Nama   : Rayhan Nurfalah Lukman
NIM   : L200180100
Kelas   : D

Modul 5

Tugas

1.

2.

3.

Python 3.7.0 Shell — □ ×

File Edit Shell Debug Options Window Help

```
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:/TUGAS INFORMATIKA/SEMESTER 4/Prak_Algostruk/Modul_5/TUGAS_.py =
Bubble    : 3.21161 detik
Selection : 1.02169 detik
Insertion : 1.57581 detik
>>>
```

Ln: 8 Col: 4

TUGAS_.py - E:/TUGAS INFORMATIKA/SEMESTER 4/Prak_Algostruk/Modul_5/TUGAS_.py (3.7.0) — □ ×

File Edit Format Run Options Window Help

```python
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: 78 Col: 12