

The image shows two side-by-side windows of a Python 3.7.0 Shell. The left window displays the output of a script named 'tugas_model_5.py'. The script prints a list of names and a list of numbers. The right window shows the code of the script, which includes a list of names, a function 'urutnam(a)' that sorts the list, and a function 'urutC(b)' that sorts a list of numbers.

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Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (tags/v3.7.0:1bbfbc003, Jun 27 2018, 04:06:47) [MSC v.1014 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:\Users\ANGUS\AppData\Local\Programs\Python\Python37-32\tugas_model_5.py
>>>
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>>>
RESTART: C:\Users\ANGUS\AppData\Local\Programs\Python\Python37-32\tugas_model_5.py
>>>
>>> urutnam(daftar)
>>> cetakn(daftar)
Aldayaz AC76744 Hpuanjuk
Aji B464053 Doyliall
Rui CS59006 Fawitan
Mikilab E346352 Copte
Ahmad F347745 Fedan
Imay D449448 Salatiga
Bernaldy B146740 Pranabanam
Dafe D112314 Hlaton
Tamaru B664545 Kekomarum
raffy B332125 Doymanlan
>>> urutC(a, b)
[1, 4, 8, 10, 13, 13, 18, 19, 20, 24, 28, 44, 66, 78, 89, 107]
>>>

```

```

Python 3.7.0 Shell
File Edit Format Run Options Window Help
daftar=[a,b,c,d,e,f,g,h,i,j,k,l,m,n,o,p,q,r,s,t,u,v,w,x,y,z]

#fungsi 1
def urutnam(a,b,c):
    uac=a[b]
    a[b]=a[a]
    a[a]=uac

def cetakn(b):
    for i in b:
        print(i,memm.i,memm.i,memm.i)

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

#fungsi 2
a = [13, 18, 25, 44, 66, 78, 89, 107]
b = [2, 4, 8, 10, 13, 18, 20, 24, 28]

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

#fungsi 3

```

Nomer 3

```
Python 3.7.3 Shell
File Edit Shell Debug Options Window Help
Tony D984395 Saletiga
Reonaldi E344742 Prambaran
Defa L111114 Kiatom
Damar M445545 KebonKrim
Raffy H333425 Joponolan
>>> uruc(a, b)
[2, 4, 8, 10, 18, 18, 18, 18, 28, 28, 28, 44, 66, 76, 88, 107]
>>>
RESTART: C:\Users\ASUS\AppData\Local\Programs\Python\Python37-32\tugas_model_3.py
Traceback (most recent call last):
  File "C:\Users\ASUS\AppData\Local\Programs\Python\Python37-32\tugas_model_3.py", line 84, in <module>
    uruc(a, b)
NameError: name 'b' is not defined
>>>
RESTART: C:\Users\ASUS\AppData\Local\Programs\Python\Python37-32\tugas_model_3.py
Traceback (most recent call last):
  File "C:\Users\ASUS\AppData\Local\Programs\Python\Python37-32\tugas_model_3.py", line 94, in <module>
    uruc(a, b)
NameError: name 'uruc' is not defined
>>>
RESTART: C:\Users\ASUS\AppData\Local\Programs\Python\Python37-32\tugas_model_3.py
Bubble (5.7413) detik
Traceback (most recent call last):
  File "C:\Users\ASUS\AppData\Local\Programs\Python\Python37-32\tugas_model_3.py", line 104, in <module>
    ur = detak(selectionSort(u_sel),ak=detak(),print("Selecion :%g detik"%ak
NameError: name 'selectionSort' is not defined
>>>
RESTART: C:\Users\ASUS\AppData\Local\Programs\Python\Python37-32\tugas_model_3.py
Bubble (11.50614) detik
Selection (2.82496) detik
Insertion (2.6587) detik
>>>
```

```
tugas_model_3.py - C:\Users\ASUS\AppData\Local\Programs\Python\Python37-32\tugas_model_3.py
File Edit Format Run Options Window Help
# -*- coding: utf-8 -*-
def swap(A, p, q):
    temp = A[p]
    A[p] = A[q]
    A[q] = temp

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 detak
from random import shuffle as kocok
```

```
Python 3.7.3 Shell
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Raffy H333425 Joponolan
>>> uruc(a, b)
[2, 4, 8, 10, 18, 18, 18, 18, 28, 28, 28, 44, 66, 76, 88, 107]
>>>
RESTART: C:\Users\ASUS\AppData\Local\Programs\Python\Python37-32\tugas_model_3.py
Traceback (most recent call last):
  File "C:\Users\ASUS\AppData\Local\Programs\Python\Python37-32\tugas_model_3.py", line 84, in <module>
    uruc(a, b)
NameError: name 'b' is not defined
>>>
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Traceback (most recent call last):
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    uruc(a, b)
NameError: name 'uruc' is not defined
>>>
RESTART: C:\Users\ASUS\AppData\Local\Programs\Python\Python37-32\tugas_model_3.py
Bubble (5.7413) detik
Traceback (most recent call last):
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    ur = detak(selectionSort(u_sel),ak=detak(),print("Selecion :%g detik"%ak
NameError: name 'selectionSort' is not defined
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RESTART: C:\Users\ASUS\AppData\Local\Programs\Python\Python37-32\tugas_model_3.py
Bubble (11.50614) detik
Selection (2.82496) detik
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```

```
tugas_model_3.py - C:\Users\ASUS\AppData\Local\Programs\Python\Python37-32\tugas_model_3.py
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# -*- coding: utf-8 -*-
def swap(A, p, q):
    temp = A[p]
    A[p] = A[q]
    A[q] = temp

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 detak
from random import shuffle as kocok

k = [i for i in range(1,4001)]
kocok(k)
u_kocok = k[:]
u_bub = k[:]
u_sel = k[:]
u_ins = k[:]

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