BINARY SEARCH CODE

arr = eval(input("Enter a sorted array (e.g., [2, 4, 6, 8, 10]): "))

target = int(input("Enter the element to search: "))

low = 0

high = len(arr) - 1

comparisons = 0

found = False

while low <= high:

comparisons += 1

mid = (low + high) // 2

if arr[mid] == target:

print(f"Element found at index {mid}")

found = True

break

elif arr[mid] < target:

low = mid + 1

else:

high = mid - 1

if not found:

print("Element not found.")

print(f"Total comparisons: {comparisons}")