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KELAS : D

MODUL : 4

modul4-1.py - C:/Users/HP/AppData/Local/Programs/Python/Python36-32/modul4-1.py (3.6.2)

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```
class MhsTIF(object):
    def __init__(self, nama, nim, kota, us):
        self.nama = nama
        self.nim = nim
        self.kota = kota
        self.uangSaku = us
    def __str__(self):
        s = self.nama + ', nim ' + str(self.nim)\
            + '. Tinggal di ' + self.kota\
            + '. Uang saku Rp ' + str(self.uangSaku)\
            + '. tiap bulannya.'
        return s

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]

def cariKotaTinggal(list, target):
    a = []
    for i in list:
        if i.kota == target:
            a.append(list.index(i))
    return a

a = cariKotaTinggal(Daftar, "Klaten")
print(a)
```

Python 3.6.2 Shell

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```
Python 3.6.2 (v3.6.2:5fd33b5, Jul 8 2017, 04:14:34) [MSC v.1900 32 bit (Intel)]
on win32
Type "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/HP/AppData/Local/Programs/Python/Python36-32/modul4-1.py =
[6, 8]
>>> |
```

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modul4-2.py - C:/Users/HP/AppData/Local/Programs/Python/Python36-32/modul4-2.py (3.6.2)

File Edit Format Run Options Window Help

```
class MhsTIF(object):
    def __init__(self, nama, nim, kota, us):
        self.nama = nama
        self.nim = nim
        self.kota = kota
        self.uangSaku = us
    def __str__(self):
        s = self.nama + ', nim ' + str(self.nim)\
            + '. Tinggal di ' + self.kota\
            + '. Uang saku Rp ' + str(self.uangSaku)\
            + '. tiap bulannya.'
        return s

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]

def cariUangSakuTerkecil(list):
    temp = list[0].uangSaku
    for i in list[1:]:
        if i.uangSaku < temp:
            temp = i.uangSaku
    return temp

a = cariUangSakuTerkecil(Daftar)
print(a)
```

Python 3.6.2 Shell

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```
Python 3.6.2 (v3.6.2:5fd33b5, Jul 8 2017, 04:14:34) [MSC v.1900 32 bit (Intel)]
on win32
Type "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/HP/AppData/Local/Programs/Python/Python36-32/modul4-2.py =
230000
>>> |
```

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```
modul4-3.py - C:/Users/HP/AppData/Local/Programs/Python/Python36-32/modul4-3.py (3.6.2)
File Edit Format Run Options Window Help

class MhsTIF(object):
    def __init__(self, nama, nim, kota, us):
        self.nama = nama
        self.nim = nim
        self.kota = kota
        self.uangSaku = us
    def __str__(self):
        s = self.nama + ', ' + str(self.nim) + '\n'
            + '. Tinggal di ' + self.kota + '\n'
            + '. Uang saku Rp ' + str(self.uangSaku) + '\n'
            + '. tiap bulannya.'
        return s

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]

def cariUangSakuTerkecilObject(list):
    temp = [list[0]]
    for i in list[1:]:
        if i.uangSaku < temp[0].uangSaku:
            temp = [i]
        elif i.uangSaku == temp[0].uangSaku:
            temp.append(i)
    return temp

a = cariUangSakuTerkecilObject(Daftar)
print(a)
```

```
Python 3.6.2 Shell
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Python 3.6.2 (v3.6.2:5fd33b5, Jul 8 2017, 04:14:34) [MSC v.1900 32 bit (Intel)]
on win32
Type "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/HP/AppData/Local/Programs/Python/Python36-32/modul4-3.py =
[<__main__.MhsTIF object at 0x02B50330>]
```

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```
modul4-4.py - C:/Users/HP/AppData/Local/Programs/Python/Python36-32/modul4-4.py (3.6.2)
File Edit Format Run Options Window Help

class MhsTIF(object):
    def __init__(self, nama, nim, kota, us):
        self.nama = nama
        self.nim = nim
        self.kota = kota
        self.uangSaku = us
    def __str__(self):
        s = self.nama + ', ' + str(self.nim) + '\n'
            + '. Tinggal di ' + self.kota + '\n'
            + '. Uang saku Rp ' + str(self.uangSaku) + '\n'
            + '. tiap bulannya.'
        return s

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]

def cariUangSakuKurang250k(list):
    temp = []
    for i in list:
        if i.uangSaku < 250000:
            temp.append(i)
    return temp

a = cariUangSakuKurang250k(Daftar)
for i in a:
    print(i.nama)
```

```
Python 3.6.2 Shell
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Python 3.6.2 (v3.6.2:5fd33b5, Jul 8 2017, 04:14:34) [MSC v.1900 32 bit (Intel)]
on win32
Type "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/HP/AppData/Local/Programs/Python/Python36-32/modul4-4.py =
Ika
Budi
Chandra
Eka
Deni
Galuh
Janto
>>>
```

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modul4-5.py - C:/Users/HP/AppData/Local/Programs/Python/Python36-32/modul4-5.py (3.6.2)
File Edit Format Run Options Window Help

```
class MhsTIF(object):  
    def __init__(self, nama, nim, kota, us):  
        self.nama = nama  
        self.nim = nim  
        self.kota = kota  
        self.uangSaku = us  
    def __str__(self):  
        s = self.nama + ', nim ' + str(self.nim) \  
            + '. Tinggal di ' + self.kota \  
            + '. Uang saku Rp ' + str(self.uangSalu) \  
            + '. tiap bulannya.'  
        return s  
  
