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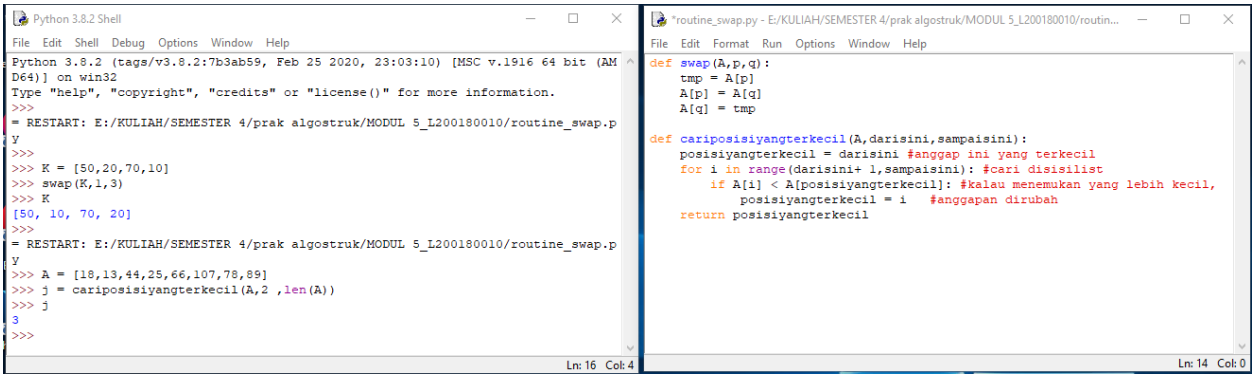
Kelas : A

Matkul : Praktikum Algoritma dan Struktur Data

LATIHAN MODUL 5

PENGURUTAN

Routine swap

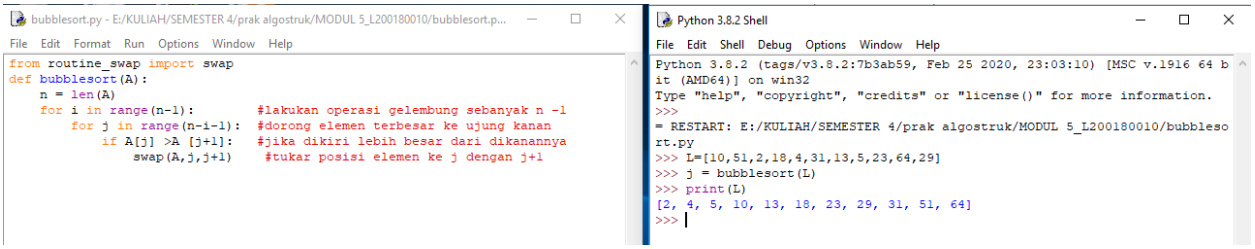


```
Python 3.8.2 Shell
File Edit Shell Debug Options Window Help
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 23:03:10) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:/KULIAH/SEMESTER 4/prak algostruk/MODUL 5_L200180010/routine_swap.py
>>>
>>> K = [50,20,70,10]
>>> swap(K,1,3)
>>> K
[50, 10, 70, 20]
>>>
= RESTART: E:/KULIAH/SEMESTER 4/prak algostruk/MODUL 5_L200180010/routine_swap.py
>>> A = [18,13,44,25,66,107,78,89]
>>> j = cariposisiyangterkecil(A,2 ,len(A))
>>> j
3
>>>
```

```
*routine_swap.py - E:/KULIAH/SEMESTER 4/prak algostruk/MODUL 5_L200180010/routin...
File Edit Format Run Options Window Help
def swap(A,p,q):
    tmp = A[p]
    A[p] = A[q]
    A[q] = tmp

def cariposisiyangterkecil(A,darisini,sampaisini):
    posisiyangterkecil = darisini #anggap ini yang terkecil
    for i in range(darisini+ 1,sampaisini): #cari disisilist
        if A[i] < A[posisiyangterkecil]: #kalau menemukan yang lebih kecil,
            posisiyangterkecil = i   #anggapan dirubah
    return posisiyangterkecil
```

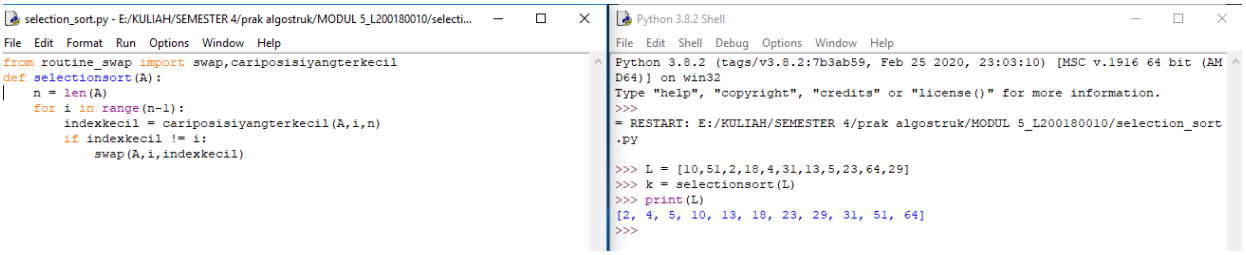
Bubble sort



```
bubblesort.py - E:/KULIAH/SEMESTER 4/prak algostruk/MODUL 5_L200180010/bubblesort.p...
File Edit Format Run Options Window Help
from routine_swap import swap
def bubblesort(A):
    n = len(A)
    for i in range(n-1):        #lakukan operasi gelembung sebanyak n -1
        for j in range(n-i-1):  #dorong elemen terbesar ke ujung kanan
            if A[j] >A [j+1]:   #jika dikiri lebih besar dari dikanannya
                swap(A,j,j+1)    #tukar posisi elemen ke j dengan j+1
```

```
Python 3.8.2 Shell
File Edit Shell Debug Options Window Help
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 23:03:10) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:/KULIAH/SEMESTER 4/prak algostruk/MODUL 5_L200180010/bubblesort.py
>>> L=[10,51,2,18,4,31,13,5,23,64,29]
>>> j = bubblesort(L)
>>> print(L)
[2, 4, 5, 10, 13, 18, 23, 29, 31, 51, 64]
>>>
```

Selection sort



```
selection_sort.py - E:/KULIAH/SEMESTER 4/prak algostruk/MODUL 5_L200180010/selecti...
File Edit Format Run Options Window Help
from routine_swap import swap,cariposisiyangterkecil
def selectionsort(A):
    n = len(A)
    for i in range(n-1):
        indexkecil = cariposisiyangterkecil(A,i,n)
        if indexkecil != i:
            swap(A,i,indexkecil)
```

```
Python 3.8.2 Shell
File Edit Shell Debug Options Window Help
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 23:03:10) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:/KULIAH/SEMESTER 4/prak algostruk/MODUL 5_L200180010/selection_sort.py

>>> L = [10,51,2,18,4,31,13,5,23,64,29]
>>> k = selectionsort(L)
>>> print(L)
[2, 4, 5, 10, 13, 18, 23, 29, 31, 51, 64]
>>>
```

Insertion sort