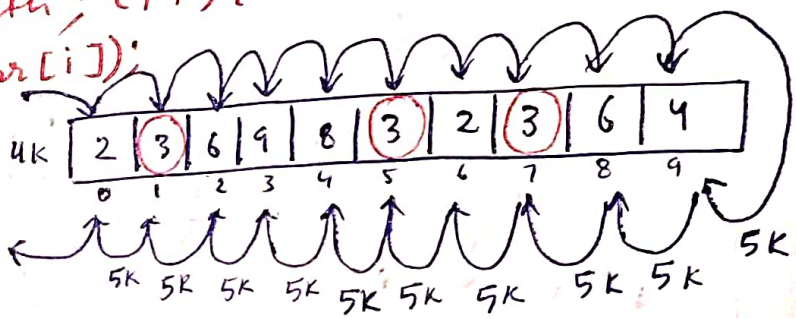
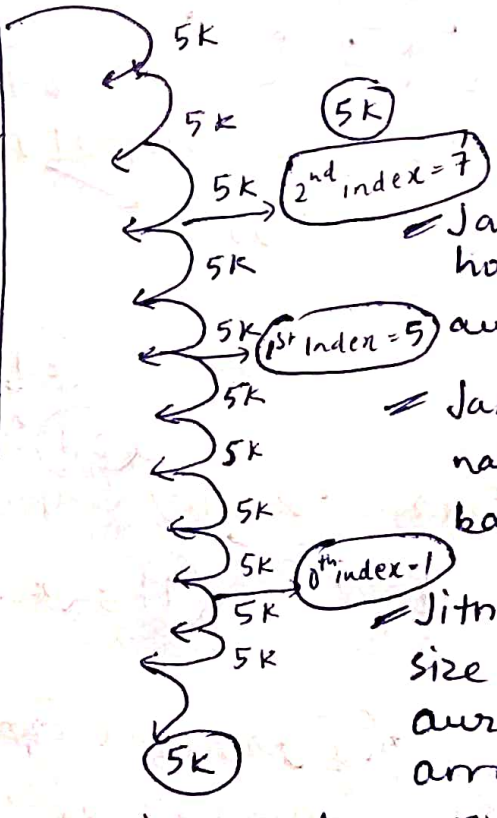
All Indices of An Array

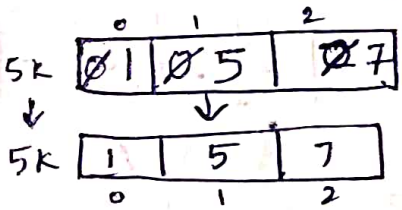
```
p s v m (s[] a){
BufferedReader br = new BufferedReader (new InputStreamReader
                                        (System.in));
int n = Integer.parseInt (br.readLine());
int [] arr = new int [n];
for (int i = 0; i<n; i++) {
   arr [i] = Integer.parseInt (br.readline());
}
int x = Integer.parseInt (br.readline());
int [] iarr = allIndices (arr, x, 0, 0);
if (iarr.length == 0) {
      System.out.println ();
      return;
}
for (int i = 0; i<iarr.length; i++) {
      System.out.println (iarr[i]);
}
}
```



	BASE CASE FOUND			
X	4K	3	10	3
	4K	3	9	3
	4K	3	8	3
	4K	3	7	2
	4K	3	6	2
	4K	3	5	1
	4K	3	4	1
	4K	3	3	1
	4K	3	2	1
	4K	3	1	0
	4K	3	0	0
	arr	x	idx	fsf

fsf → found so far





= Jab value (x) ke equal ho, toh index bhi badaiye aur (fsf) bhi badaiye!

= Jab value (x) ke equal nahi ho keval (idx) badaiye!

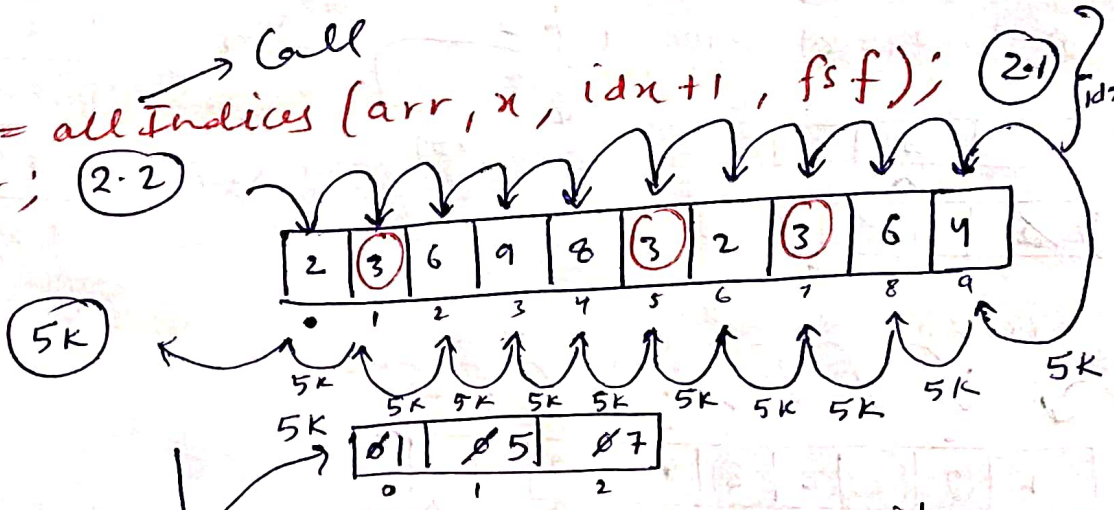
= Jitne (fsf) milengy utne size ka array banega! aur base case vo new array return krega!

= Wapis aty huay 5K (new) array ko fill krengy check krty krty!

```
PS  int[] allIndices(int[]arr, int x, int idx, int fsf)
{
   if(idx==arr.length){
      return new int[fsf];
   }
   if(arr[idx]==x){ (1)
      int[] iarr = allIndices(arr, x, idx+1, fsf+1); (1.1)
      iarr[fsf] = idx; (1.2)
      return iarr; (1.3)
   }
   else{
      int[] iarr = allIndices(arr, x, idx+1, fsf); (2.1)
      return iarr; (2.2)
   }
}
```

idx-↑ fsf-↑

Call



BASE CASE FOUND			
5K	3	10	3
5K	3	9	3
5K	3	8	3
5K	3	7	2
5K	3	6	2
5K	3	5	1
5K	3	4	1
5K	3	3	1
5K	3	2	1
5K	3	1	0
5K	3	0	0
arr	x	idx	fsf