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]  
  
def cariLinkedList(head, target):  
    temp = head  
    while temp.data != None:  
        if temp.data == target:  
            return temp  
    return -1
```

Python 3.6.2 Shell
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Python 3.6.2 (v3.6.2:5fd33b5, Jul 8 2017, 04:14:34) [MSC v.1900 32 bit (Intel)]
on win32
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>>> |

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modul4-6.py - C:/Users/HP/AppData/Local/Programs/Python/Python36-32/modul4-6.py (3.6.2)
File Edit Format Run Options Window Help

```
class MhsTIF(object):  
    def __init__(self, nama, nim, kota, us):  
        self.nama = nama  
        self.nim = nim  
        self.kota = kota  
        self.uangSaku = us  
    def __str__(self):  
        s = self.nama + ', nim ' + str(self.nim) \  
            + '. Tinggal di ' + self.kota \  
            + '. Uang saku Rp ' + str(self.uangSalu) \  
            + '. tiap bulannya.'  
        return s  
  
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]  
  
def binSe(kumpulan, target):  
    low = 0  
    high = len(kumpulan)-1  
    while low <= high:  
        mid = (high+low)//2  
        if kumpulan[mid] == target:  
            return mid  
        elif target < kumpulan[mid]:  
            high = mid-1  
        else:  
            low = mid+1  
    return False
```

Python 3.6.2 Shell
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Python 3.6.2 (v3.6.2:5fd33b5, Jul 8 2017, 04:14:34) [MSC v.1900 32 bit (Intel)]
on win32
Type "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/HP/AppData/Local/Programs/Python/Python36-32/modul4-6.py =
2
>>> |

Activate Windows
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```
modul4-8.py - C:/Users/HP/AppData/Local/Programs/Python/Python36-32/modul4-8.py (3.6.2)
File Edit Format Run Options Window Help

"""Karena memakai konsep Big-O. dan yang dipakai
adalah rumus O(log n) dengan rincian 1 = 1, 2 = 2, 4 = 3, 10 = 4, 100 = 7, 1000=10.
Di mana log berasal dari pangkat log berbasis 2. Dengan begitu dapat mengetahui jumlah
maksimal tebakan.
Untuk pola sendiri:
    apabila ingin menebak angka 70

    a = nilai tebakan pertama // 2
    tebakan selanjutnya = nilai tebakan "lebih dari" + a
    'jika hasil tebakan selanjutnya "kurang dari", maka nilai yang dipakai
    tetap nilai lebih dari sebelumnya"
    a = a // 2

Simulasi
    tebakan ke 1: 50 (mengambil nilai tengah) jawaban= "lebih dari itu"
    tebakan ke 2: 75 (dari 50 + 25) jawaban = "kurang dari itu"
    tebakan ke 3: 62 (dari 50 + 12) jawaban = "lebih dari itu"
    tebakan ke 4: 68 (dari 62 + 6) jawaban = "lebih dari itu"
    tebakan ke 5: 71 (dari 68 + 3) jawaban = "kurang dari itu"
    tebakan ke 6: 69 (dari 68 + 1) jawaban = "lebih dari itu"
    tebakan ke 7: antara 71 dan 69 hanya ada 1 angka = 70!!!

"""
```

```
Python 3.6.2 Shell
File Edit Shell Debug Options Window Help
Python 3.6.2 (v3.6.2:5fd33b5, Jul 8 2017, 04:14:34) [MSC v.1900 32 bit (Intel)]
on win32
Type "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/HP/AppData/Local/Programs/Python/Python36-32/modul4-8.py =
>>>
```

```
modul4-7.py - C:/Users/HP/AppData/Local/Programs/Python/Python36-32/modul4-7.py (3.6.2)
File Edit Format Run Options Window Help

class MhsTIF(object):
    def __init__(self, nama, nim, kota, us):
        self.nama = nama
        self.nim = nim
        self.kota = kota
        self.uangSaku = us
    def __str__(self):
        s = self.nama + ', ' + str(self.nim) + '\n'
            + '. Tinggal di ' + self.kota + '\n'
            + '. Uang saku Rp ' + str(self.uangSaku) + '\n'
            + '. tiap bulannya.'
        return s

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("Saluh", 5, "Wonogiri", 245000)
c8 = MhsTIF("Juno", 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]

def binSeMass(kumpulan, target):
    temp = []
    low = 0
    high = len(kumpulan)-1
    while low <= high :
        mid = (high+low)//2
        if kumpulan[mid] == target:
            midKiri = mid-1
            while kumpulan[midKiri] == target:
                temp.append(midKiri)
                midKiri = midKiri-1
            temp.append(mid)
            midKanan = mid+1
            while kumpulan[midKanan] == target:
                temp.append(midKanan)
```

```
Python 3.6.2 Shell
File Edit Shell Debug Options Window Help
Python 3.6.2 (v3.6.2:5fd33b5, Jul 8 2017, 04:14:34) [MSC v.1900 32 bit (Intel)]
on win32
Type "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/HP/AppData/Local/Programs/Python/Python36-32/modul4-7.py =
[3, 4, 5]
>>>
```