**Binary Search :**

Write a function that takes in a sorted array of integers as well as target integer.

The function should use binary search algo to determine if the target integer is contained in the array and should return its index if it is, otherwise -1

Sample Input:

array = [ 0, 1, 21, 33, 45,45,61,71, 72, 73 ]

target = 33

Sample Output:

3

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**Search For Range :**

Write a function that takes in a sorted array of integers as well as a target integer.

The function should use a variation of the binary search algorithm to find a range of indices in between which the target number is contained in the array and should return  this range in the form of an array

The first number in the output array should represent the first index at which the target number is located, while the second number should represent the last index at which the target number is located. The function should return [ -1, -1 ] if the integer is not contained in the array

Sample Input :

array = [ 0 ,1,21,33,45,45,45,45,45,45,61,71,73]

target = 45

Sample Output :

[ 4 , 9 ]

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**Index Equals Value :**

Write a function that takes in a sorted array of distinct integers and return the first index in the array that is equal to the value at that index. In the others words, your function should return the minimum index where index == array[index]

If there is no such index, your function should return -1

Sample Input

Array = [ -5, -3 , 0 , 3 , 4, 5, 9 ]

Sample Output

3

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