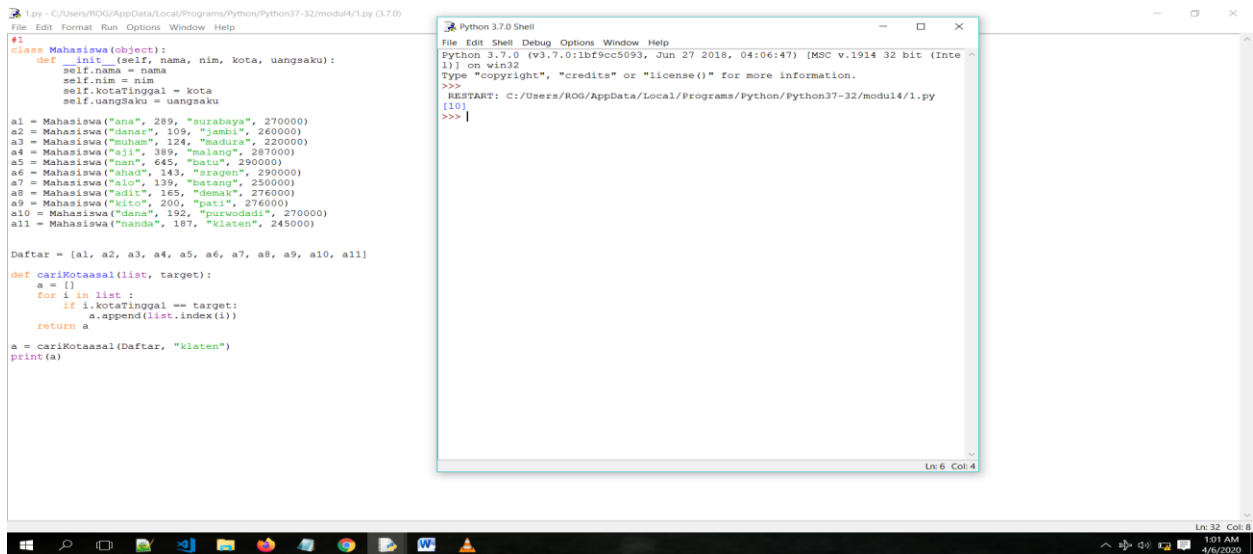


Nama : moch afrizal

No : L200180022

## Modul 4

1



```
#1
class Mahasiswa(object):
    def __init__(self, nama, nim, kota, uangSaku):
        self.nama = nama
        self.nim = nim
        self.kotaTinggal = kota
        self.uangSaku = uangSaku

a1 = Mahasiswa("ana", 289, "surabaya", 270000)
a2 = Mahasiswa("danar", 109, "jambi", 260000)
a3 = Mahasiswa("muham", 124, "madura", 220000)
a4 = Mahasiswa("aji", 389, "malang", 287000)
a5 = Mahasiswa("nan", 645, "batu", 290000)
a6 = Mahasiswa("ahad", 143, "sragen", 290000)
a7 = Mahasiswa("alo", 139, "batang", 250000)
a8 = Mahasiswa("adit", 165, "demak", 276000)
a9 = Mahasiswa("kito", 200, "pati", 276000)
a10 = Mahasiswa("dana", 192, "purwodadi", 270000)
a11 = Mahasiswa("nanda", 187, "klATEN", 245000)

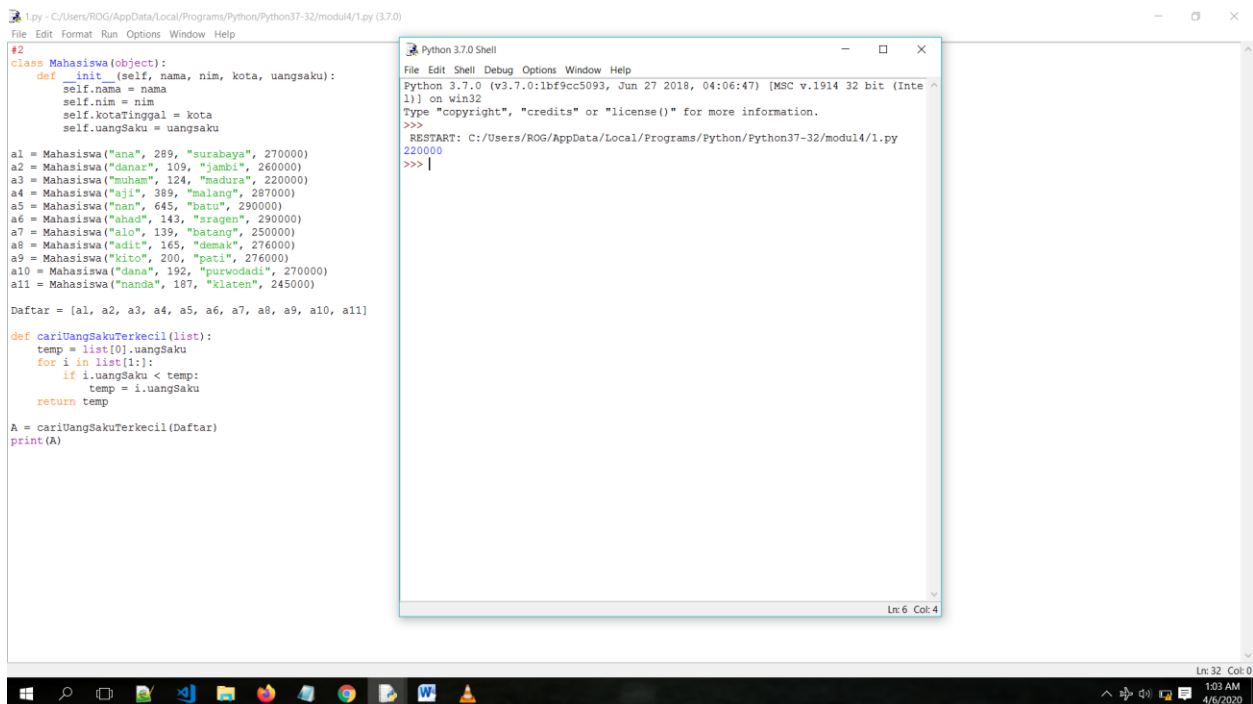
Daftar = [a1, a2, a3, a4, a5, a6, a7, a8, a9, a10, a11]

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

a = cariKotaasakal(Daftar, "klATEN")
print(a)
```

```
Python 3.7.0 Shell
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:06:47) [MSC v.1914 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:/Users/ROG/AppData/Local/Programs/Python/Python37-32/modul4/1.py
[10]
```

