

March
2015



073-292

14
Saturday

wk - 11

OPTIMAL.

$$\text{arr}[] = [2, 1, 5, 4, 3, 0, 0]$$

Appointments

8

9

ray

ray

10

bx

11

FAIR

Taking example from

dictionary

15

Sunday

074-291

Real

Reality

Rearrange

Reason.

Reap

Realign.

Realt

Realign

Readjust

March

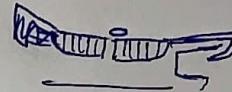
As you can see the words are arranged with prefix Real. ∵ the 1st 3 words are same, the order of the words are determined by the next letter.

'Real' comes first, as the last letter is 'l', then 'reality' as the letter next, then 'realize' as the next element to be. common 'real' is 'z' in 'realize', than 'y' in 'reality',

16

16
Monday

075-290



March
2015

wk - 12

Take this concept & apply it do our example. $\text{arr} = [2, 1, 5, 4, 3, 0, 0]$.

Now the main goal is to find a number next to arr!

[Hypothetical thinking]

Now in an array

If we take

2, 15

2 15 4 3 0 0

This as prefix then we see that changing

'0' doesn't give number greater than arr

② Now if we take

2 15 4 3 0 0

as

prefix we

still get no less than arr since interchanging '0' doesn't reach

realize

April

M	T	W	T	F	S	S	M	T	W	T	F	S	S
1	2	3	4	5	6	7	8	9	10	11	12	13	14
15	16	17	18	19	20	21	22	23	24	25	26	27	28

March
2015

17

Tuesday

076-289

St. Patrick's Day (Northern Ireland, Republic of Ireland, USA)

wk - 12

(3) 3
2154300

Appointments

8

9

10

By taking 2154, 215 or 21 as prefix (i.e. keeping them const)
we get no. smaller than arr.

1st pref

1st we need to get the no.
greater than arr

then we need to find the
no. which just greater than
arr.

By taking

2154300

as prefix (constant) we
get no.'s greater than arr

like 2514300, 2543100

etc

M	T	W	T	F	S	S	M	T	W	T	F	S	S
9	10	11	12	13	14	15	16	17	18	19	20	21	22
23	24	25	26	27	28	29	30	31					

18

Wednesday

077-288

March
2015

Now we can say '1' is the breaking point
as replacing '1' gives the greater no.'s
than arr

Now in arr

2154300

Breaking point

We need to replace this with the next no. which just greater than '1' but not way greater than '1'.

This is done to find the next no. which is only greater than arr.

so

2154300

Next greater approx

↳ could be ans.

as the no. next greater than 3 is 4, no. greater than 4 is 5. Out [00],

the greatest element is one

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24

March
2015

21 54300
23/ [0 0 1 4 5]

19
Thursday

078-287

After placing '3', we have
to keep the rest of no.
in a way such that the
overall number is
as small as possible
this can be achieved
by putting the rest no.
is asc order.

See we need to find
the no. which is only greater
than arr

Once we replaced
'1' with '3' we need to arrange
the rest of no. in such a way
that it is not way greater than
arr but only greater than arr.

Sorting & reversing
yield same result
but sorting time complexity
 $O(n \log n)$ &
reverse is $O(n)$

wk - 12

8

20

Friday

079-286

Appointments

8

Steps

10

Pseudo code

11

12

13

14

15

16

18

19

20

25

26

27

28

29

30

R

March
2015

wk - 12

- ① danger put in math
 $a[i] < a[i+1]$
- ② find > A buffer
smallest no. to
sort rest & stay close
- ③ sort rest of element
in sorted order

21 04300

23

PTD

April

M	T	W	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24

March
2015

wk - 13 Pseudocode

we start checking 24
from 2nd start Tuesday
element
∴ we have every
comparing

```
for(int i=n-2; i>=0; i--) {  
    if(a[i] < a[i+1]) {  
        index = i;  
        break;  
    }  
}
```

~~for(int i=n-1; i>=0; i--) {
 for(int i=n-1; i>=ind; i--) {
 if(arr[i] > arr[ind]) {
 swap(arr, i, ind);
 }
 }
 rev(arr, ind+1, n-1);
}~~

March											
M	T	W	T	F	S	S	M	T	W	T	F
9 10 11 12 13 14 15 16 17 18 19 20 21 22	1 2 3 4 5 6 7 8										
23 24 25 26 27 28 29 30 31											

we start checking 24
from 2nd start Tuesday
element
∴ we have every

25 → 2154309 Ⓛ 231 March
Wednesday 084-281 312 321 2015
Appointments
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
0

To locate the breaking point,
we need to find where the dip is occurring.

Now after locating the dip point
swap with the element
which is only greater than
4) / breaking point no. but
not the rest hence we get
3.

After swapping we get 2354109

April
M T W T F S S M T W T F S S
1 2 3 4 5 6 7 8 9 10 11 12
13 14 15 16 17 18 19 20 21 22 23 24 25 26
27 28 29 30

we can either
sort this or
we can reverse
thus subarray.