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## Latihan 4.1

The screenshot shows a Python 3.5.2 IDE with two windows. The left window, titled '4.1.py - /home/brianadit24/Documents/Modul4-Algostruk/4.1.py (3.5.2)', contains the following code:

```
def carilurus(wadah, target):
    n = len(wadah)
    for i in range(n):
        if wadah[i] == target:
            return True
    return False
```

The right window, titled 'Python 3.5.2 Shell', shows the execution of the script:

```
Python 3.5.2 (default, Oct 8 2019, 13:06:37)
[GCC 5.4.0 20160609] on linux
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: /home/brianadit24/Documents/Modul4-Algostruk/4.1.py =====
>>> A = [10, 51, 2, 18, 4, 31, 13, 5, 23, 64, 29]
>>> carilurus(A,31)
True
>>> carilurus(A,8)
False
>>>
```

## Latihan 4.2

The screenshot shows a Python 3.5.2 IDE with two windows. The left window, titled '4.2.py - /home/brianadit24/Documents/Modul4-Algostruk/4.2.py (3.5.2)', contains the following code:

```
from Class_MhsTIF import MhsTIF

c0 = MhsTIF('Ika',10,'Sukoharjo', 240000)
c1 = MhsTIF('Budi',51,'Sragen', 230000)
c2 = MhsTIF('Ahmad',2,'Surakarta', 250000)
c3 = MhsTIF('Chandra',18,'Surakarta', 235000)
c4 = MhsTIF('Eka',4,'Boyolali', 240000)
c5 = MhsTIF('Fandi',31,'Salatiga', 250000)
c6 = MhsTIF('Deni',13,'Klaten', 245000)
c7 = MhsTIF('Galuh',5,'Wonogiri', 245000)
c8 = MhsTIF('Janto',23,'Klaten', 245000)
c9 = MhsTIF('Hasan',64,'Karanganyar', 270000)
c10 = MhsTIF('Khalid',29,'Purwodadi', 265000)

Daftar = [c0,c1,c2,c3,c4,c5,c6,c7,c8,c9,c10]

target = 'Klaten'
for i in Daftar:
    if i.kotaTinggal == target:
        print(i.nama + ' tinggal di ' + target)
```

The right window, titled 'Python 3.5.2 Shell', shows the execution of the script:

```
Python 3.5.2 (default, Oct 8 2019, 13:06:37)
[GCC 5.4.0 20160609] on linux
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: /home/brianadit24/Documents/Modul4-Algostruk/4.2.py =====
Deni tinggal di Klaten
Janto tinggal di Klaten
>>>
```

```
4.2.2.py - /home/brianadit24/Documents/Modul4-Algostruk/4.2.2.py (3.5.2)
File Edit Format Run Options Window Help
def cariTerkecil(kumpulan):
    n = len(kumpulan)
    terkecil = kumpulan[0]
    for i in range(1,n):
        if kumpulan[i] < terkecil:
            terkecil = kumpulan[i]
    return terkecil
Daftar = [12,60,13,4,7,19]
print(cariTerkecil(Daftar))

Ln: 1 Col: 0

Python 3.5.2 Shell
File Edit Shell Debug Options Window Help
Python 3.5.2 (default, Oct 8 2019, 13:06:37)
[GCC 5.4.0 20160609] on linux
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: /home/brianadit24/Documents/Modul4-Algostruk/4.2.2.py =====
4
>>>

Ln: 7 Col: 4
```

