Recursion contd

10 July 2023 20:07

Is array sorted or not. (Ascending)

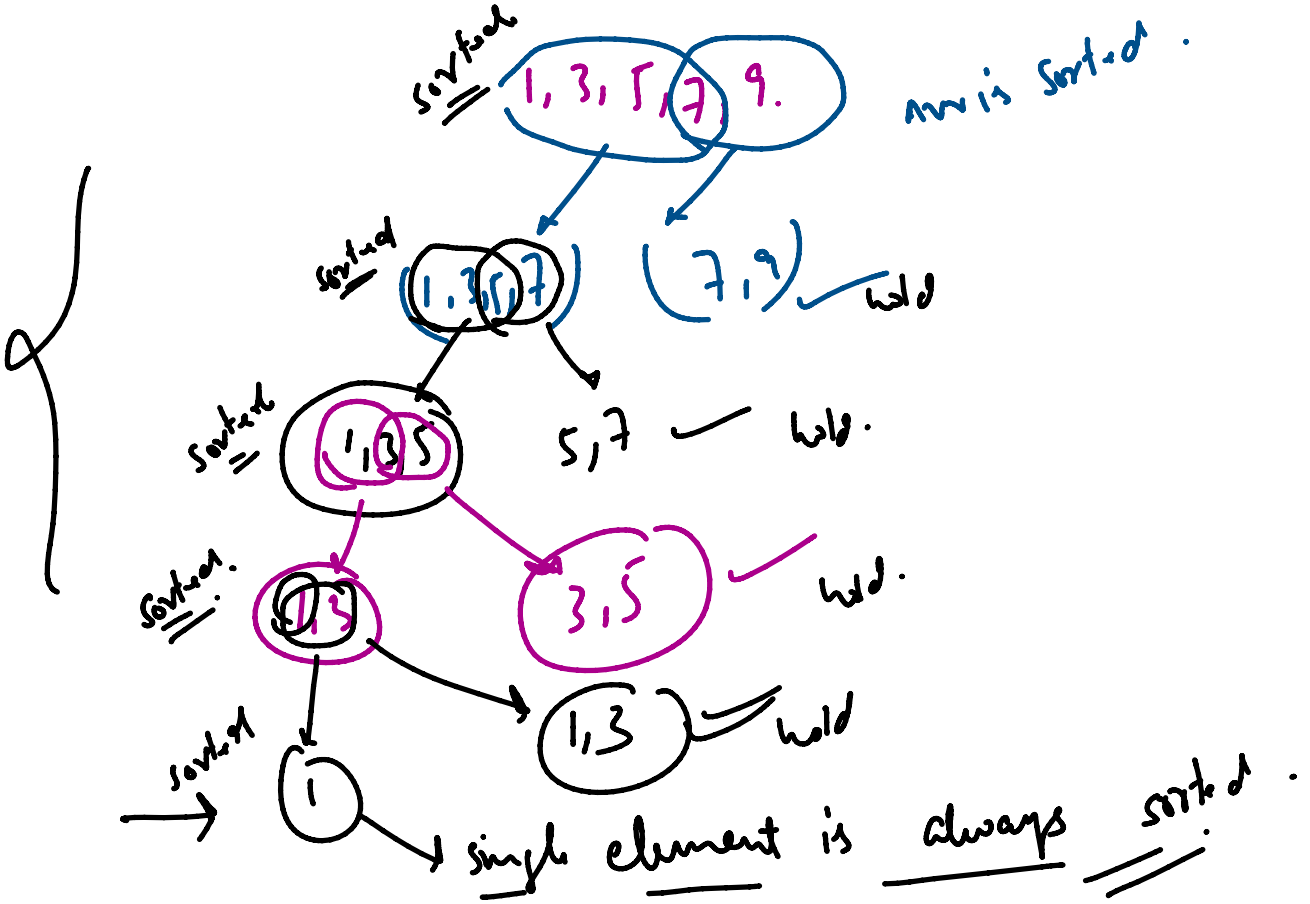
arr[] = {1, 3, 5, 7, 9};

