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Kelas : A

Modul 4 tugas

1. Tugas 1

```
*gas1.py - C:/Users/ACER/Documents/GitHub/algostruk/MODUL4/lat2.py
File Edit Format Run Options Window Help

from lat2 import *

def cariIndex(daftar, target):
    index = []
    for i in range(len(daftar)):
        if daftar[i].kotatinggal == target:
            index.append(i)
    return index

print(cariIndex(daftar, 'Klaten'))
```

```
Python 3.8.0 Shell
File Edit Shell Debug Options Window Help
Python 3.8.0 (tags/v3.8.0:fa919fd, tel)] on win32
Type "help", "copyright", "credits"
>>>
===== RESTART: C:/Users/ACER/Docu
deni tinggal di klaten
janto tinggal di klaten
[]
>>> |
```

2. Tugas 2

```
gas2.py - C:/Users/ACER/Documents/GitHub/algostruk/MODUL4/lat2.py
File Edit Format Run Options Window Help

from lat2 import *

def cariTerkecil(daftar):
    terkecil = daftar[0].uangsbaku
    for i in daftar:
        if i.uangsbaku < terkecil:
            terkecil = i.uangsbaku
    return terkecil

print(cariTerkecil(daftar))
```

```
Python 3.8.0 Shell
File Edit Shell Debug Options Window Help
Python 3.8.0 (tags/v3.8.0:fa919fd, Oct 14 2019, 19:2
tel)] on win32
Type "help", "copyright", "credits" or "license()" f
>>>
===== RESTART: C:/Users/ACER/Documents/GitHub/alg
deni tinggal di klaten
janto tinggal di klaten
230000
>>> |
```

3. Tugas 3

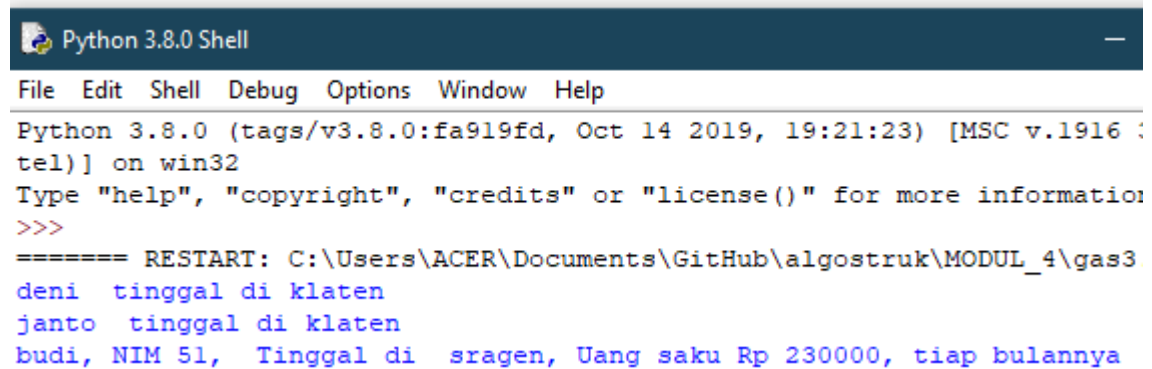
```

from lat2 import *

def cariTerkecil(daftar):
    terkecil = daftar[0].uangsak
    for i in daftar:
        if i.uangsak < terkecil:
            terkecil = i.uangsak
    for i in daftar:
        if i.uangsak == terkecil:
            print(i)

print(cariTerkecil(daftar))

```

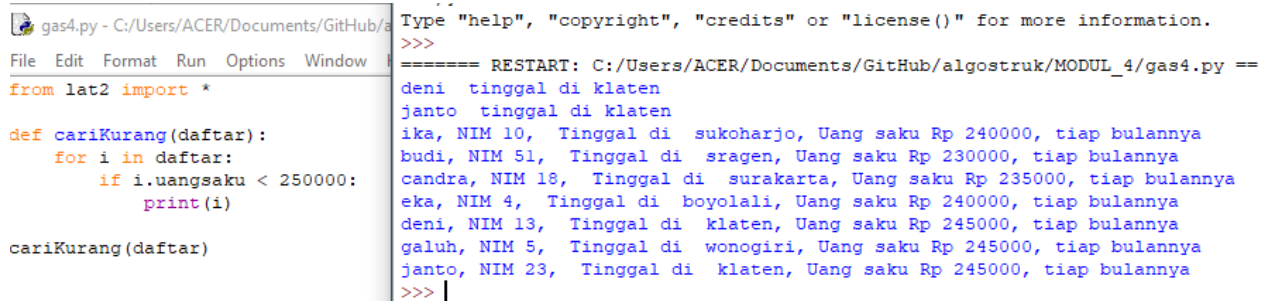


```

Python 3.8.0 Shell
File Edit Shell Debug Options Window Help
Python 3.8.0 (tags/v3.8.0:fa919fd, Oct 14 2019, 19:21:23) [MSC v.1916 :
tel)] on win32
Type "help", "copyright", "credits" or "license()" for more information
>>>
===== RESTART: C:\Users\ACER\Documents\GitHub\algostruk\MODUL_4\gas3
deni tinggal di klaten
janto tinggal di klaten
budi, NIM 51, Tinggal di sragen, Uang saku Rp 230000, tiap bulannya