## Uang Saku Terkecil

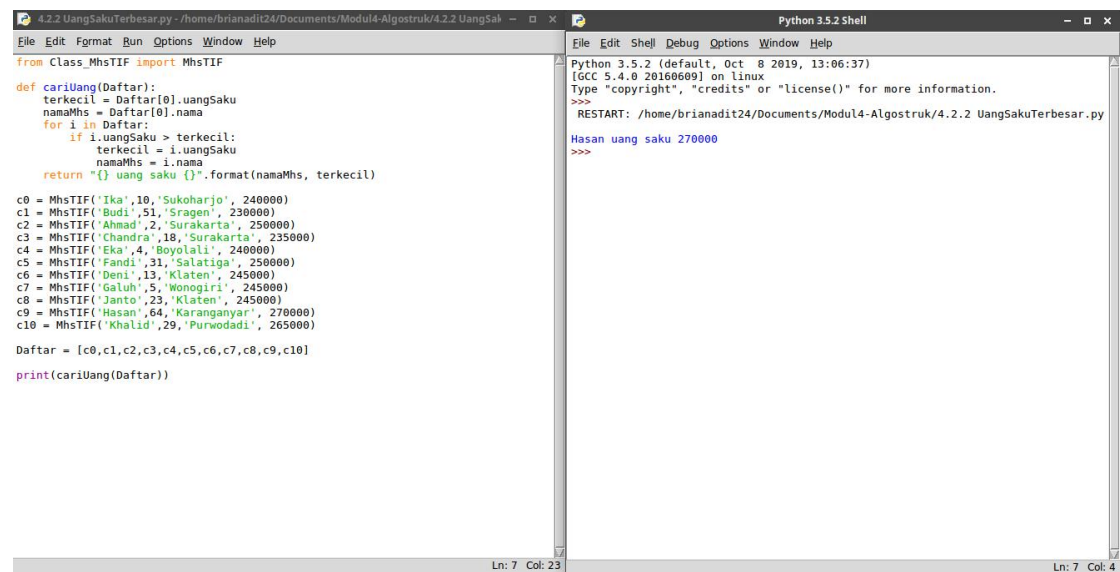
```
4.2.2 UangSakuTerkecil.py - /home/brianadit24/Documents/Modul4-Algostruk/4.2.2 UangSaku
File Edit Format Run Options Window Help
from Class_MhsTIF import MhsTIF
def cariUang(Daftar):
    terkecil = Daftar[0].uangSaku
    namaMhs = Daftar[0].nama
    for i in Daftar:
        if i.uangSaku < terkecil:
            terkecil = i.uangSaku
            namaMhs = i.nama
    return "{} uang saku {}".format(namaMhs, terkecil)
c0 = MhsTIF('Ika',10,'Sukoharjo', 240000)
c1 = MhsTIF('Budi',51,'Sragen', 230000)
c2 = MhsTIF('Ahmad',2,'Surakarta', 250000)
c3 = MhsTIF('Chandra',18,'Surakarta', 235000)
c4 = MhsTIF('Eka',4,'Boyolali', 240000)
c5 = MhsTIF('Fandi',31,'Salatiga', 250000)
c6 = MhsTIF('Deni',13,'Klaten', 245000)
c7 = MhsTIF('Galuh',5,'Wonogiri', 245000)
c8 = MhsTIF('Janto',23,'Klaten', 245000)
c9 = MhsTIF('Hasan',64,'Karanganyar', 270000)
c10 = MhsTIF('Khalid',29,'Purwodadi', 265000)
Daftar = [c0,c1,c2,c3,c4,c5,c6,c7,c8,c9,c10]
print(cariUang(Daftar))

Ln: 7 Col: 23

Python 3.5.2 Shell
File Edit Shell Debug Options Window Help
Python 3.5.2 (default, Oct 8 2019, 13:06:37)
[GCC 5.4.0 20160609] on linux
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: /home/brianadit24/Documents/Modul4-Algostruk/4.2.2 UangSakuTerkecil.py
Budi uang saku 230000
>>>

Ln: 7 Col: 4
```

## Uang Saku Terbesar



```
4.2.2 UangSakuTerbesar.py - /home/brianadit24/Documents/Modul4-Algostruk/4.2.2 UangSaku - Python 3.5.2 Shell
File Edit Format Run Options Window Help
from Class_MhsTIF import MhsTIF

def cariUang(Daftar):
    terkecil = Daftar[0].uangSaku
    namaMhs = Daftar[0].nama
    for i in Daftar:
        if i.uangSaku > terkecil:
            terkecil = i.uangSaku
            namaMhs = i.nama
    return "{} uang saku {}".format(namaMhs, terkecil)

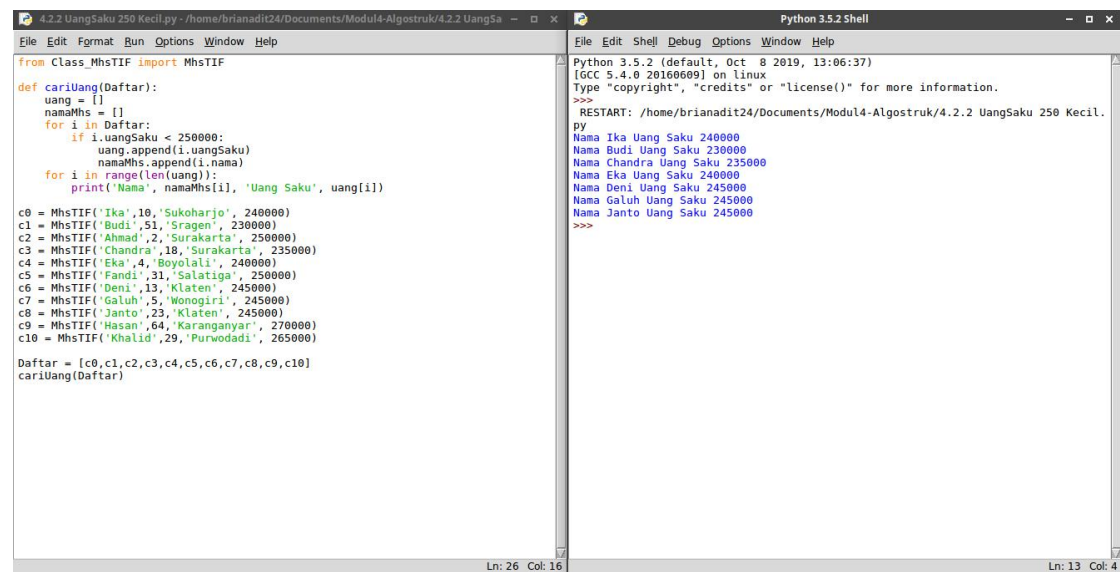
c0 = MhsTIF('Ika',10,'Sukoharjo', 240000)
c1 = MhsTIF('Budi',51,'Sragen', 230000)
c2 = MhsTIF('Ahmad',2,'Surakarta', 250000)
c3 = MhsTIF('Chandra',18,'Surakarta', 235000)
c4 = MhsTIF('Eka',4,'Boyolali', 240000)
c5 = MhsTIF('Fandi',31,'Salatiga', 250000)
c6 = MhsTIF('Deni',13,'Klaten', 245000)
c7 = MhsTIF('Galuh',5,'Wonogiri', 245000)
c8 = MhsTIF('Janto',23,'Klaten', 245000)
c9 = MhsTIF('Hasan',64,'Karanganyar', 270000)
c10 = MhsTIF('Khalid',29,'Purwodadi', 265000)

Daftar = [c0,c1,c2,c3,c4,c5,c6,c7,c8,c9,c10]

print(cariUang(Daftar))

Python 3.5.2 (default, Oct 8 2019, 13:06:37)
[GCC 5.4.0 20160609] on linux
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: /home/brianadit24/Documents/Modul4-Algostruk/4.2.2 UangSakuTerbesar.py
Hasan uang saku 270000
>>>
```

