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Kelas : E

Modul 5

Latihan

Python 3.8.2 Shell

```
Python 3.8.2 (v3.8.2:7b3ab5921f, Feb 24 2020, 17:52:18)
[Clang 6.0 (clang-600.0.57)] on darwin
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: /Users/ryananindityamanggala/Documents/lat1.py ==========
>>> swap(A,1,2)
>>> K
[50, 20, 70, 10]
>>> swap(K,1,2)
>>> K
[50, 70, 20, 10]
>>> j=cariPosisiTerkecil(A,2,len(A))
>>> A
[18, 44, 13, 25, 66, 107, 78, 89]
>>> j
2
>>> bubbleSort(L)
>>> L
[2, 4, 5, 10, 13, 18, 23, 29, 31, 51, 64]
>>> selectionSort(L)
Traceback (most recent call last):
  File "<pyshell#9>", line 1, in <module>
    selectionSort(L)
  File "/Users/ryananindityamanggala/Documents/lat1.py", line 33, in selectionSo
rt
    indexKecil = cariPosisiYangTerKecil(A,i,n)
NameError: name 'cariPosisiYangTerKecil' is not defined
>>>
========== RESTART: /Users/ryananindityamanggala/Documents/lat1.py ==========
>>> selectionSort(L)
Traceback (most recent call last):
  File "<pyshell#10>", line 1, in <module>
    selectionSort(L)
  File "/Users/ryananindityamanggala/Documents/lat1.py", line 33, in selectionSo
rt
    indexKecil = cariPosisiTerKecil(A,i,n)
NameError: name 'cariPosisiTerKecil' is not defined
>>>
========== RESTART: /Users/ryananindityamanggala/Documents/lat1.py ==========
>>> selectionSort(L)
>>> L
[2, 4, 5, 10, 13, 18, 23, 29, 31, 51, 64]
>>> insertionSort(L)
>>> L
[2, 4, 5, 10, 13, 18, 23, 29, 31, 51, 64]
>>> insertionSort(A)
>>> A
[13, 18, 25, 44, 66, 78, 89, 107]
>>>
```

Ln: 12 Col: 0

lat1.py - /Users/ryananindityamanggala/Documents/lat1.py (3.8.2)

```
#Contoh 1
K = [50,20,70,10]
def swap(A,p,q):
    tmp = A[p]
    A[p] = A[q]
    A[q] = tmp


#Contoh 2
A = [18,13,44,25,66,107,78,89]
def cariPosisiTerkecil(A,dariSini,sampaiSini):
    posisiYangTerkecil = dariSini
    for i in range(dariSini+1, sampaiSini):
        if A[i] < A[posisiYangTerkecil]:
            posisiYangTerkecil = i
    return posisiYangTerkecil


#Kegiatan 5.1 Bubble Sort
L = [10,51,2,18,4,31,13,5,23,64,29]
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)


#Kegiatan 5.2 Selection Sort
def selectionSort(A):
    n = len(A)
    for i in range(n-1):
        indexKecil = cariPosisiTerkecil(A,i,n)
        if indexKecil != i:
            swap(A,i,indexKecil)


#Kegiatan 5.3 Insertion Sort
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
```

Ln: 14 Col: 37

Tugas

Python 3.8.2 Shell

```
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[Clang 6.0 (clang-600.0.57)] on darwin
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: /Users/ryananindityamanggala/Documents/tgs3.py ==========
>>> swap(Daftar,1,4)
>>> Daftar
[<__main__.MhsTIF object at 0x109a3ae50>, <__main__.MhsTIF object at 0x109356160
>, <__main__.MhsTIF object at 0x1093560a0>, <__main__.MhsTIF object at 0x1093561
00>, <__main__.MhsTIF object at 0x109356040>, <__main__.MhsTIF object at 0x10935
61c0>, <__main__.MhsTIF object at 0x109356220>, <__main__.MhsTIF object at 0x109
356280>, <__main__.MhsTIF object at 0x1093562e0>, <__main__.MhsTIF object at 0x1
09356340>, <__main__.MhsTIF object at 0x1093563a0>]
>>> nim(Daftar)
10
4
2
18
51
31
13
5
23
64
29
>>> bubblesort(Daftar)
>>> Daftar
[<__main__.MhsTIF object at 0x1093560a0>, <__main__.MhsTIF object at 0x109356160
>, <__main__.MhsTIF object at 0x109356280>, <__main__.MhsTIF object at 0x109a3ae
50>, <__main__.MhsTIF object at 0x109356220>, <__main__.MhsTIF object at 0x10935
6100>, <__main__.MhsTIF object at 0x1093562e0>, <__main__.MhsTIF object at 0x109
3563a0>, <__main__.MhsTIF object at 0x1093561c0>, <__main__.MhsTIF object at 0x1
09356040>, <__main__.MhsTIF object at 0x109356340>]
>>> urut(C)
>>> C
[1, 3, 6, 7, 8, 9, 10, 11, 12, 13, 20, 100]
>>> swap(NIM,1,5)
Traceback (most recent call last):
  File "<pyshell#7>", line 1, in <module>
    swap(NIM,1,5)
NameError: name 'NIM' is not defined
>>>
========== RESTART: /Users/ryananindityamanggala/Documents/tgs3.py ==========
Traceback (most recent call last):
  File "/Users/ryananindityamanggala/Documents/tgs3.py", line 103, in <module>
    kocok(k)
  File "/Library/Frameworks/Python.framework/Versions/3.8/lib/python3.8/random.p
y", line 307, in shuffle
    x[i], x[j] = x[j], x[i]
TypeError: 'range' object does not support item assignment
>>>
========== RESTART: /Users/ryananindityamanggala/Documents/tgs3.py ==========
```
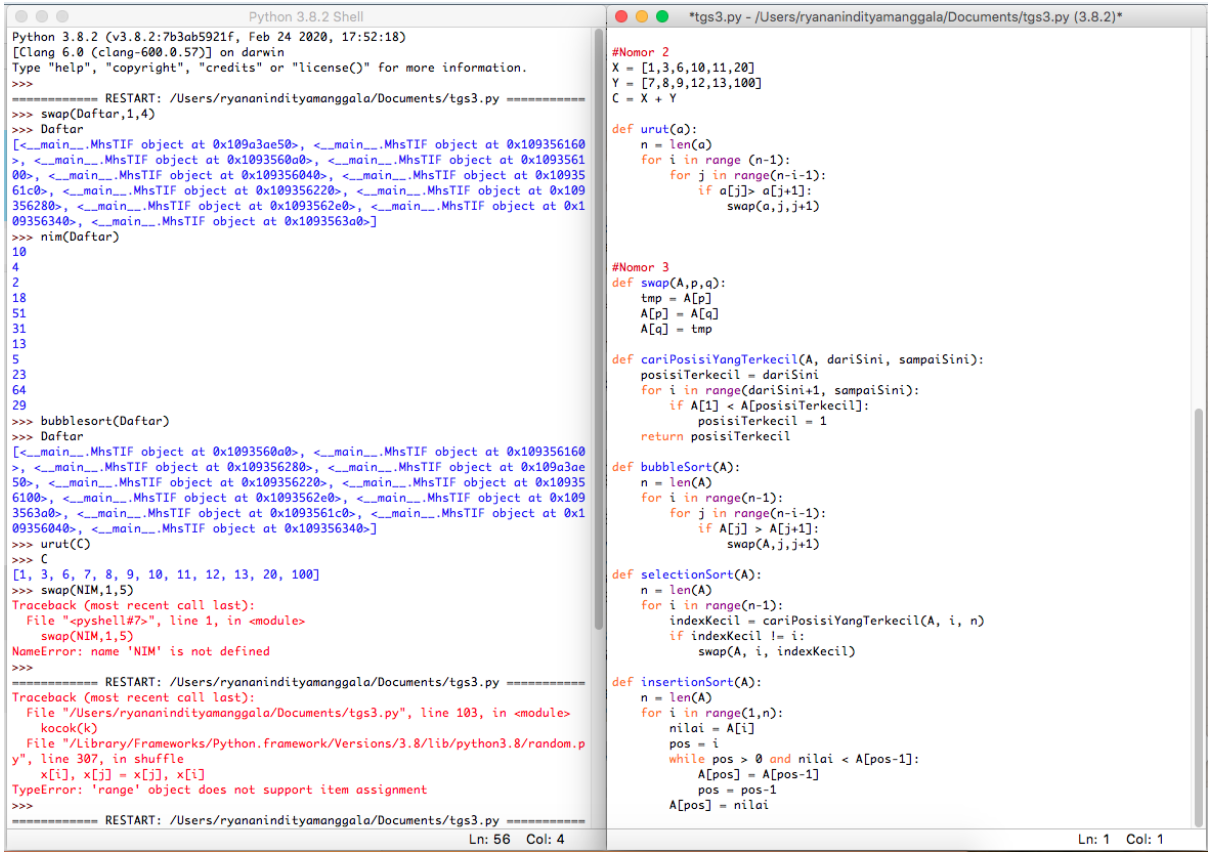

Ln: 56 Col: 4

tgs3.py - /Users/ryananindityamanggala/Documents/tgs3.py (3.8.2)

```
Nomor 1
class MhsTIF(object):
    def __init__(self,nama,NIM,kota,us):
        self.nama = nama
        self.NIM = NIM
        self.kotaTinggal = kota
        self.uangSaku = us
    def ambilNama(self):
        return self.nama
    def ambilNIM(self):
        return self.NIM
    def ambilKota(self):
        return self.kota
    def ambilUangSaku(self):
        return self.uangSaku

c0 = MhsTIF('Ika',10,'Sukoharjo',240000)
c1 = MhsTIF('Budi',51,'Sragen', 230000)
c2 = MhsTIF('Ahmad',2,'Surakarta',250000)
c3 = MhsTIF('Chandra',18,'Surakarta',235000)
c4 = MhsTIF('Eka',4,'Boyolali',240000)
c5 = MhsTIF('Fandi',31,'Salatiga',250000)
c6 = MhsTIF('Deni',13,'Klaten', 240000)
c7 = MhsTIF('Galuh',5,'Wonogiri',245000)
c8 = MhsTIF('Janto',23,'Klaten',245000)
c9 = MhsTIF('Hasan',64,'Karanganyar',270000)
c10 = MhsTIF('Khalid',29,'Purwodadi',265000)

Daftar = [c0,c1,c2,c3,c4,c5,c6,c7,c8,c9,c10]

def swap(A, p, q):
    tmp = A[p]
    A[p] = A[q]
    A[q] = tmp

def nim(daftar):
    for i in daftar:
        print(i.NIM)

def bubblesort(daftar):
    n = len(daftar)
    for i in range (n-1):
        for j in range(n-i-1):
            if daftar[j].NIM > daftar[j+1].NIM:
                swap(daftar,j,j+1)



Nomor 2
X = [1,3,6,10,11,20]
Y = [7,8,9,12,13,100]
C = X + Y
```

Ln: 15 Col: 28


Python 3.8.2 Shell
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>>> nim(Daftar)
10
4
2
18
51
31
13
5
23
64
29
>>> bubblesort(Daftar)
>>> Daftar
[<__main__.MhsTIF object at 0x1093560a0>, <__main__.MhsTIF object at 0x109356160>, <__main__.MhsTIF object at 0x109356280>, <__main__.MhsTIF object at 0x109a3ae50>, <__main__.MhsTIF object at 0x109356220>, <__main__.MhsTIF object at 0x109356100>, <__main__.MhsTIF object at 0x1093562e0>, <__main__.MhsTIF object at 0x1093563a0>, <__main__.MhsTIF object at 0x1093561c0>, <__main__.MhsTIF object at 0x109356040>, <__main__.MhsTIF object at 0x109356340>]
>>> urut(C)
>>> C
[1, 3, 6, 7, 8, 9, 10, 11, 12, 13, 20, 100]
>>> swap(NIM,1,5)
Traceback (most recent call last):
File "<pyshell#7>", line 1, in <module>
swap(NIM,1,5)
NameError: name 'NIM' is not defined
>>>
========== RESTART: /Users/ryananindityamanggala/Documents/tgs3.py ==========
Traceback (most recent call last):
File "/Users/ryananindityamanggala/Documents/tgs3.py", line 103, in <module>
kocok(k)
File "/Library/Frameworks/Python.framework/Versions/3.8/lib/python3.8/random.py", line 307, in shuffle
x[i], x[j] = x[j], x[i]
TypeError: 'range' object does not support item assignment
>>>
========== RESTART: /Users/ryananindityamanggala/Documents/tgs3.py ==========
Ln: 56 Col: 4
tgs3.py - /Users/ryananindityamanggala/Documents/tgs3.py (3.8.2)
#Nomor 2
X = [1,3,6,10,11,20]
Y = [7,8,9,12,13,100]
C = X + Y
def urut(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)
#Nomor 3
def swap(A,p,q):
tmp = A[p]
A[p] = A[q]
A[q] = tmp
def cariPosisiYangTerkecil(A, dariSini, sampaiSini):
posisiTerkecil = dariSini
for i in range(dariSini+1, sampaiSini):
if A[1] < A[posisiTerkecil]:
posisiTerkecil = 1
return posisiTerkecil
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
Ln: 1 Col: 1