

1, 2, 3, 4, 5, 6, 7  $\Rightarrow$  5, 6, 7, 1, 2, 3, 4

$$k = k \% n$$

k = 3  
1, 2, 3, 4

5 % 4  
 $\downarrow$   
1

1, 2, 3, 4, 5, 6, 7  
 $\downarrow n-k$        $\downarrow k$

4, 3, 2, 1, 7, 6, 5  
 $\downarrow$

5, 6, 7, 1, 2, 3, 4

Constraints

1  $\leq$  n  $\leq$  100

TLE

$O(n)$   
 $\Downarrow$   
...

$O(n^2)$   
 $\Downarrow$   
10000

$\leq 10^8$   
 $\Downarrow$

↓  
100

(1000)

$$O(n \times k) \geq 10^8$$

"1234"  
\$#, ?

s = "hello world"  
↑ ↑ ↑  
0 1 2

C/C++  
Mutable

Java, JS, Py  
Immutable

s[2] = 'P' X

[2, 3, 5, 9, 12, 35, 42]  
0 1 2 3 4 5 6

arr. slice (start id, end id)  $\geq$  start < end

(3, 5)  $\rightarrow O(n)$

Substring vs Subsequence

"hello world"  
↑ ↑

h l o - w r d

↑

↑

"hello"

"hello world"

Prefix vs Suffix

h	d
he	ld
hel	rl
hell	orld
hello	

"(t)oday is Saturday"  
↓ ↓  
"Today Is Saturday"

→ identify start of a new word?  
→ capitalize a letter?