## Uang Saku Kurang dari 250000



```
4.2.2 UangSaku 250 Kecil.py - /home/brianadit24/Documents/Modul4-Algostruk/4.2.2 UangSa - Python 3.5.2 Shell
File Edit Format Run Options Window Help
from Class_MhsTIF import MhsTIF

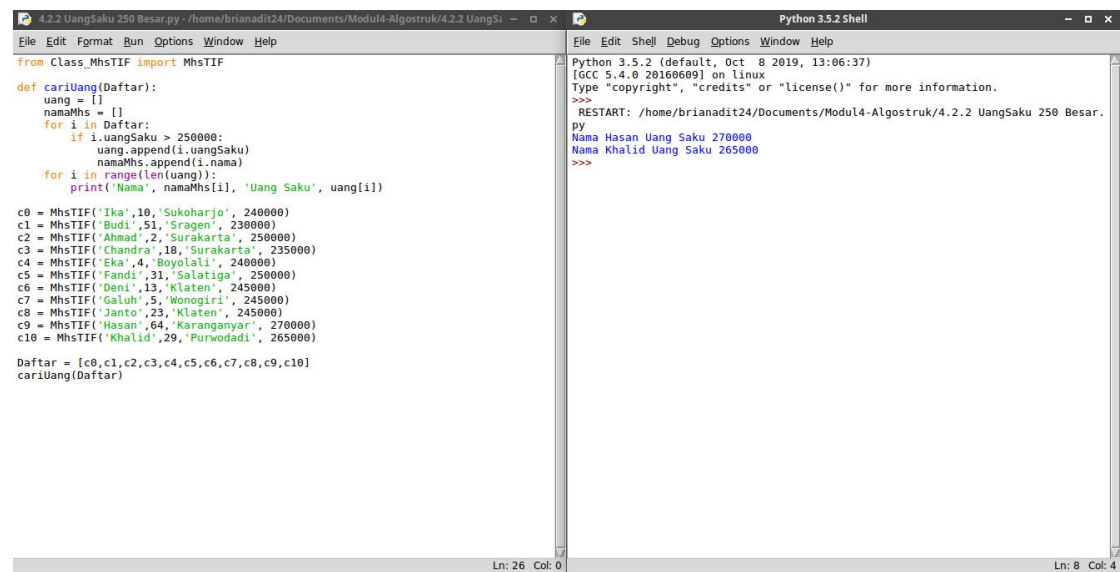
def cariUang(Daftar):
    uang = []
    namaMhs = []
    for i in Daftar:
        if i.uangSaku < 250000:
            uang.append(i.uangSaku)
            namaMhs.append(i.nama)
    for i in range(len(uang)):
        print('Nama', namaMhs[i], 'Uang Saku', uang[i])

c0 = MhsTIF('Ika',10,'Sukoharjo', 240000)
c1 = MhsTIF('Budi',51,'Sragen', 230000)
c2 = MhsTIF('Ahmad',2,'Surakarta', 250000)
c3 = MhsTIF('Chandra',18,'Surakarta', 235000)
c4 = MhsTIF('Eka',4,'Boyolali', 240000)
c5 = MhsTIF('Fandi',31,'Salatiga', 250000)
c6 = MhsTIF('Deni',13,'Klaten', 245000)
c7 = MhsTIF('Galuh',5,'Wonogiri', 245000)
c8 = MhsTIF('Janto',23,'Klaten', 245000)
c9 = MhsTIF('Hasan',64,'Karanganyar', 270000)
c10 = MhsTIF('Khalid',29,'Purwodadi', 265000)

Daftar = [c0,c1,c2,c3,c4,c5,c6,c7,c8,c9,c10]
cariUang(Daftar)

Python 3.5.2 (default, Oct 8 2019, 13:06:37)
[GCC 5.4.0 20160609] on linux
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: /home/brianadit24/Documents/Modul4-Algostruk/4.2.2 UangSaku 250 Kecil.py
Nama Ika Uang Saku 240000
Nama Budi Uang Saku 230000
Nama Chandra Uang Saku 235000
Nama Eka Uang Saku 240000
Nama Deni Uang Saku 245000
Nama Galuh Uang Saku 245000
Nama Janto Uang Saku 245000
>>>
```

