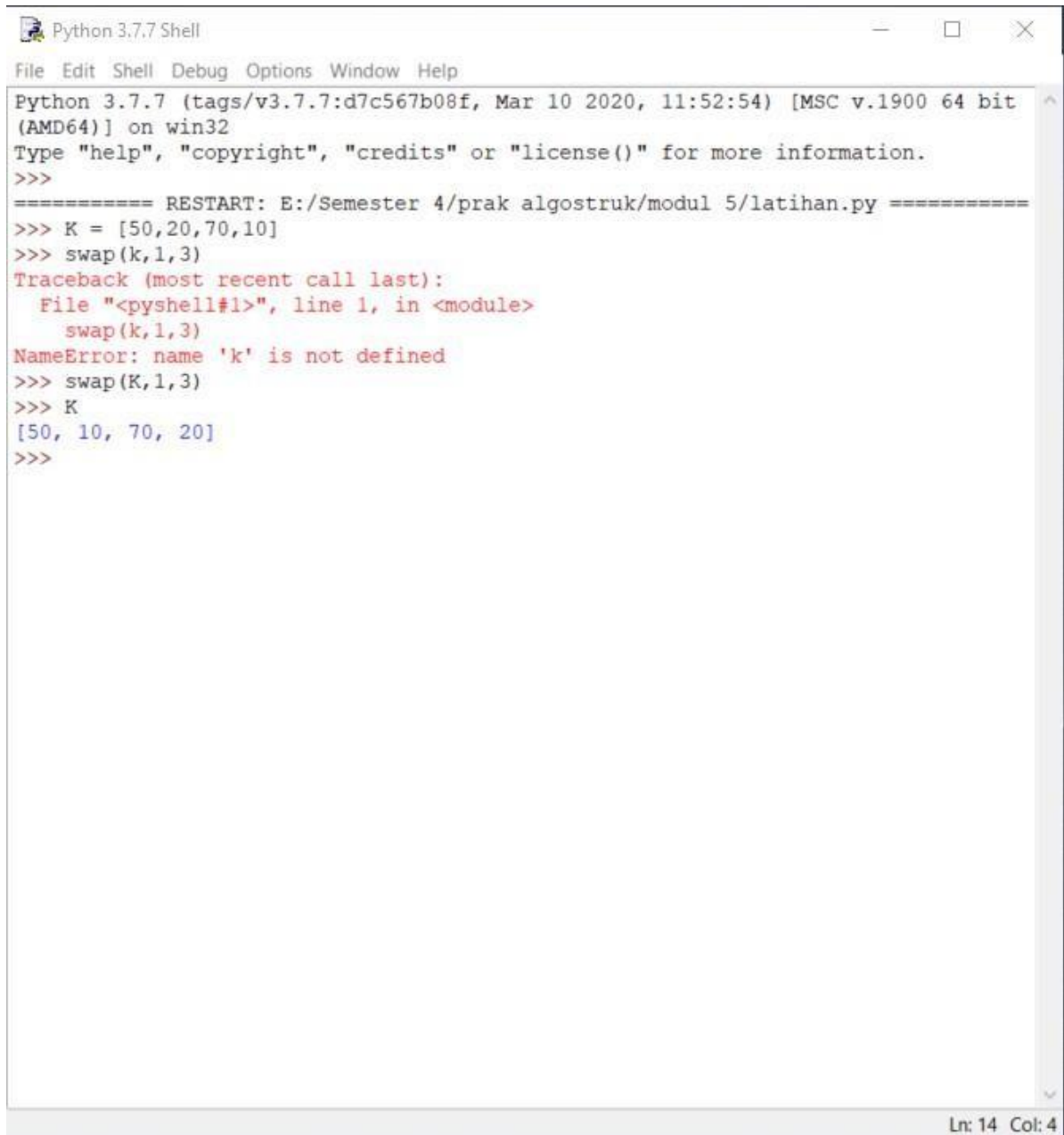


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PRAK ASD MODUL 5 LATIHAN



```
Python 3.7.7 Shell
File Edit Shell Debug Options Window Help
Python 3.7.7 (tags/v3.7.7:d7c567b08f, Mar 10 2020, 11:52:54) [MSC v.1900 64 bit
(AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: E:/Semester 4/prak algostruk/modul 5/latihan.py =====
>>> K = [50,20,70,10]
>>> swap(k,1,3)
Traceback (most recent call last):
  File "<pyshell#1>", line 1, in <module>
    swap(k,1,3)
NameError: name 'k' is not defined
>>> swap(K,1,3)
>>> K
[50, 10, 70, 20]
>>>
```

