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Modul 5

1.

```
1.py - D:\Download\Compressed\praktikum-ASD-master\MODUL - 05\1.py (3.8.2)
File Edit Format Run Options Window Help
class Mahasiswa(object):
       """Class Mahasiswa yang dibangun dari class Manusia."""

def __init__(self, nama, NIM, kota, us):
    """Metode inisiasi ini menutupi metode inisiasi di class Manusia"""
               self.nama = nama
                self.NIM = NIM
                self.kotaTinggal = kota
               self.uangSaku = us
def BubbleSort(val):
       for passnum in range(len(val)-1,0,-1):
    for i in range(passnum):
                       if val[i]>val[i+1]:
                               temp = val[i]
val[i] = val[i+1]
val[i+1] = temp
c0 = Mahasiswa('Krisna',10,'Sragen',300000)
c1 = Mahasiswa('Ganta',51,'Surabaya',330000)
c2 = Mahasiswa('Ricky',2,'Madiun',280000)
c3 = Mahasiswa('Anom',18,'Surakarta',237000)
C3 = Mahasiswa ('Anom', 18, 'Surakarta', 23,7000)
C4 = Mahasiswa ('Juandru', 4, 'Semarang', 670000)
C5 = Mahasiswa ('Deli', 31, 'Salatiga', 250000)
C6 = Mahasiswa ('Hanif', 13, 'Malang', 245000)
C7 = Mahasiswa ('Faisal', 5, 'Wonogiri', 245000)
C8 = Mahasiswa ('Jaya', 64, 'Pekalongan', 270000)
C9 = Mahasiswa ('Jaya', 64, 'Pekalongan', 270000)
cl0 = Mahasiswa('Aprillia', 29, 'Yogyakarta', 230000)
angka = [c0.NIM,c1.NIM,c2.NIM,c3.NIM,c4.NIM,c5.NIM,c6.NIM,c7.NIM,c8.NIM,c9.NIM,c10.NIM]
BubbleSort(angka)
print(angka)
                                                                                                                                                                                                                       Ln: 24 Col: 38
```

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3.py - D:\Download\Compressed\praktikum-ASD-master\MODUL - 05\3.py (3.8.2)
                                                                                                                                         File Edit Format Run Options Window Help
from time import time as detak
from random import shuffle as kocok
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]:</pre>
         A[pos] = A[pos -1]
pos = pos -1
A[pos] = nilai
def swap(A,p,q):
    tmp = A[p]
A[p] = A[q]
    A[q]= tmp
def cariPosisiYangTerkecil(A, darisini, sampaisini):
    posisiYangTerkecil = darisini
     for i in range (darisini+1, sampaisini):
         if A[i] < A[posisiYangTerkecil]:</pre>
             posisiYangTerkecil = i
    return posisiYangTerkecil
k = []
for i in range(1,6001):
    k.append(i)
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: 6 Col: 24
```

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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: D:\Download\Compressed\praktikum-ASD-master\MODUL - 05\3.py =====

bubble: 7.09392 detik
selection: 2.7744 detik
insertion: 3.21215 detik

>>>

Ln: 8 Col: 4
```