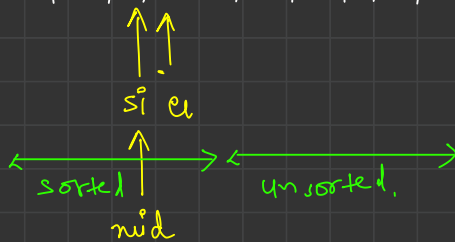




Search in a rotated sorted array

arr[] = { 4, 5, 6, 7, 8, 9, 10, 1, 2, 3 }

ele = 7



if (arr[mid] == ele)
return mid;

else if (arr[si] <= arr[mid])
{

if (ele in left Range)
move left;

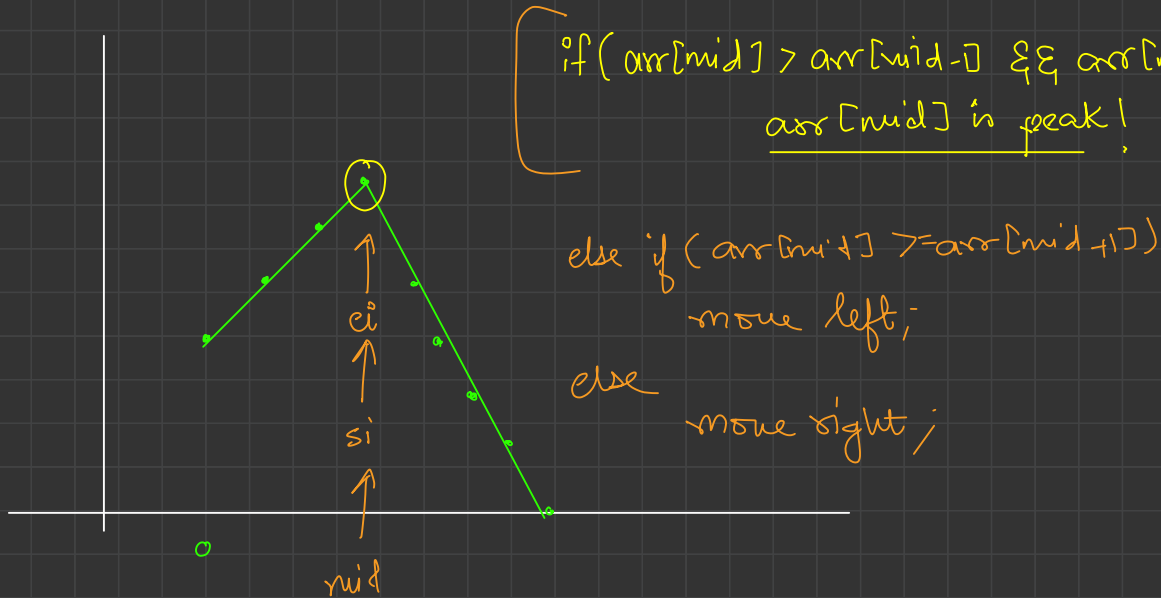
else
move right;

}
else

{
if (ele in Right Range)
move right;

Peak in a Mountain Array

int[] = { 3, 4, 5, 6, 4, 3, 2, 1, 0 }



if (arr[mid] > arr[mid-1] && arr[mid] > arr[mid+1])
arr[mid] is peak!

else if (arr[mid] >= arr[mid+1])
move left;

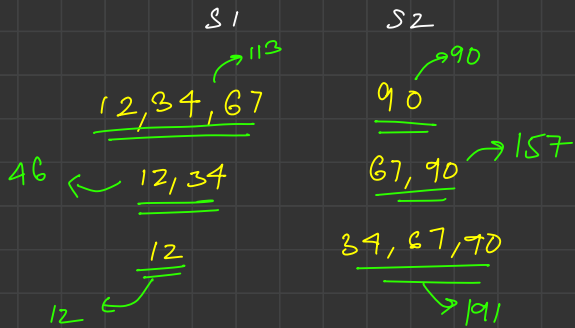
else
move right;

