate(nums):
        if num == 1:
            if prev_index != -1 and i - prev_index - 1 < k:
                return False
            prev_index = i

    return True
```

Example usage

`nums = [1, 0, 0, 0, 1, 0, 0, 1]`

`k = 2`

`result = kLengthApart(nums, k)`

`print(result) # Output: true`

Output:

```
"C:\Program Files\Python312\python.exe" "C:\Work Space\DAA COADS.PYTHON\program 55.py"
True

Process finished with exit code 0
```

Time complexity: