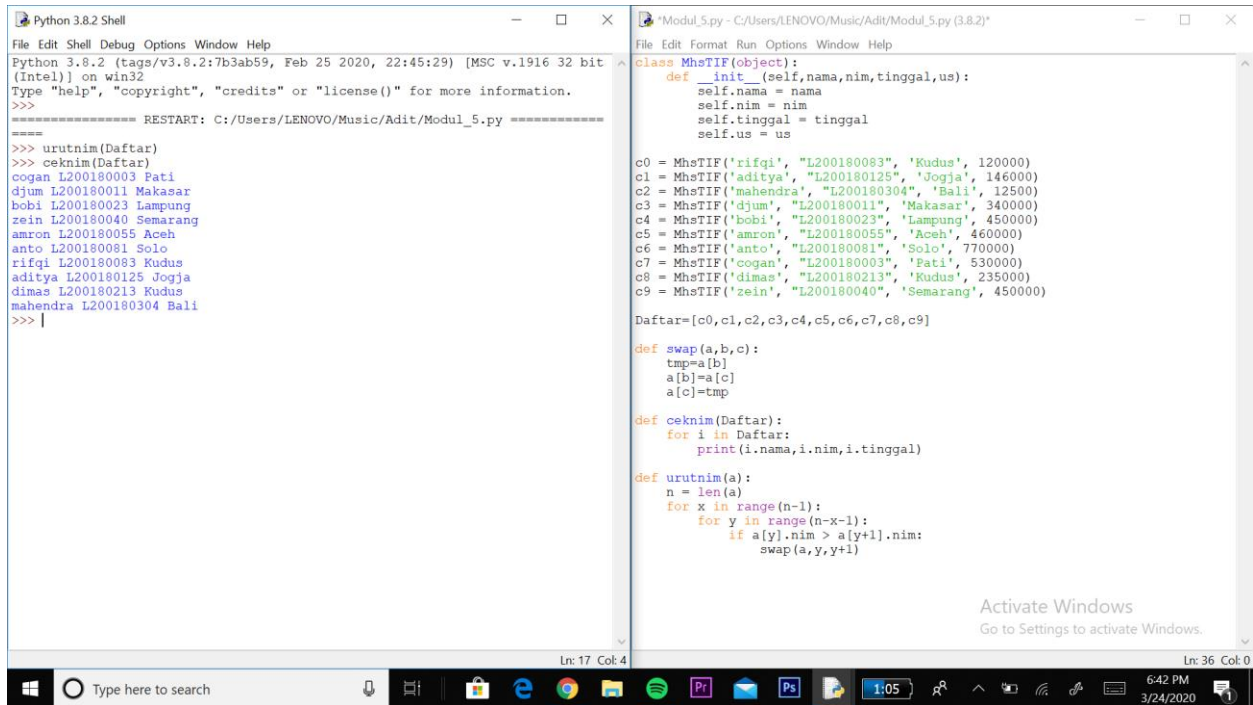


Nama : Rifqi Aditya Mahendra  
NIM : L200180083  
Kelas : B

## Modul 5

### No 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, 22:45:29) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/LENOVO/Music/Adit/Modul_5.py =====
>>> urutnim(Daftar)
>>> ceknim(Daftar)
cogan L200180003 Pati
djun L200180011 Makasar
bobi L200180023 Lampung
zein L200180040 Semarang
amron L200180055 Aceh
anto L200180081 Solo
rifqi L200180083 Kudus
aditya L200180125 Jogja
dimas L200180213 Kudus
mahendra L200180304 Bali
>>> |

Modul_5.py - C:/Users/LENOVO/Music/Adit/Modul_5.py (3.8.2)
File Edit Format Run Options Window Help
class MhsTIF(object):
    def __init__(self,nama,nim,tinggal,us):
        self.nama = nama
        self.nim = nim
        self.tinggal = tinggal
        self.us = us

c0 = MhsTIF('rifqi', "L200180083", 'Kudus', 120000)
c1 = MhsTIF('aditya', "L200180125", 'Jogja', 146000)
c2 = MhsTIF('mahendra', "L200180304", 'Bali', 12500)
c3 = MhsTIF('djum', "L200180011", 'Makasar', 340000)
c4 = MhsTIF('bobi', "L200180023", 'Lampung', 450000)
c5 = MhsTIF('amron', "L200180055", 'Aceh', 460000)
c6 = MhsTIF('anto', "L200180081", 'Solo', 770000)
c7 = MhsTIF('cogan', "L200180003", 'Pati', 530000)
c8 = MhsTIF('dimas', "L200180213", 'Kudus', 235000)
c9 = MhsTIF('zein', "L200180040", 'Semarang', 450000)

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

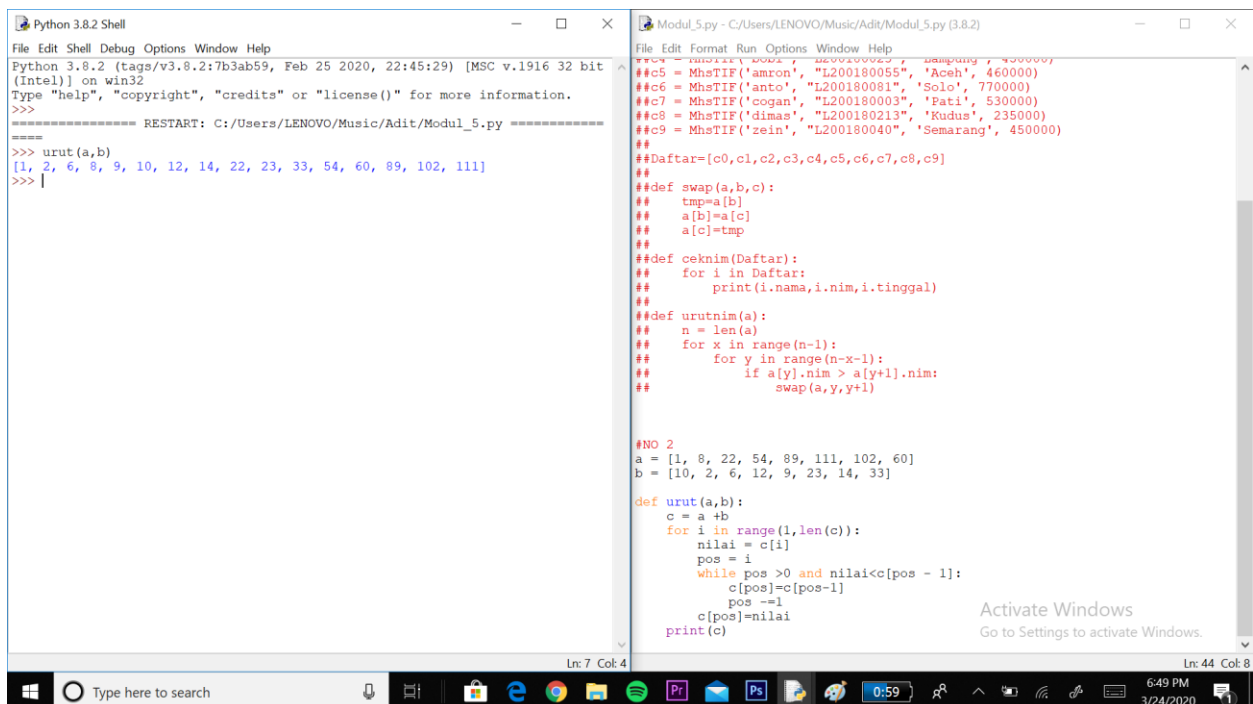
def swap(a,b,c):
    tmp=a[b]
    a[b]=a[c]
    a[c]=tmp

def ceknim(Daftar):
    for i in Daftar:
        print(i.nama,i.nim,i.tinggal)

def urutnim(a):
    n = len(a)
    for x in range(n-1):
        for y in range(n-x-1):
            if a[y].nim > a[y+1].nim:
                swap(a,y,y+1)

Activate Windows
Go to Settings to activate Windows.
```

### No 2



```
Python 3.8.2 Shell
File Edit Shell Debug Options Window Help
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 22:45:29) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/LENOVO/Music/Adit/Modul_5.py =====
>>> urut(a,b)
[1, 2, 6, 8, 9, 10, 12, 14, 22, 23, 33, 54, 60, 89, 102, 111]
>>> |

Modul_5.py - C:/Users/LENOVO/Music/Adit/Modul_5.py (3.8.2)
File Edit Format Run Options Window Help
class MhsTIF(object):
    def __init__(self,nama,nim,tinggal,us):
        self.nama = nama
        self.nim = nim
        self.tinggal = tinggal
        self.us = us

c0 = MhsTIF('rifqi', "L200180083", 'Kudus', 120000)
c1 = MhsTIF('aditya', "L200180125", 'Jogja', 146000)
c2 = MhsTIF('mahendra', "L200180304", 'Bali', 12500)
c3 = MhsTIF('djum', "L200180011", 'Makasar', 340000)
c4 = MhsTIF('bobi', "L200180023", 'Lampung', 450000)
c5 = MhsTIF('amron', "L200180055", 'Aceh', 460000)
c6 = MhsTIF('anto', "L200180081", 'Solo', 770000)
c7 = MhsTIF('cogan', "L200180003", 'Pati', 530000)
c8 = MhsTIF('dimas', "L200180213", 'Kudus', 235000)
c9 = MhsTIF('zein', "L200180040", 'Semarang', 450000)

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

def swap(a,b,c):
    tmp=a[b]
    a[b]=a[c]
    a[c]=tmp

def ceknim(Daftar):
    for i in Daftar:
        print(i.nama,i.nim,i.tinggal)

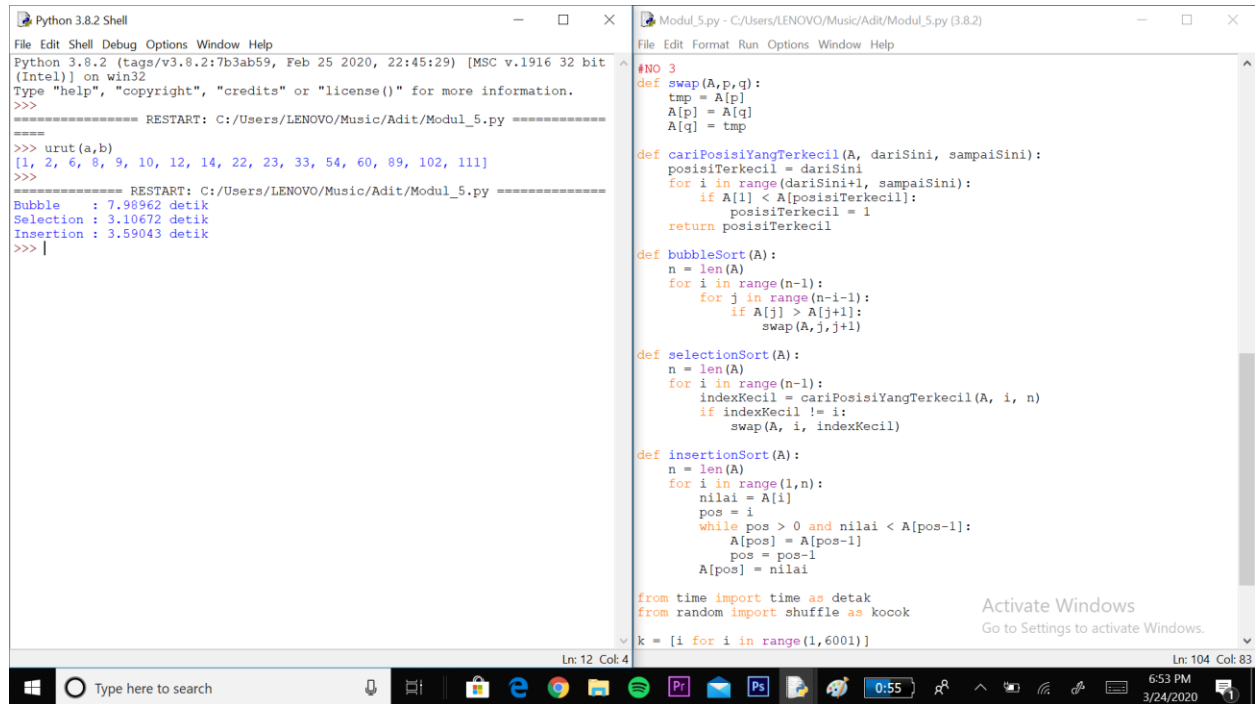
def urutnim(a):
    n = len(a)
    for x in range(n-1):
        for y in range(n-x-1):
            if a[y].nim > a[y+1].nim:
                swap(a,y,y+1)

#NO 2
a = [1, 8, 22, 54, 89, 111, 102, 60]
b = [10, 2, 6, 12, 9, 23, 14, 33]

def urut(a,b):
    c = a + b
    for i in range(1,len(c)):
        nilai = c[i]
        pos = i
        while pos > 0 and nilai < c[pos - 1]:
            c[pos] = c[pos-1]
            pos -= 1
        c[pos] = nilai
    print(c)

Activate Windows
Go to Settings to activate Windows.
```

NO 3



The image shows a screenshot of a Windows desktop with two windows open. The left window is a Python 3.8.2 Shell, and the right window is a code editor showing the source code of a Python script named 'Modul\_5.py'.

**Python 3.8.2 Shell:**

```
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 22:45:29) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/LENOVO/Music/Adit/Modul_5.py =====
>>>
>>> urut(a,b)
[1, 2, 6, 8, 9, 10, 12, 14, 22, 23, 33, 54, 60, 89, 102, 111]
>>>
===== RESTART: C:/Users/LENOVO/Music/Adit/Modul_5.py =====
Bubble      : 7.98962 detik
Selection   : 3.10672 detik
Insertion   : 3.59043 detik
>>> |
```

**Modul\_5.py - C:/Users/LENOVO/Music/Adit/Modul\_5.py (3.8.2):**

```
#NO 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[i] < A[posisiTerkecil]:
            posisiTerkecil = i
    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

from time import time as detik
from random import shuffle as kocok

k = [i for i in range(1,6001)]
```

The taskbar at the bottom shows the Windows Start button, a search bar, and several application icons including File Explorer, Edge, and various productivity tools. The system clock indicates 6:53 PM on 3/24/2020.