2



```
#2
class Mahasiswa(object):
    def __init__(self, nama, nim, kota, uangSaku):
        self.nama = nama
        self.nim = nim
        self.kotaTinggal = kota
        self.uangSaku = uangSaku

a1 = Mahasiswa("ana", 289, "surabaya", 270000)
a2 = Mahasiswa("danar", 109, "jambi", 260000)
a3 = Mahasiswa("muham", 124, "madura", 220000)
a4 = Mahasiswa("aji", 389, "malang", 287000)
a5 = Mahasiswa("nan", 645, "batu", 290000)
a6 = Mahasiswa("ahad", 143, "sragen", 290000)
a7 = Mahasiswa("alo", 139, "batang", 250000)
a8 = Mahasiswa("adit", 165, "demak", 276000)
a9 = Mahasiswa("kito", 200, "pati", 276000)
a10 = Mahasiswa("dana", 192, "purwodadi", 270000)
a11 = Mahasiswa("nanda", 187, "klATEN", 245000)

Daftar = [a1, a2, a3, a4, a5, a6, a7, a8, a9, a10, a11]

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 3.7.0 Shell
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:06:47) [MSC v.1914 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:/Users/ROG/AppData/Local/Programs/Python/Python37-32/modul4/1.py
220000
>>> |
```

3

The screenshot shows a Python IDE with a file named 1.py. The code defines a class `Mahasiswa` with an `__init__` method that takes `nama`, `NIM`, `kota`, and `us` as parameters. It then creates 11 instances of the class, each with specific attributes. A list `Daftar` is created containing all instances. A method `cariTerkecil` is defined to find the instance with the lowest `uangSaku` value. The shell window shows the execution of the code, displaying the output of the `cariTerkecil` method, which returns the instance with the lowest `uangSaku` value: `['danar', 109, 'jambi', 260000]`.

```

1.py - C:/Users/ROG/AppData/Local/Programs/Python/Python37-32/modul4/1.py (3.7.0)
File Edit Format Run Options Window Help

#3
class Mahasiswa(object):
    def __init__(self, nama, NIM, kota, us):
        self.nama = nama
        self.NIM = NIM
        self.kotaTinggal = kota
        self.uangSaku = us

a1 = Mahasiswa("ana", 289, "surabaya", 270000)
a2 = Mahasiswa("danar", 109, "jambi", 260000)
a3 = Mahasiswa("muham", 124, "madura", 220000)
a4 = Mahasiswa("aji", 389, "malang", 287000)
a5 = Mahasiswa("nan", 645, "batu", 290000)
a6 = Mahasiswa("ahad", 143, "sragen", 290000)
a7 = Mahasiswa("alo", 139, "batang", 250000)
a8 = Mahasiswa("adit", 165, "demak", 276000)
a9 = Mahasiswa("kito", 200, "pati", 276000)
a10 = Mahasiswa("dana", 192, "purwodadi", 270000)
a11 = Mahasiswa("nanda", 187, "klaten", 245000)

Daftar = [a1, a2, a3, a4, a5, a6, a7, a8, a9, a10, a11]

def cariTerkecil(self):
    terkecil = self[0].uangSaku
    c = []
    for i in self:
        if i.uangSaku < terkecil:
            c.append((i.nama, i.NIM, i.kotaTinggal, i.uangSaku))
    return c
print(cariTerkecil(Daftar))

Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:06:47) [MSC v.1914 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:/Users/ROG/AppData/Local/Programs/Python/Python37-32/modul4/1.py
[['danar', 109, 'jambi', 260000], ('muham', 124, 'madura', 220000), ('alo', 139, 'batang', 250000), ('nanda', 187, 'klaten', 245000)]
>>>
Ln: 6 Col: 4
Ln: 9 Col: 0
1:06 AM
4/6/2020