Ln: 14 Col: 4

```
Python 3.7.7 Shell
File Edit Shell Debug Options Window Help
Python 3.7.7 (tags/v3.7.7:d7c567b08f, Mar 10 2020, 11:52:54) [MSC v.1900 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: E:/Semester 4/prak algostruk/modul 5/latihan.py =====
>>> A = [18,13,44,25,66,107,78,89]
>>> j = cariPosisiYangTerkecil(A,2,len(A))
>>> j
3
>>> |

latihan.py - E:/Semester 4/prak algostruk/modul 5/latihan.py (3.7.7)
File Edit Format Run Options Window Help
def cariPosisiYangTerkecil(A,dariSini,sampaiSini):
    posisiYangTerkecil = dariSini
    for i in range(dariSini+1, sampaiSini):
        if A[i] < A[posisiYangTerkecil]:
            posisiYangTerkecil = i
    return posisiYangTerkecil

Ln: 9 Col: 4
Ln: 6 Col: 29
```

Bubble sort

```
Python 3.7.7 Shell
File Edit Shell Debug Options Window Help
Python 3.7.7 (tags/v3.7.7:d7c567b08f, Mar 10 2020, 11:52:54) [MSC v.1900 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: E:/Semester 4/prak algostruk/modul 5/latihan.py =====
[50, 20, 70, 30]
swap!
[50, 30, 70, 20]

[10, 51, 2, 18, 4, 31, 13, 5, 23, 64, 29]
posisi terkecil nya
2
>>> bubbleSort(A)
>>> print(A)
[2, 4, 5, 10, 13, 18, 23, 29, 31, 51, 64]
>>> |

latihan.py - E:/Semester 4/prak algostruk/modul 5/latihan.py (3.7.7)
File Edit Format Run Options Window Help
def swap(A,p,q) :
    tmp = A[p]
    A[p] = A[q]
    A[q] = tmp

K = [50,20,70,30]
print(K)
print("swap!")
swap(K,1,3)
print(K)
print()

def cariPosisiYangTerkecil(A, dariSini, sampaiSini) :
    posisiYangTerkecil = dariSini
    for i in range(dariSini+1, sampaiSini):
        if A[i] < A[posisiYangTerkecil] :
            posisiYangTerkecil = i
    return posisiYangTerkecil

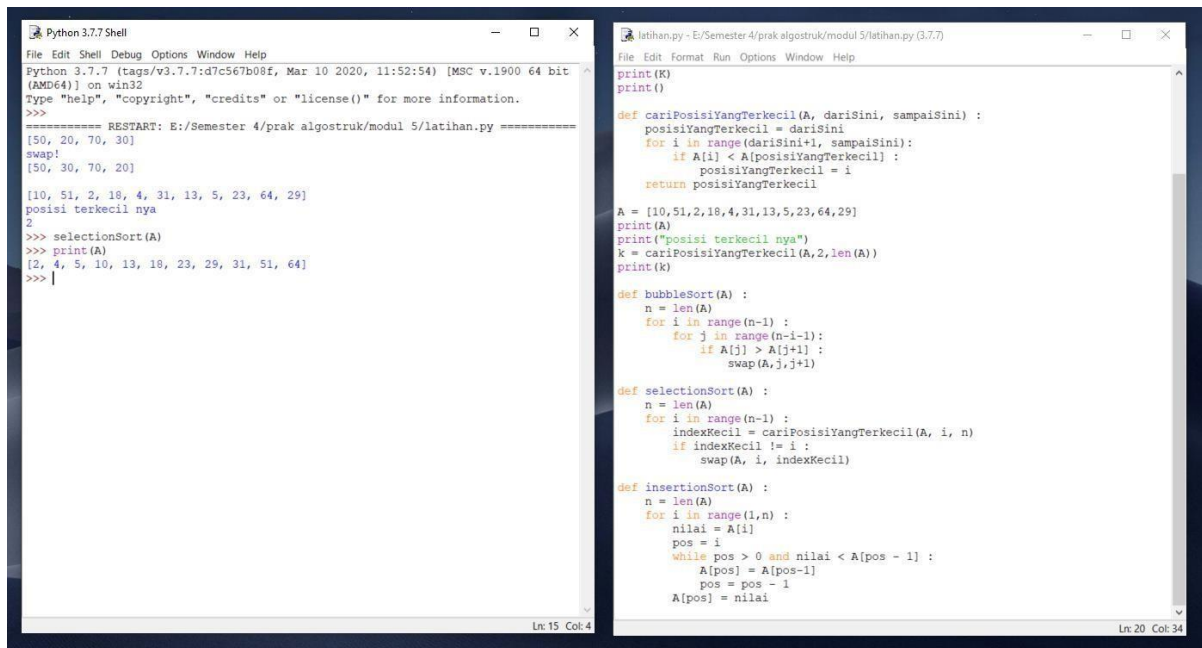
A = [10,51,2,18,4,31,13,5,23,64,29]
print(A)
print("posisi terkecil nya")
k = cariPosisiYangTerkecil(A,2,len(A))
print(k)

def bubbleSort(A) :
    n = len(A)
    for i in range(n-1) :
        for j in range(n-i-1):
            if A[j] > A[j+1] :
                swap(A,j,j+1)

def selectionSort(A) :
    n = len(A)
    for i in range(n-1) :
        indexKecil = cariPosisiYangTerkecil(A, i, n)
        if indexKecil != i :
            swap(A, i, indexKecil)

def insertionSort(A) :
```

