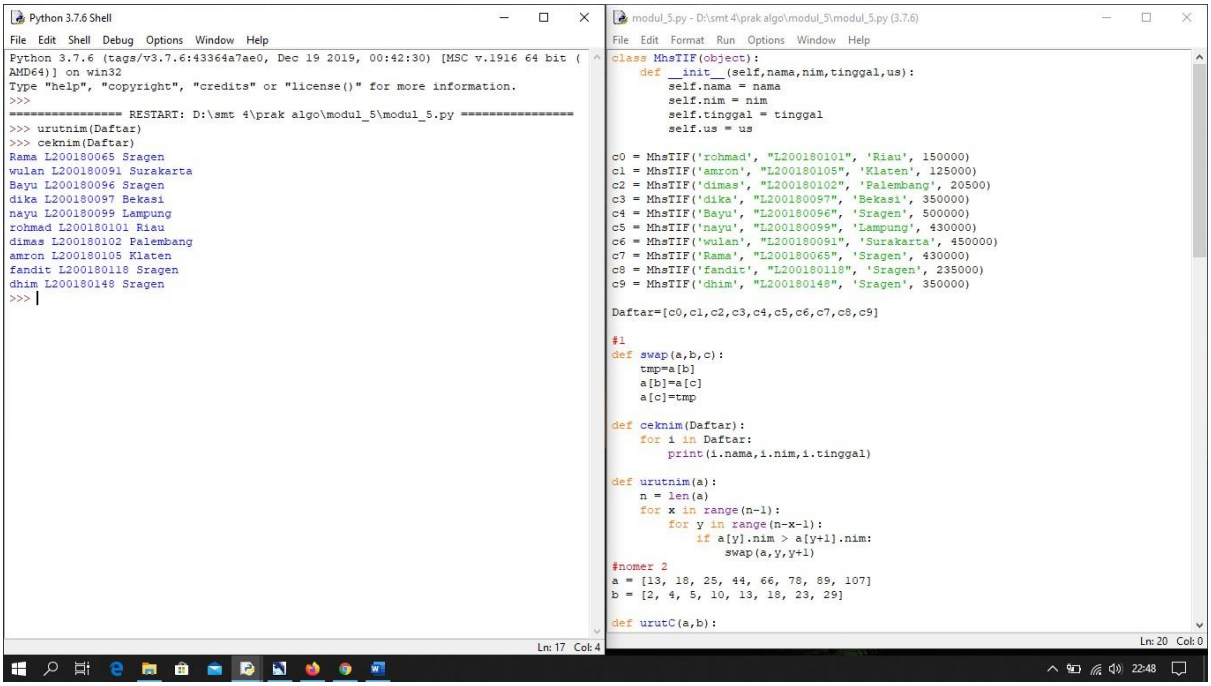
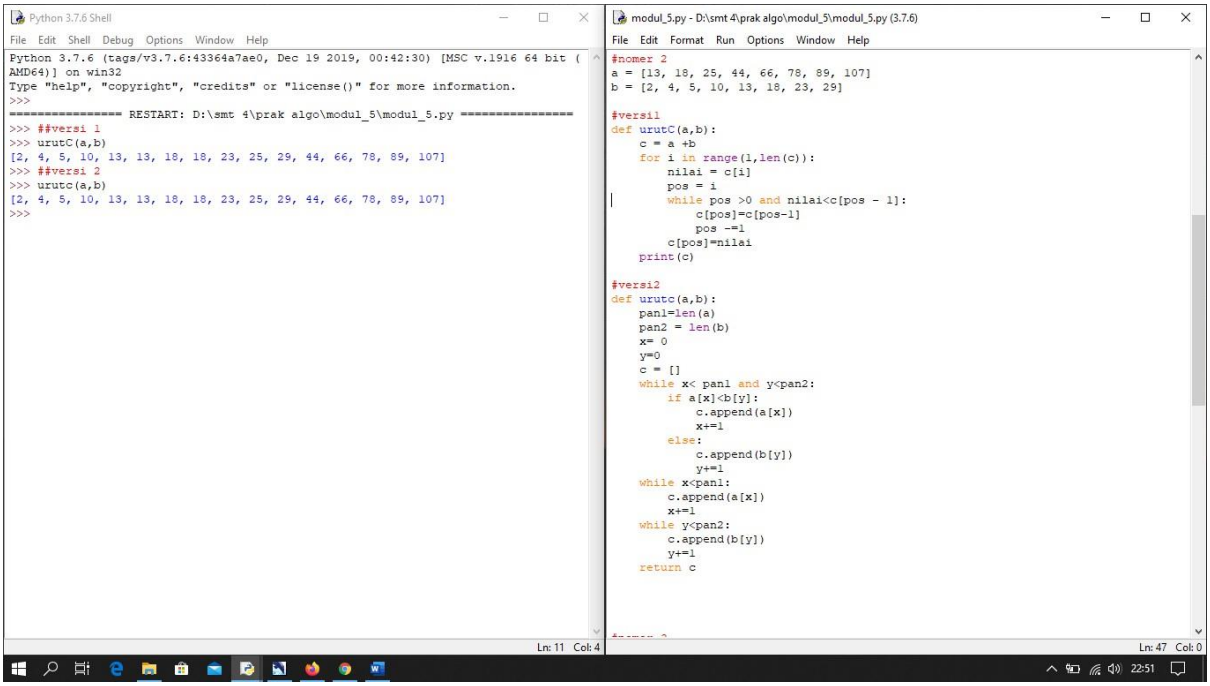
Nama : Chandika Aulia
NIM : L200180097
Kelas : D

