def linear\_search(arr, key):

for i, element in enumerate(arr):

if element == key:

return i

return -1

def binary\_search(arr, key):

low, high = 0, len(arr) - 1

while low <= high:

mid = (low + high) // 2

mid\_element = arr[mid]

if mid\_element == key:

return mid

elif mid\_element < key:

low = mid + 1

else:

high = mid - 1

return -1

def search\_element(arr, key, search\_function):

index = search\_function(arr, key)

if index != -1:

return f"Element {key} found at index {index}."

else:

return f"Element {key} not found in the list."

if \_name\_ == "\_main\_":

user\_list = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]

print("Choose search type:")

print("1. Linear Search")

print("2. Binary Search")

choice = int(input("Enter choice (1 or 2): "))

if choice == 1:

result = search\_element(user\_list, int(input("Enter element to search: ")), linear\_search)

elif choice == 2:

result = search\_element(user\_list, int(input("Enter element to search: ")), binary\_search)

else:

result = "Invalid choice. Please choose 1 or 2."

print(result)