SelectionSort



The image shows two side-by-side Python 3.7.7 Shell windows. The left window displays the execution of a Selection Sort program. The right window shows the source code for the program, which includes functions for finding the minimum element and performing the swap, along with the main sorting loop.

```
Python 3.7.7 Shell
File Edit Shell Debug Options Window Help
Python 3.7.7 (tags/v3.7.7:d7c567b08f, Mar 10 2020, 11:52:54) [MSC v.1900 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: E:/Semester 4/prak algostruk/modul 5/latihan.py =====
[50, 20, 70, 30]
swap!
[50, 30, 70, 20]

[10, 51, 2, 18, 4, 31, 13, 5, 23, 64, 29]
posisi terkecil nya
2
>>> selectionSort(A)
>>> print(A)
[2, 4, 5, 10, 13, 18, 23, 29, 31, 51, 64]
>>>

latihan.py - E:/Semester 4/prak algostruk/modul 5/latihan.py (3.7.7)
File Edit Format Run Options Window Help
print(K)
print()

def cariPosisiYangTerkecil(A, dariSini, sampaiSini):
    posisiYangTerkecil = dariSini
    for i in range(dariSini+1, sampaiSini):
        if A[i] < A[posisiYangTerkecil]:
            posisiYangTerkecil = i
    return posisiYangTerkecil

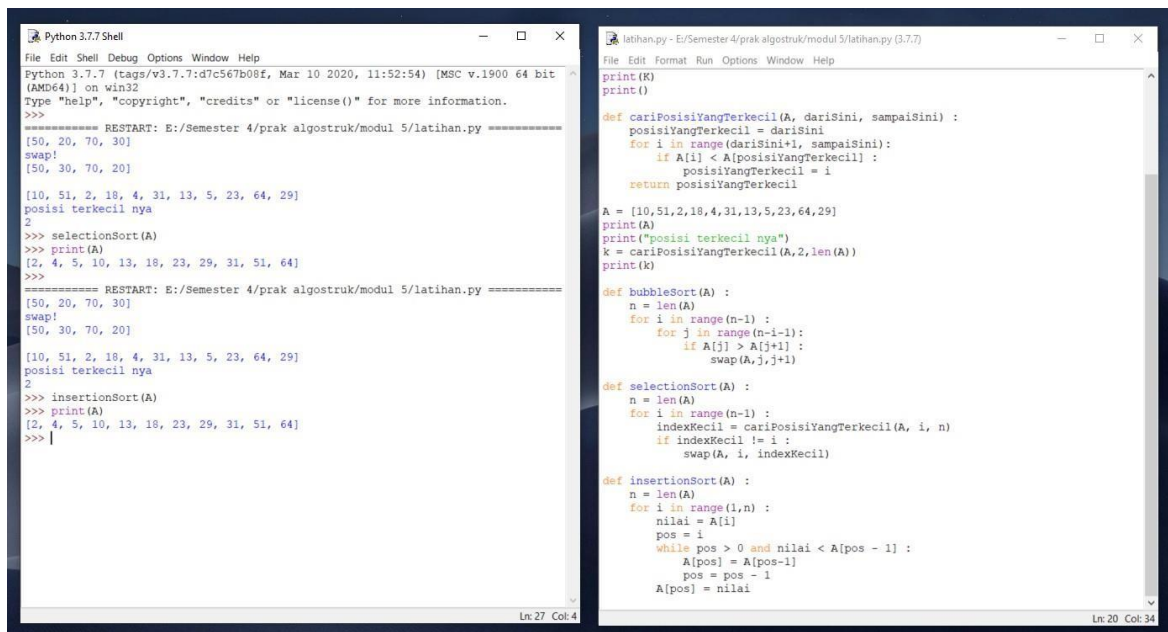
A = [10, 51, 2, 18, 4, 31, 13, 5, 23, 64, 29]
print(A)
print("posisi terkecil nya")
k = cariPosisiYangTerkecil(A, 2, len(A))
print(k)

def bubbleSort(A):
    n = len(A)
    for i in range(n-1):
        for j in range(n-i-1):
            if A[j] > A[j+1]:
                swap(A, j, j+1)

def selectionSort(A):
    n = len(A)
    for i in range(n-1):
        indexKecil = cariPosisiYangTerkecil(A, i, n)
        if indexKecil != i:
            swap(A, i, indexKecil)

def insertionSort(A):
    n = len(A)
    for i in range(1, n):
        nilai = A[i]
        pos = i
        while pos > 0 and nilai < A[pos - 1]:
            A[pos] = A[pos-1]
            pos = pos - 1
        A[pos] = nilai
```

