Binary Search

Requires sorted array and tc is O(logn)

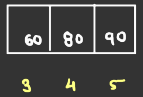
And follows divide and conquer strategy

0+5//2 ⟶ 2 # middle element

target element = 90

90 != 40 But 90 is greater than mid element

So we gonna eliminate first half of array



⟶ # second half of array

3+5//2 = 4

90 != 80 90 greater than 80

gonna eliminate first half of array

90 == 90 Now we can return index of element that we found.

Example

target ⟶ 2

start = 0, end = 3

3 ! = 2 2 smallew than 3 eliminate right pawt

start = 0, end = 0

1 ! = 2 2 gweatew than 1 eliminate left pawt

start ⟶ mid + 1

0 + 1

final output ⟶ 1