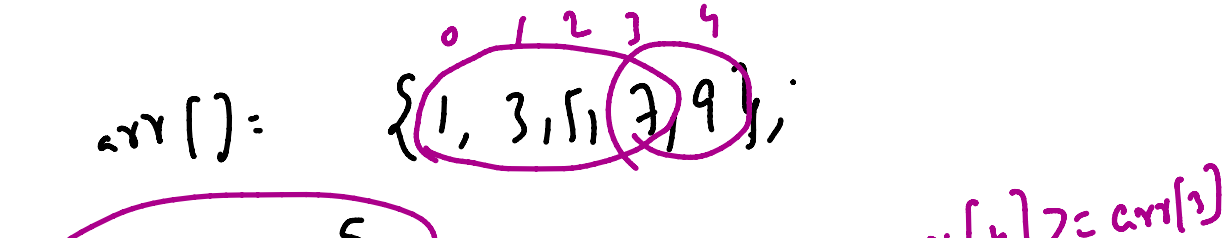
$1 <= 3 <= 5 <= 7 <= 9$

array is sorted.

$[0 \le i \le n-2]$ ——— $arr[i] <= arr[i+1]$

Smaller version of the problem.





n = 5 → arr[4] >= arr[3]
arr[n-1] >= arr[n-2]