insertionSort



The image shows two side-by-side Python 3.7.7 Shell windows. The left window displays the execution of an Insertion Sort program. The right window shows the source code for the program, which includes functions for finding the minimum element and performing the swap, along with the main sorting loop.

```
Python 3.7.7 Shell
File Edit Shell Debug Options Window Help
Python 3.7.7 (tags/v3.7.7:d7c567b08f, Mar 10 2020, 11:52:54) [MSC v.1900 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: E:/Semester 4/prak algostruk/modul 5/latihan.py =====
[50, 20, 70, 30]
swap!
[50, 30, 70, 20]

[10, 51, 2, 18, 4, 31, 13, 5, 23, 64, 29]
posisi terkecil nya
2
>>> selectionSort(A)
>>> print(A)
[2, 4, 5, 10, 13, 18, 23, 29, 31, 51, 64]
>>>
===== RESTART: E:/Semester 4/prak algostruk/modul 5/latihan.py =====
[50, 20, 70, 30]
swap!
[50, 30, 70, 20]

[10, 51, 2, 18, 4, 31, 13, 5, 23, 64, 29]
posisi terkecil nya
2
>>> insertionSort(A)
>>> print(A)
[2, 4, 5, 10, 13, 18, 23, 29, 31, 51, 64]
>>>

latihan.py - E:/Semester 4/prak algostruk/modul 5/latihan.py (3.7.7)
File Edit Format Run Options Window Help
print(K)
print()

def cariPosisiYangTerkecil(A, dariSini, sampaiSini):
    posisiYangTerkecil = dariSini
    for i in range(dariSini+1, sampaiSini):
        if A[i] < A[posisiYangTerkecil]:
            posisiYangTerkecil = i
    return posisiYangTerkecil

A = [10, 51, 2, 18, 4, 31, 13, 5, 23, 64, 29]
print(A)
print("posisi terkecil nya")
k = cariPosisiYangTerkecil(A, 2, len(A))
print(k)

def bubbleSort(A):
    n = len(A)
    for i in range(n-1):
        for j in range(n-i-1):
            if A[j] > A[j+1]:
                swap(A, j, j+1)

def selectionSort(A):
    n = len(A)
    for i in range(n-1):
        indexKecil = cariPosisiYangTerkecil(A, i, n)
        if indexKecil != i:
            swap(A, i, indexKecil)

def insertionSort(A):
    n = len(A)
    for i in range(1, n):
        nilai = A[i]
        pos = i
        while pos > 0 and nilai < A[pos - 1]:
            A[pos] = A[pos-1]
            pos = pos - 1
        A[pos] = nilai
```