Binary Search Over Solution

Allocate Min^m Pages

books[] = {12, 34, 67, 90}

studs = 2



max

113

157

191

studs = 2

113

books[] = {12, 34, 67, 90}

studs = 2

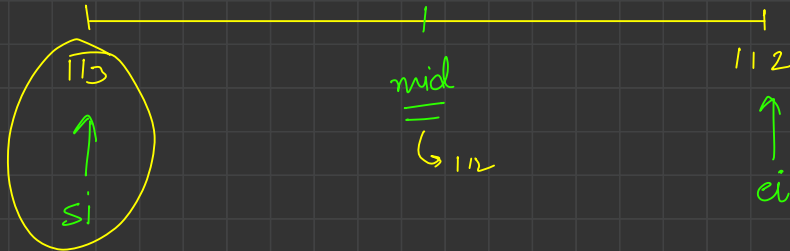
stud = 1

{12, 34, 67, 90}

= 203 pages

stud = 4

way {12} {34} {67} {90}
= 90 pages



pages = ~~146~~ ~~117~~ 113

$$\underline{\text{maxPages} = 146}$$

$$\text{books}[i] = \{ \underset{\nearrow}{12}, \underset{\nearrow}{34}, \underset{\nearrow}{67}, \underset{\uparrow}{90} \}$$

$$\left\{ \begin{array}{l} S1 \rightarrow 12 + 34 + 67 \\ S2 \rightarrow 90 \end{array} \right.$$

$$\underline{\text{maxPages} = 117}$$

$$\text{books}[i] = \{ \underset{\nearrow}{12}, \underset{\nearrow}{34}, \underset{\nearrow}{67}, \underset{\uparrow}{90} \}$$

$$\left\{ \begin{array}{l} S1 \rightarrow 12 + 34 + 67 \\ S2 \rightarrow 90 \end{array} \right.$$

$$\underline{\text{maxPages} = 103}$$

$$\text{books}[i] = \{ \underset{\nearrow}{12}, \underset{\nearrow}{34}, \underset{\nearrow}{67}, \underset{\uparrow}{90} \}$$

$$S1 \rightarrow 12 + 34$$

$$S2 \rightarrow 67$$

$$S3 \rightarrow 90$$

$$\underline{\text{maxPages} = 110}$$

$$\text{books}[i] = \{ \underset{\nearrow}{12}, \underset{\nearrow}{34}, \underset{\nearrow}{67}, \underset{\uparrow}{90} \}$$

$$S1 \rightarrow 12 + 34$$

$$S2 \rightarrow 67$$

$$S3 \rightarrow 90$$

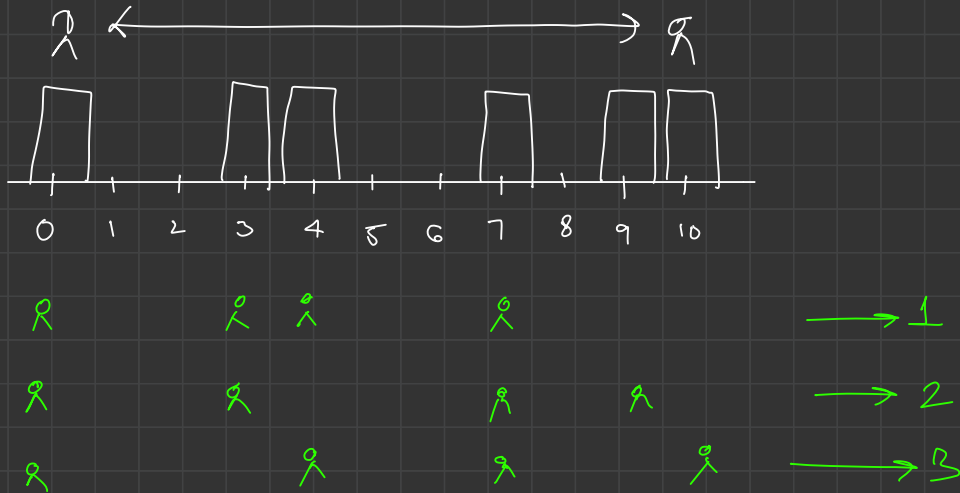
maxPages = 113

books[] = {^s12, 34, 67, 90^e}
 ~~1~~ ~~2~~ ~~3~~ ~~4~~

S1 → 12 + 34 + 67 }
S2 → 90

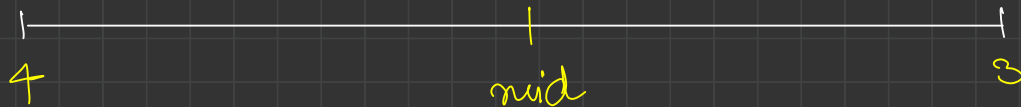
Aggressive Cows

stalls = $\{0, 3, 4, 7, 9, 10\}$ cows = 4



max dist = dist b/w first and last stall

min dist = min dist b/w any two cons stalls



stalls = { 0, 3, 4, 7, 9, 10 }

Below the numbers 0, 3, and 4 in the set, there are small stick figures representing stalls.

mindist = 4

ans = ~~3~~

The text 'ans = 3' is enclosed in a box, with a large 'X' drawn over it, and the box is underlined twice.