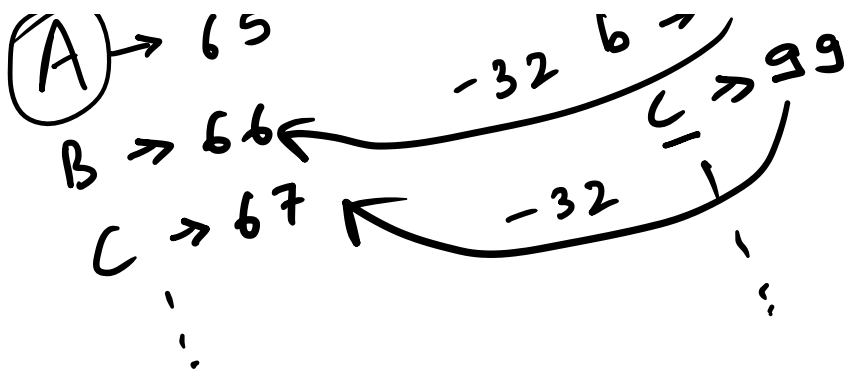
⊖

→ after space  
→ after full stop  
→  $i == 0$

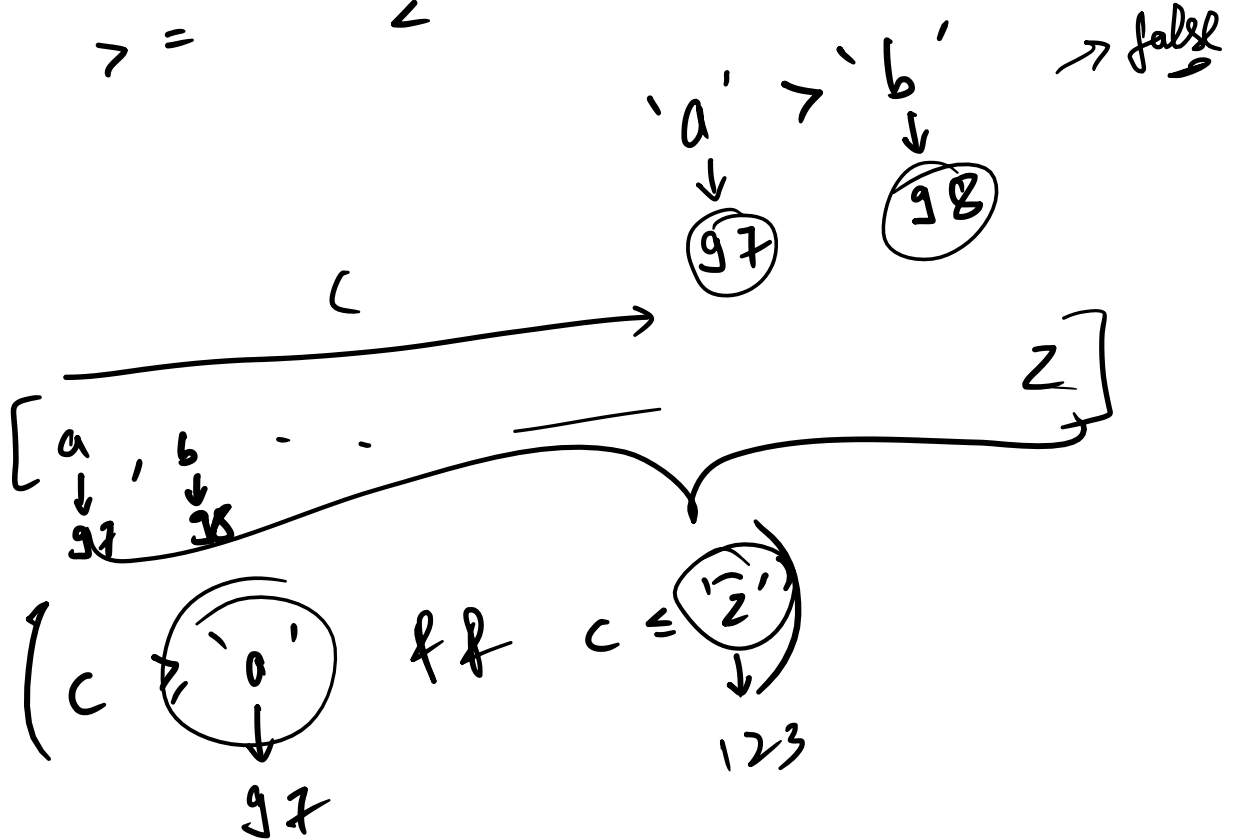
ASCII values

(A) → 65  
-32  
(a) → 97  
-32  
b → 99

(0) → 48  
(1) → 49



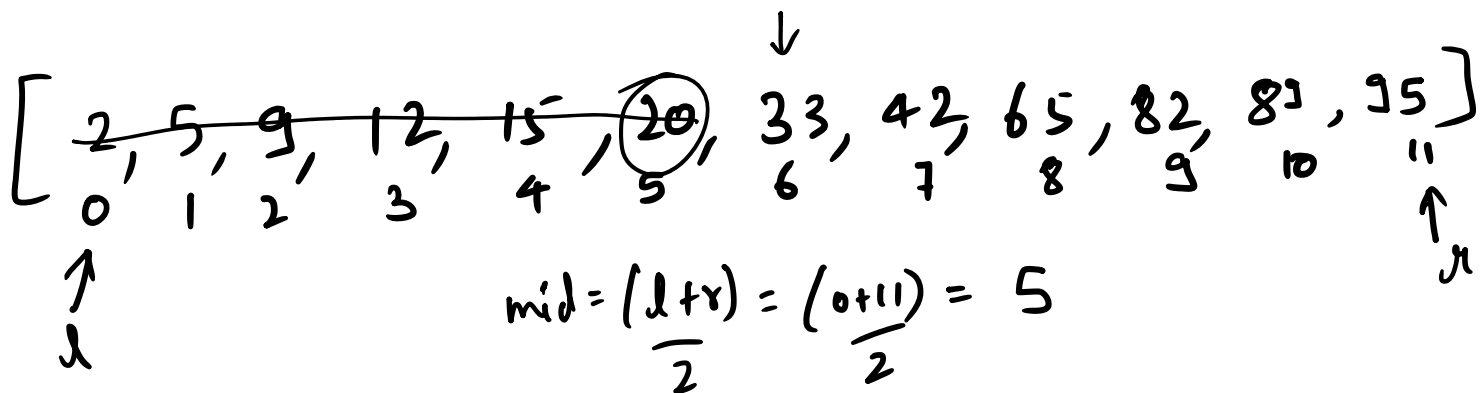
$> =$        $<$

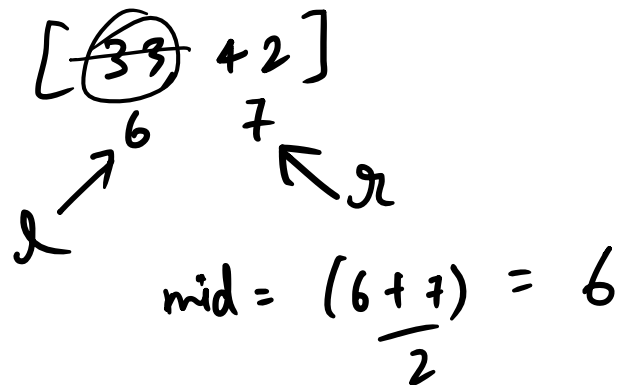
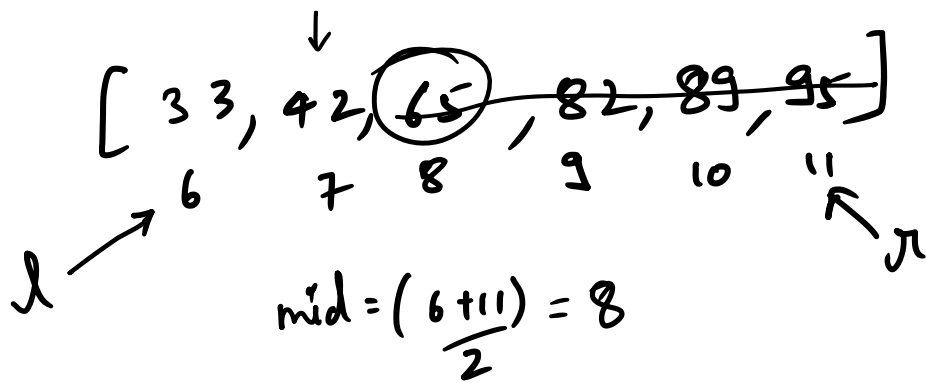


## Binary Search

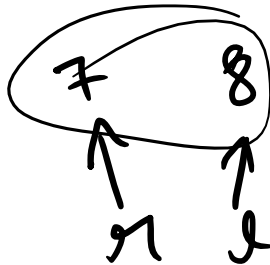
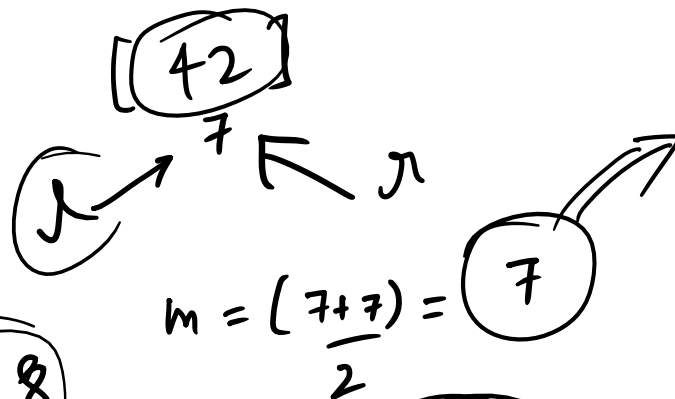
$\rightarrow$  sorted

$x = 42$





43



$l \leq r$