```

4

The screenshot shows a Python IDE with a file named 1.py. The code defines a class `Mahasiswa` with an `__init__` method that takes `nama`, `nim`, `kota`, and `uangsaku` as parameters. It then creates 11 instances of the class, each with specific attributes. A list `Daftar` is created containing all instances. A method `cariUangSakuKurangdari250rb` is defined to find the instances with `uangSaku` less than 250,000. The shell window shows the execution of the code, displaying the output of the `cariUangSakuKurangdari250rb` method, which returns the instances with `uangSaku` less than 250,000: `muham`, `nanda`, and `nanda`.

```

1.py - C:/Users/ROG/AppData/Local/Programs/Python/Python37-32/modul4/1.py (3.7.0)
File Edit Format Run Options Window Help

#4
class Mahasiswa(object):
    def __init__(self, nama, nim, kota, uangSaku):
        self.nama = nama
        self.nim = nim
        self.kotaTinggal = kota
        self.uangSaku = uangSaku

a1 = Mahasiswa("ana", 289, "surabaya", 270000)
a2 = Mahasiswa("danar", 109, "jambi", 260000)
a3 = Mahasiswa("muham", 124, "madura", 220000)
a4 = Mahasiswa("aji", 389, "malang", 287000)
a5 = Mahasiswa("nan", 645, "batu", 290000)
a6 = Mahasiswa("ahad", 143, "sragen", 290000)
a7 = Mahasiswa("alo", 139, "batang", 250000)
a8 = Mahasiswa("adit", 165, "demak", 276000)
a9 = Mahasiswa("kito", 200, "pati", 276000)
a10 = Mahasiswa("dana", 192, "purwodadi", 270000)
a11 = Mahasiswa("nanda", 187, "klaten", 245000)

Daftar = [a1, a2, a3, a4, a5, a6, a7, a8, a9, a10, a11]

def cariUangSakuKurangdari250rb(list):
    temp = []
    for i in list:
        if i.uangSaku < 250000:
            temp.append(i)
    return temp

f = cariUangSakuKurangdari250rb(Daftar)
for i in f:
    print(i.nama)

Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:06:47) [MSC v.1914 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:/Users/ROG/AppData/Local/Programs/Python/Python37-32/modul4/1.py
muham
nanda
nanda
>>>
Ln: 7 Col: 4
Ln: 21 Col: 55
1:12 AM
4/6/2020

```

5

The screenshot shows a Python IDE with a file named `1.py` at `C:/Users/ROG/AppData/Local/Programs/Python/Python37-32/modul4/1.py`. The code implements a linked list structure with a `node` class and a `cari` method to search for a value. The execution output in the Python 3.7.0 Shell shows the results of the search for values 10 and 22.

```
#5
class node (object):
    def __init__(self, data, next = None):
        self.data = data
        self.next = next
    def cari (self, cari):
        curNode = self
        while curNode is not None :
            if curNode.data != cari :
                curNode = curNode.next
            else :
                print ("Data", cari, "ada dalam Linked List")
                break
        elif curNode.next == None :
            print ("Data", cari, "tidak ada dalam linked list")
            break

a = node (80)
menu = a
a.next = node (22)
a = a.next
a.next = node (10)
a = a.next
a.next = node (19)

menu.cari(10)
menu.cari(22)
```

```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:06:47) [MSC v.1914 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:/Users/ROG/AppData/Local/Programs/Python/Python37-32/modul4/1.py
Data 10 ada dalam Linked List
Data 22 ada dalam Linked List
>>> |
```

6

The screenshot shows a Python IDE with a file named `1.py` at `C:/Users/ROG/AppData/Local/Programs/Python/Python37-32/modul4/1.py`. The code implements a binary search function `binSe` to find a target value in a sorted list. The execution output in the Python 3.7.0 Shell shows the results of the binary search for targets 56 and 120.