# Modul 5

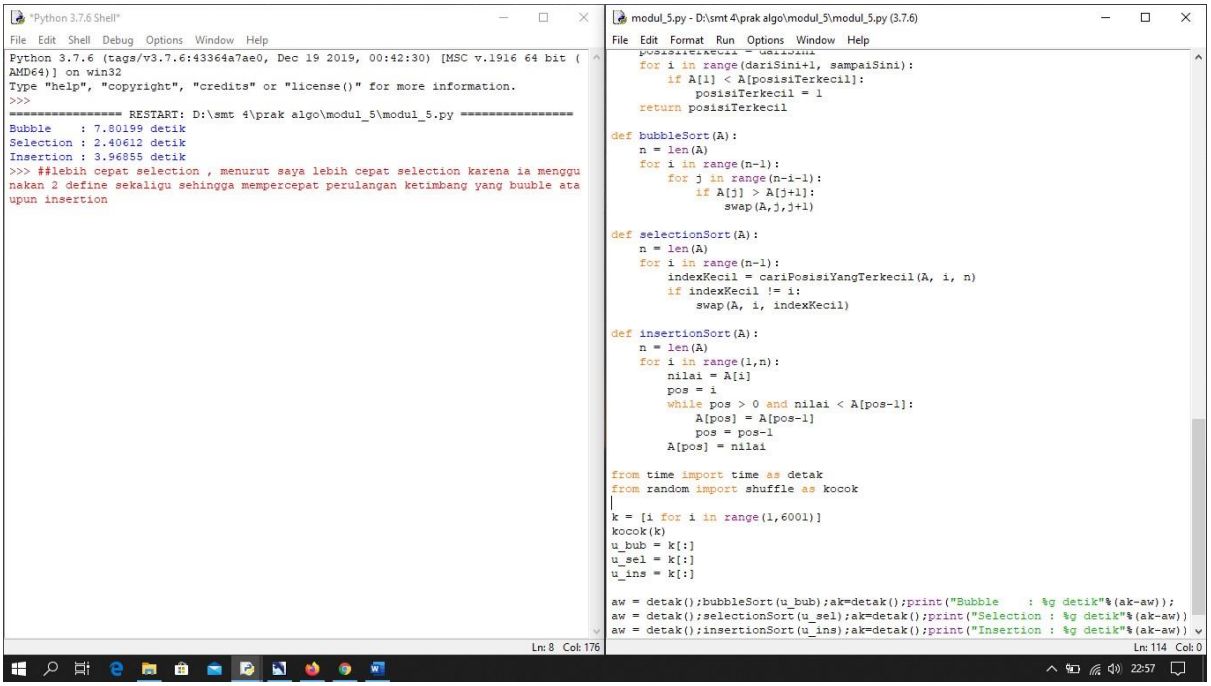
## 1).Mengurutkan dafatr MhsTIF berdasarkan NIM




## 2). penggabungan array a dan b menjadi aray c dan urutkan



3).membandingkan lebih cepat mana buble,selection atau insertion



*Python 3.7.6 Shell*

```
File  Edit  Shell  Debug  Options  Window  Help
Python 3.7.6 (tags/v3.7.6:43364a7ae0, Dec 19 2019, 00:42:30) [MSC v.1916 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: D:\smt 4\prak algo\modul_5\modul_5.py ==========
Bubble    : 7.80199 detik
Selection : 2.40612 detik
Insertion : 3.96855 detik
>>> ##lebih cepat selection , menurut saya lebih cepat selection karena ia menggu
nakan 2 define sekaligu sehingga mempercepat perulangan ketimbang yang buuble ata
upun insertion
```

Ln: 8  Col: 176

modul_5.py - D:\smt 4\prak algo\modul_5\modul_5.py (3.7.6)

```
File  Edit  Format  Run  Options  Window  Help
    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 detak
from random import shuffle as kocok

k = [i for i in range(1,6001)]
kocok(k)
u_bub = k[:]
u_sel = k[:]
u_ins = k[:]

aw = detak();bubbleSort(u_bub);ak=detak();print("Bubble    : %g detik"%(ak-aw));
aw = detak();selectionSort(u_sel);ak=detak();print("Selection : %g detik"%(ak-aw))
aw = detak();insertionSort(u_ins);ak=detak();print("Insertion : %g detik"%(ak-aw))
```

Ln: 114  Col: 0

22:57