

Ques: Segregate 0s and 1s

arr = { 1, 0, 0, 1, 1, 1, 0, 1, 0 1, 1, 0 }

M-1: Count the no. of zeroes & ones

noz = 5, nob = 7

```
for (int i=0; i<noz; i++) {  
    arr[i] = 0  
}  
3  
for (int i=noz; i<n; i++) {  
    arr[i] = 1;  
}
```

Ques: Segregate 0s and 1s (2-pointer technique)

arr = { 1, 0, 0, 1, 1, 1, 0, 1, 0 1, 1, 0 }

0 0 0 0 0 1 1 1 1 1 1 1
j i

Ques: Segregate 0s and 1s

0 0 0 1 0 1
j i

```
while(i < j) {  
    if(arr[i] == 0) i++;  
    if(arr[j] == 1) j--;  
    if(arr[i] == 1 & arr[j] == 0) {  
        swap  
        i++  
        j--  
    }  
}
```

Ques: Wave Array

ArrayList & Vector in Java

{
dynamic arrays → growing array 'Collection Framework'

Array ki problem → fixed size

Ques: Adding One

$$\begin{array}{r}
 0 \ 0 \ 1 \\
 1 \ 8 \ 7 \ 9 \\
 + \ 1 \\
 \hline
 1 \ 8 \ 8 \ 0
 \end{array}$$

$$\begin{array}{r}
 1 \ 1 \ 1 \\
 9 \ 9 \ 9 \\
 + \ 1 \\
 \hline
 1 \ 0 \ 0 \ 0
 \end{array}$$

$$\begin{array}{r}
 0 \ 1 \ 1 \\
 1 \ 2 \ 9 \ 9 \\
 + \ 1 \\
 \hline
 1 \ 3 \ 0 \ 0
 \end{array}$$

if($\text{arr}[n-1] \neq 9$) $\text{arr}[n-1]++;$

$\text{ans} = \{0, 8, 8, 1\}$

↓
reverse

`ArrayList<Integer> ans = new ArrayList<>();`

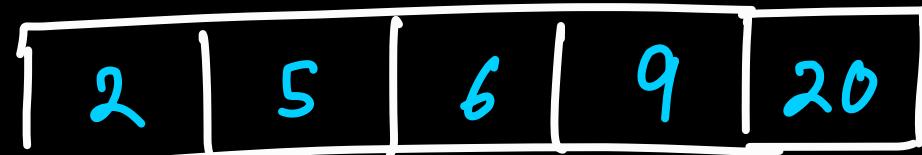
*^{Ques:} Merge 2 Sorted Arrays in a single big array.

$$a = \boxed{2 \mid 5 \mid 6 \mid 9 \mid 20} \quad i = \boxed{ } \quad b = \boxed{1 \mid 3 \mid 4 \mid 5 \mid 7 \mid 8} \quad j = \boxed{ }$$

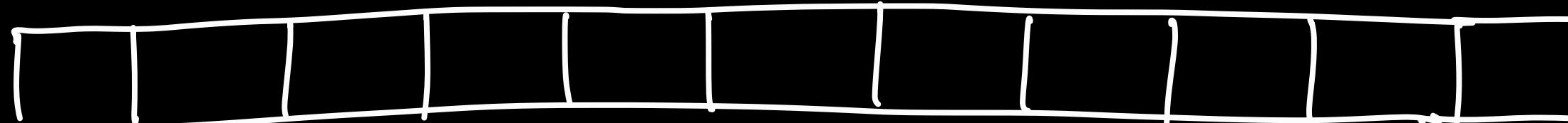
$$c = [1, 2, 3, 4, 5, 5, 6, 7, 8, 9, 20]$$

3 pointer technique

Ques: Merge 2 Sorted Arrays 'Homework'

$a =$  i

$b =$  j

$c =$  k

merge in reverse order

Ques: Sort 0s, 1s and 2s *'Homework'*



THANKYOU
Cuties