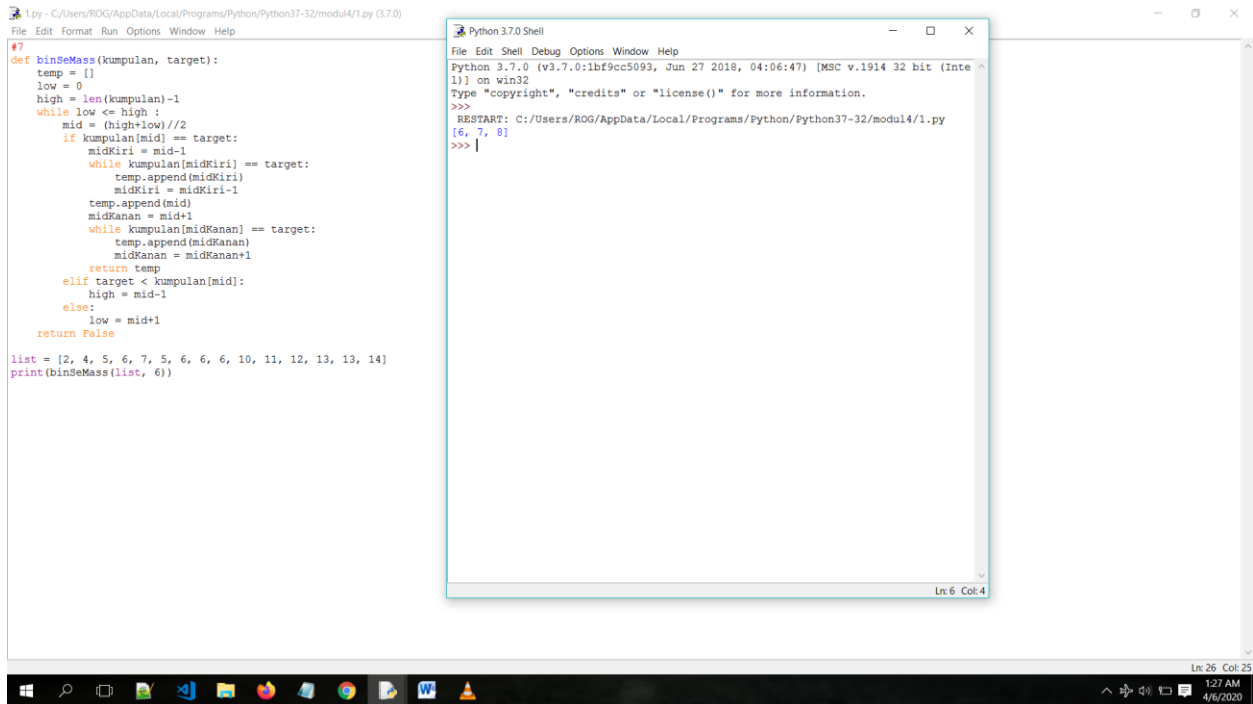
```
#6
def binSe(kumpulan, target):
    low = 0
    high = len(kumpulan) - 1
    data = []
    while low <= high:
        mid = (high + low) // 2
        if kumpulan[mid] == target:
            data.append(kumpulan.index(target))
            return True
        elif target < kumpulan[mid]:
            high = mid - 1
        else :
            low = mid + 1
    return False

list = [38, 12, 56, 137, 299]
target1 = 56
target2 = 120

print ("nilai target :", target1)
print (binSe(list, target1))

print ("\nnilai target :", target2)
print (binSe(list, target2))
```

```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:06:47) [MSC v.1914 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:/Users/ROG/AppData/Local/Programs/Python/Python37-32/modul4/1.py
nilai target : 56
True
nilai target : 120
False
>>> |
```



The image shows a screenshot of a Python IDE with two windows. The main window displays a Python script for a binary search algorithm. The script defines a function `binSeMass` that takes a list `kumpulan` and a `target` as input. It uses a binary search approach to find the target in the list. The list `list` is defined as `[2, 4, 5, 6, 7, 5, 6, 6, 6, 10, 11, 12, 13, 13, 14]` and the target is `6`. The script prints the result of `binSeMass(list, 6)`.

```
#7
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)
                midKanan = midKanan+1
            return temp
        elif target < kumpulan[mid]:
            high = mid-1
        else:
            low = mid+1
    return False

list = [2, 4, 5, 6, 7, 5, 6, 6, 6, 10, 11, 12, 13, 13, 14]
print(binSeMass(list, 6))
```

The Python 3.7.0 Shell window shows the execution of the script. It displays the Python version, architecture, and the path to the script. The output of the script is `[6, 7, 8]`.

```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:06:47) [MSC v.1914 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:/Users/ROG/AppData/Local/Programs/Python/Python37-32/modul4/1.py
[6, 7, 8]
>>> |
```

The taskbar at the bottom shows the Windows taskbar with various icons and the system clock displaying 1:27 AM on 4/6/2020.