## Uang Saku Lebih dari 250000



```
File Edit Format Run Options Window Help
from Class_MhsTIF import MhsTIF

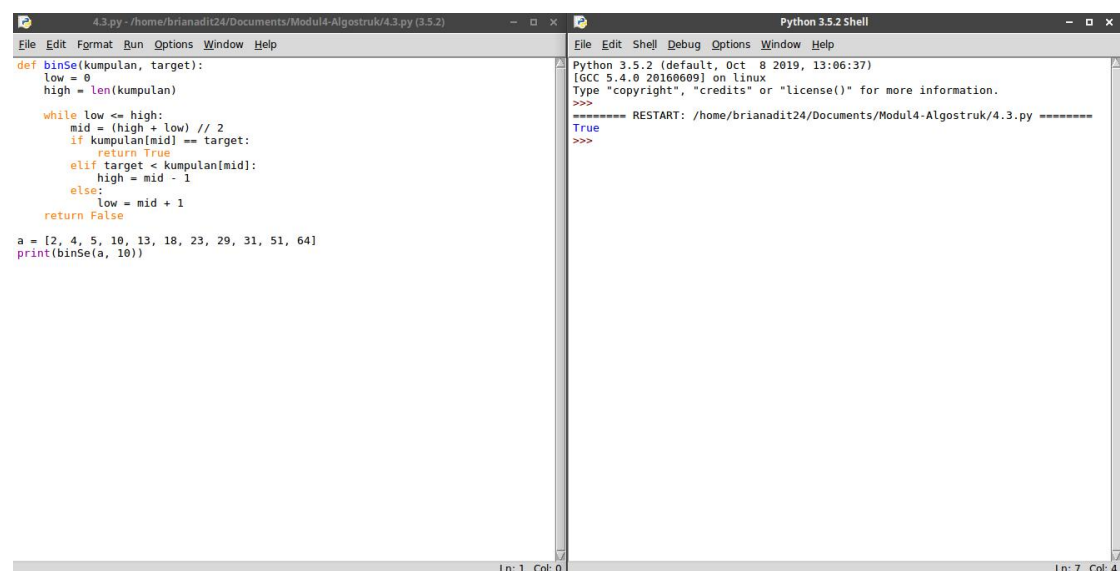
def cariUang(Daftar):
    uang = []
    namaMhs = []
    for i in Daftar:
        if i.uangSaku > 250000:
            uang.append(i.uangSaku)
            namaMhs.append(i.nama)
    for i in range(len(uang)):
        print('Nama', namaMhs[i], 'Uang Saku', uang[i])

c0 = MhsTIF('Ika',10,'Sukoharjo', 240000)
c1 = MhsTIF('Budi',51,'Sragen', 230000)
c2 = MhsTIF('Ahmad',2,'Surakarta', 250000)
c3 = MhsTIF('Chandra',18,'Surakarta', 235000)
c4 = MhsTIF('Eka',4,'Boyolali', 240000)
c5 = MhsTIF('Fandi',31,'Salatiga', 250000)
c6 = MhsTIF('Deni',13,'Klaten', 245000)
c7 = MhsTIF('Galuh',5,'Wonogiri', 245000)
c8 = MhsTIF('Janto',23,'Klaten', 245000)
c9 = MhsTIF('Hasan',64,'Karanganyar', 270000)
c10 = MhsTIF('Khalid',29,'Purwodadi', 265000)

Daftar = [c0,c1,c2,c3,c4,c5,c6,c7,c8,c9,c10]
cariUang(Daftar)
```

Ln: 26 Col: 0

## Latihan 4.3



```
File Edit Format Run Options Window Help
def binSe(kumpulan, target):
    low = 0
    high = len(kumpulan)

    while low <= high:
        mid = (high + low) // 2
        if kumpulan[mid] == target:
            return True
        elif target < kumpulan[mid]:
            high = mid - 1
        else:
            low = mid + 1
    return False

a = [2, 4, 5, 10, 13, 18, 23, 29, 31, 51, 64]
print(binSe(a, 10))
```

Ln: 1 Col: 0