```

4. Tugas 4



```

gas4.py - C:/Users/ACER/Documents/GitHub/a
File Edit Format Run Options Window
from lat2 import *

def cariKurang(daftar):
    for i in daftar:
        if i.uangsak < 250000:
            print(i)

cariKurang(daftar)

Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/ACER/Documents/GitHub/algostruk/MODUL_4/gas4.py ==
deni tinggal di klaten
janto tinggal di klaten
ika, NIM 10, Tinggal di sukoharjo, Uang saku Rp 240000, tiap bulannya
budi, NIM 51, Tinggal di sragen, Uang saku Rp 230000, tiap bulannya
candra, NIM 18, Tinggal di surakarta, Uang saku Rp 235000, tiap bulannya
eka, NIM 4, Tinggal di boyolali, Uang saku Rp 240000, tiap bulannya
deni, NIM 13, Tinggal di klaten, Uang saku Rp 245000, tiap bulannya
galuh, NIM 5, Tinggal di wonogiri, Uang saku Rp 245000, tiap bulannya
janto, NIM 23, Tinggal di klaten, Uang saku Rp 245000, tiap bulannya
>>>

```

5. Tugas 5

```
gas5.py - C:/Users/ACER/Documents/GitHub/algostruk/MODU Python
File Edit Format Run Options Window Help File Edit
class Node:
    def __init__(self, data, next = None):
        self.data = data
        self.next = next

class LinkedList:
    def __init__(self, head = None):
        self.head = head

    def cari(self, head, yang_dicari):
        while head is not None:
            if head.data == yang_dicari:
                return True
            head = head.next
        return False

a = Node(11)
b = Node(12)
c = Node(13)
d = Node(15)
e = Node(16)

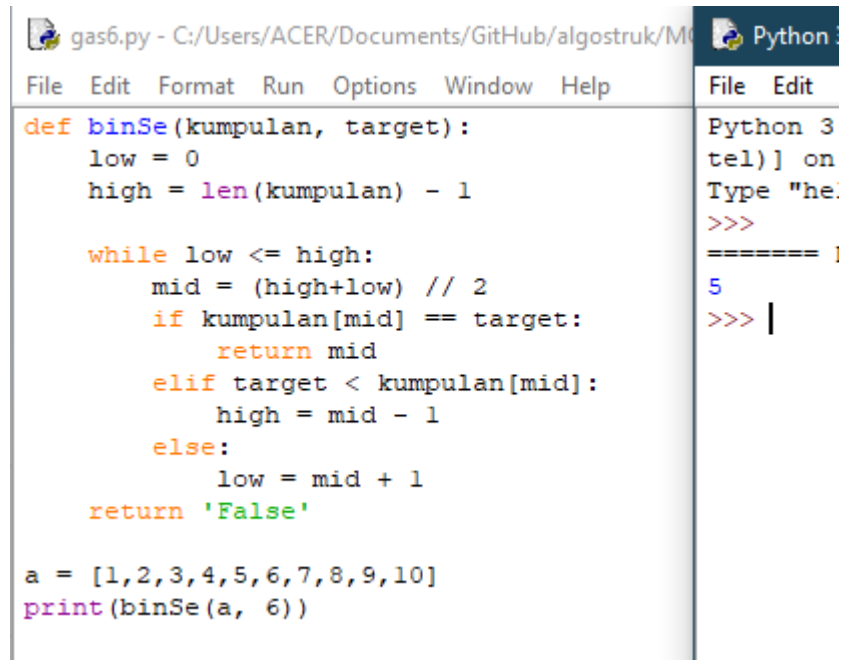
a.next = b
b.next = c
c.next = d
d.next = e

l1list = LinkedList(a)

print(l1list.cari(a,13))
```

```
Python
tel)] c
Type "h
>>>
=====
True
>>> |
```

