**COUNTING SORT:**

def counting\_sort(arr):

min\_val = min(arr)

max\_val = max(arr)

count = [0] \* (max\_val - min\_val + 1)

print(count)

for num in arr:

count[num - min\_val] += 1

sorted\_array = []

for i in range(len(count)):

sorted\_array.extend([i + min\_val] \* count[i])

print(sorted\_array)

return sorted\_array

arr = list(map(int, input("Enter array elements: ").split()))

result = counting\_sort(arr)

print(result)

**LINEAR SEACH:**

def linear\_search(arr,n):

for i in range(len(arr)):

if arr[i] == n:

return "Yes available"

return "Not available"

arr = list(map(int, input("Enter array elements: ").split()))

n = int(input("Enter target element: "))

result = linear\_search(arr,n)

print(result)

**BINARY SEARCH:**

def binary\_search(arr, target):

left, right = 0, len(arr) - 1

while left <= right:

mid = (left + right) // 2

if arr[mid] == target:

return mid

elif arr[mid] < target:

left = mid + 1

else:

right = mid - 1

return -1

arr = list(map(int,input("Enter array elements: ").split()))

target = int(input("Enter target element: "))

result = binary\_search(arr,target)

if result == -1:

print("Not available..")

else:

print("Yes Available.. at index: ",result)