122) Binary search

CODE:

```
def binary_search(arr, x):
    arr.sort()
    low = 0
    high = len(arr) - 1

    while low <= high:
        mid = (low + high) // 2

        if arr[mid] == x:
            return f"Element {x} is found at position {mid}"
        elif arr[mid] < x:
            low = mid + 1
        else:
            high = mid - 1

    return f"Element {x} is not found in the array"

# Test the binary search function
arr = [3, 4, 6, -9, 10, 8, 9, 30]
x = 10
print(binary_search(sorted(arr), x))
```

OUTPUT:

TIME COMPLEXITY : O(nlogn)