6. Tugas 6



The image shows a screenshot of a Python IDE with two windows. The left window, titled 'gas6.py - C:/Users/ACER/Documents/GitHub/algostruk/M...', contains a Python script for a binary search function. The right window, titled 'Python 3...', shows the output of the script.

```
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'  
  
a = [1,2,3,4,5,6,7,8,9,10]  
print(binSe(a, 6))
```

The right window shows the output of the script:

```
Python 3  
tel)] on  
Type "he:  
>>>  
===== ]  
5  
>>> |
```

7. Tugas 7

```
gas7.py - C:/Users/ACER/Documents/GitHub/algostruk/MODUL_4
File Edit Format Run Options Window Help

def binSe(kumpulan, target):
    low = 0
    high = len(kumpulan) - 1

    index = []

    while low <= high:
        mid = (high+low) // 2
        if kumpulan[mid] == target:
            while kumpulan[mid - 1] == target:
                mid -= 1
            while kumpulan[mid] == target:
                index.append(mid)
                mid += 1
            if mid > len(kumpulan)-1:
                break
            return index
        elif target < kumpulan[mid]:
            high = mid - 1
        else:
            low = mid + 1
    return 'False'

a = [1,1,1,2,3,4]
b = [1,2,4,4,4,4]
c = [2,3,5,6,6,6,8,9,9,10]
print(binSe(a,1))
print(binSe(b,4))
print(binSe(c, 6))
```

```
Python 3.8.0 Shell
File Edit Shell [
Python 3.8.0 (
tel)] on win32
Type "help", "
>>>
===== RESTART
[0, 1, 2]
[2, 3, 4, 5]
[3, 4, 5]
>>> |
```

8. Tugas 8

gas8.py - C:/Users/ACER/Documents/GitHub/algostruk/MODUL_4/gas8.py (3.8.0)

File Edit Format Run Options Window Help

```
from random import randint

def log2n(n):
    return 1 + log2n(n/2) if (n > 1) else 0

def quiz(angka):
    quiz = randint(1, angka)
    jawab = 0
    count = 1
    maks = log2n(angka)

    print('Saya menyimpan angka bulat antara 1 sampai {}. anda punya {}x kesempatan'.format(angka, maks))
    while jawab != quiz and count <= maks:
        jawab = int(input('Masukkan tebakan ke-{}:>'.format(count)))
        if jawab == quiz:
            print('Ya. Anda benar')
        elif jawab < quiz:
            print('Itu terlalu kecil. Coba lagi')
        else:
            print('Itu terlalu besar. Coba lagi')
        count += 1

quiz(10000)
```

Python 3.8.0 Shell

File Edit Shell Debug Options Wind

```
Python 3.8.0 (tags/v3.8.0:fa91
tel)] on win32
Type "help", "copyright", "cre
>>>
===== RESTART: C:/Users/ACER
Saya menyimpan angka bulat ant
a tebak
Masukkan tebakan ke-1:>32
Itu terlalu kecil. Coba lagi
Masukkan tebakan ke-2:>400
Itu terlalu kecil. Coba lagi
Masukkan tebakan ke-3:>600
Itu terlalu kecil. Coba lagi
Masukkan tebakan ke-4:>800
Itu terlalu kecil. Coba lagi
Masukkan tebakan ke-5:>900
Itu terlalu kecil. Coba lagi
Masukkan tebakan ke-6:>999
Itu terlalu kecil. Coba lagi
Masukkan tebakan ke-7:>10000
Itu terlalu besar. Coba lagi
Masukkan tebakan ke-8:>5000
Itu terlalu besar. Coba lagi
Masukkan tebakan ke-9:>3000
Itu terlalu kecil. Coba lagi
Masukkan tebakan ke-10:>4000
Itu terlalu kecil. Coba lagi
Masukkan tebakan ke-11:>4500
Itu terlalu kecil. Coba lagi
Masukkan tebakan ke-12:>4700
Itu terlalu besar. Coba lagi
Masukkan tebakan ke-13:>4600
Itu terlalu besar. Coba lagi
Masukkan tebakan ke-14:>4555
Itu terlalu besar. Coba lagi
>>> |
```