Saturday, 18 September 2021 12:36 PM

Q Given an array of integers arr, return the no. of subarrays with an odd sum.

→ Since the answer can be very large. return it modulo $10^9 + 7$.

① arr → [1, 3, 5]
ans → 4
↳ [1], [3], [5], [1, 3, 5]
1 3 5 9

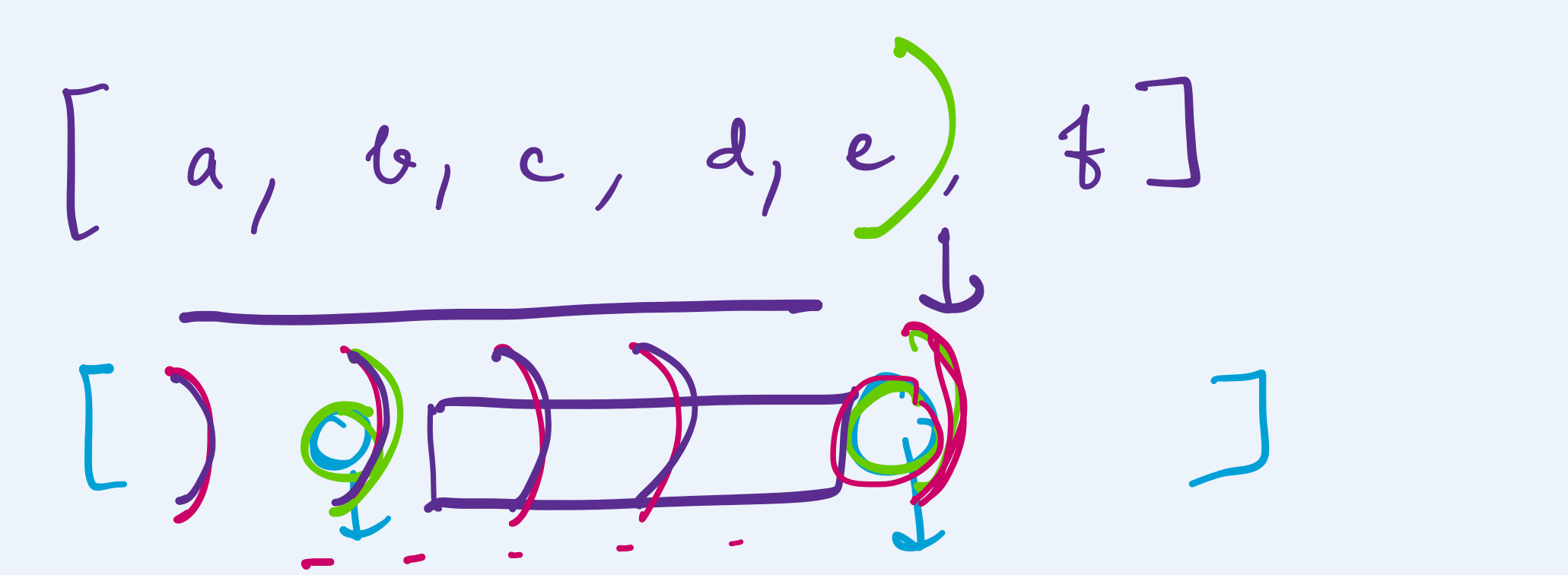
② arr → [2, 4, 6]
ans → 0

[1 2 4]

1 → 1 ✓
1 2 → 3 ✓
1 2 4 → 7 ✓
2 → 2
2 4 → 6 → ×
4 → 4

ans → ③

[a, b, c, d, e), f]



TC → $O(n^2)$ $\cancel{a}+\cancel{b}+\boxed{c+d+e}-\cancel{a}-\cancel{b})$

even = even + even
even = odd + odd

odd = even + odd

① $\boxed{\text{odd} - \text{even} = \text{odd}}$

② $\boxed{\text{even} - \text{odd} = \text{odd}}$

Arr → 2 4 1 ⑥
psum → ② ⑥ 7 ⑬ ✓
odd − even = odd
13 − 2 = 11 ✓
13 − 6 = 7 ✓

arr → 2 1 4 3 2
psum → 2 3 7 10 ⑫

even − odd = odd
12 − 3 = 9
12 − 7 = 5

9 − 2
⑨

odd − even

2 3 4 5 1 4
psum → 2 5 9 14 15 19

odd → ~~0~~ ~~1~~ ~~②~~ 3
even → ~~0~~ ~~1~~ 2

ans → 1

```
if (sum ~~is~~ odd)
        ans += even + 1
else {
        ans += odd
    }
```

Q Given an integer array, return an answer array such that ans[i] is equal to the product of all the elements except arr[i].

→ Cannot use %, / operations.

Eg: arr → [1, 2, 3, 4]
[24, 12, 8, 6]
2×3×4 1×3×4 1×2×4 1×2×3

4 5 1 8 2 80
4 5 1 8 2 64
20 × 16
4 5 1 8 2 → 320
4 5 1 8 2 40
4 5 1 8 2 160

	4	5	1	8	2
left	1	4	20	20	160
Right	80	16	16	2	1
ans[i] →	80	64	320	40	160

left[i] * right[i]

Q Faulty keyboard

→ writing on a faulty keyboard, when typing a character, the key might get long pressed, and the character will be printed more times.

→ examine the typed characters of the keyboard.

→ true → if it is possible that it was your freinds name.

Eg: "mannu" typed = "mmannu" true
Eg: "sahil" typed = "sahil" true
Eg: "shree" typed = "shhre" false

mannu maannnnu true

name : m a n n u
typed : m m a a n n u

name : s u m e e t
typed : s s u m e e t

name : a b c c
typed : a c . .

```
i = = j
        j++;
        i++;
j = = i-1
        j+1
else
        retrn false.
```

name : a a b
typed : b b

name : a a b b c
typed : a a b b c c d
c c c c c

name : a a b b c c
typed : a a a b b b j . . . j =

name : a b c d
typed : abc