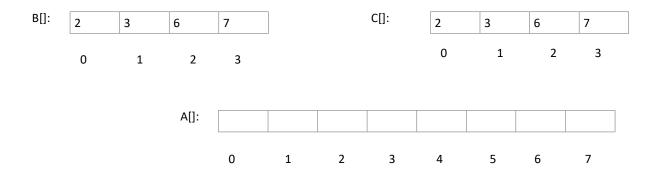# Merge Two Sorted Arrays - Sister Problem of Merge Sort

28 August 2022   21:22
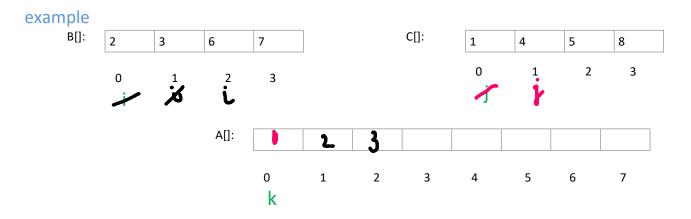
Question: Given two sorted arrays ,make another merge sorted array .

B[]:

2	3	6	7
0	1	2	3

C[]:

2	3	6	7
0	1	2	3

A[]:

0	1	2	3	4	5	6	7

Putting i,j,k at index 0 ,0 ,0 th index of array B,C,A respectively

Compare ith and jth elements and whichever smaller put in k

example

B[]:

2	3	6	7
0	1	2	3

i

C[]:

1	4	5	8
0	1	2	3

j   i

A[]:

1	2	3					
0	1	2	3	4	5	6	7

k

```c
void MergeSortedArrays(int *a,int *b,int*c,int n,int m)
{
    int i=0,j=0,k=0;
    while(i<n and j<m)
    {
        if(b[i]<c[j])
        {
            a[k++]=b[i++];
        }
        else
        {
            a[k++]=c[j++];
        }
    }
    while(j<m)
    {
        a[k++]=c[j++];

    }
    while(i<n)
    {
        a[k++]=b[i++];
    }
}
```