To write a Python Program to perform binary search.

Python

```
def binary_search(alist, key):
    """Search key in alist[start... end - 1]."""
    start = 0
    end = len(alist)
    while start < end:
        mid = (start + end) // 2
        if alist[mid] == key:
            return mid
        elif alist[mid] < key:
            start = mid + 1
        else:
            end = mid
    return -1

alist = input('Enter the sorted list of numbers: ')
alist = alist.split()
alist = [int(x) for x in alist]

key = int(input('Enter the number to search for: '))

index = binary_search(alist, key)

if index < 0:
    print('{} was not found.'.format(key))
else:
    print('{} was found at index {}.'.format(key, index))
```

OUTPUT:

Enter the sorted list of numbers: 1 2 3 4 5 6 7 8 9

The number to search for: 4

4 was found at index 3.

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