* + 1. (DAY 7)

1.Write a program of selection sort:

Python program:

def selection\_sort(lst):

for i in range(len(lst)):

min\_idx=i

for j in range(i+1,len(lst)):

if lst[j]<lst[min\_idx]:

min\_idx=j

lst[i],lst[min\_idx]=lst[min\_idx],lst[i]

for i in range(len(lst)):

print(lst[i],end='')

lst=list(map(int,input().split()))

selection\_sort(lst)

OUTPUT:

14 8 2 19 69 1

1 2 8 14 19 69

2.Write a program of quick sort:

Python program:

def quick\_sort(lst):

if len(lst)<1:

return lst

else:

pv=lst[0]

left\_lst=[i for i in lst if i<pv]

right\_lst=[i for i in lst if i>pv]

return quick\_sort(left\_lst)+[pv]+quick\_sort(right\_lst)

lst=list(map(int,input().split()))

quick\_sort(lst)

OUTPUT:

36 67 12 90 32

12 32 36 67 90

3.Write a program of merge sort:

Python program:

def merge\_sort(lst):

if len(lst)<=1:

return lst

else:

mid=len(lst)//2

left=lst[:mid]

right=lst[mid:]

merge\_sort[left]

merge\_sort[right]

i=j=k=0

while i<len(left) and j<len[right]:

if left[i]<right[j]:

lst[k]=left[i]

i+=1

k+=1

else:

lst[k]=right[j]

i+=1

k+=1

while i<len(left):

lst[k]=left[i]

i+=1

k+=1

while i<len(right):

lst[k]=right[j]

i+=1

k+=1

lst=list(map(int,input().split()))

merge\_sort(lst)

print(lst)

OUTPUT:

14 8 2 19 69 1

1 2 8 14 19 69

4.Write a program of insertion sort:

Python program:

l=[6,3,9,2,1]

c=0

for i in range(len(l)-1):

for j in range(i+1,len(l)):

if l[i]>l[j]:

c+=1

print(c)

OUTPUT: 8