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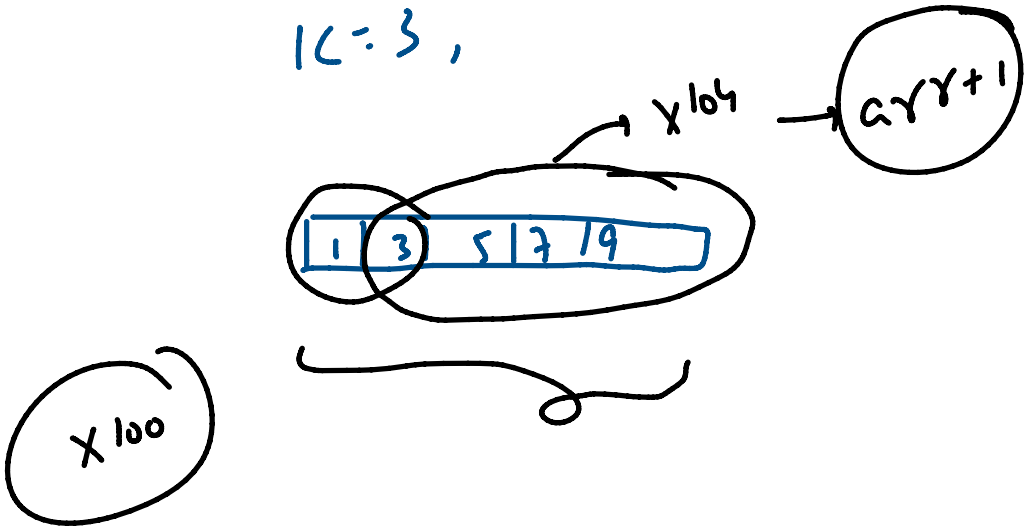
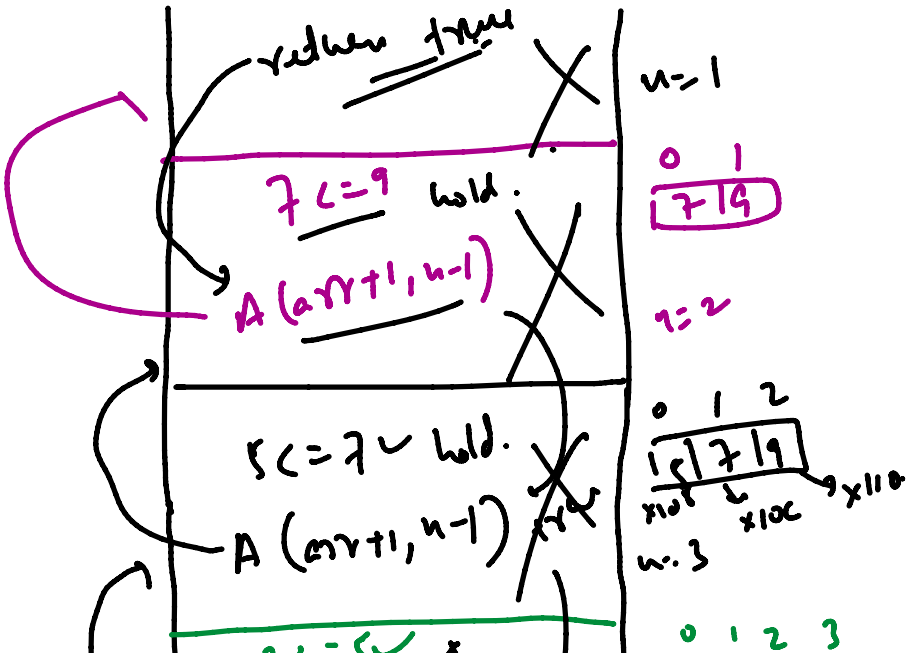
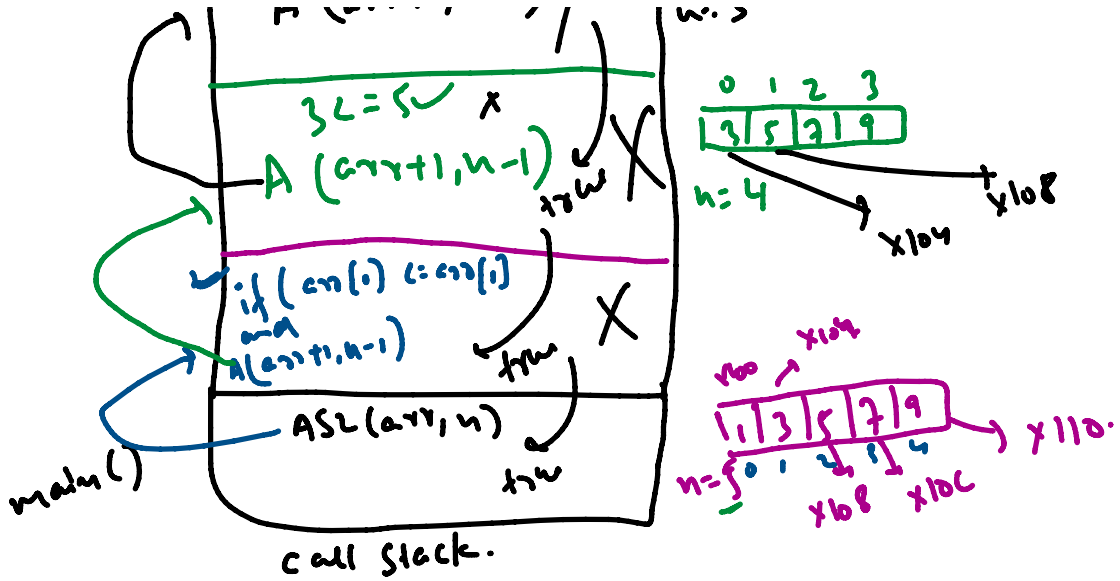
arr[] = {1, 3, 5, 7, 9}

arr[] = {1, 3, 5, 7, 9}

1C = 3,







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n ↓ arr = [1,3,5,7,9]

arr ↑ n ↓

Ap1

1,3,5,7,9.

1,3,5,7.

1,3,5

1,3,

1

Ap2.

1,3,5,7,9.

3,5,7,9,

5,7,9,

7,9

9.

---

arr, n → constant.

[1,3,5,7,9]

5.

5.

0 1 2 3 4

1<=3<=5<=7<=9.

arr[0]<=a[1]<=a[2]<=a[3]<=a[4]

return true.

return true.

return false.

arr[n-2] <= arr[n-1]

n-1

3rd Approach