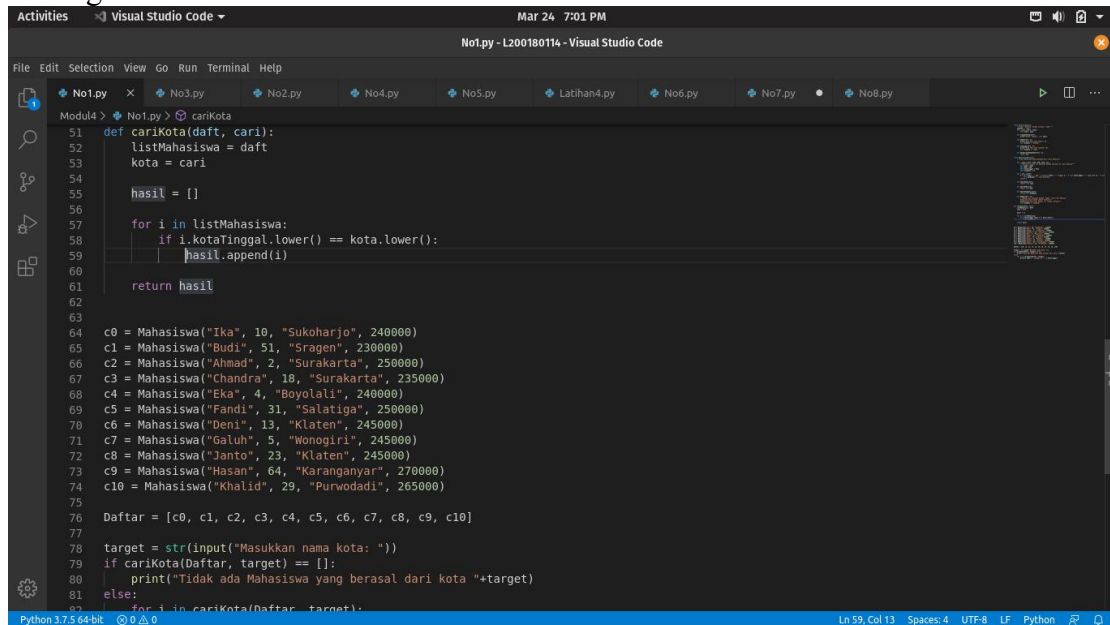


**Nama : Arga Dwi Ardinata**  
**NIM : L200180114**  
**Kelas : E**

## Soal-soal untuk Mahasiswa

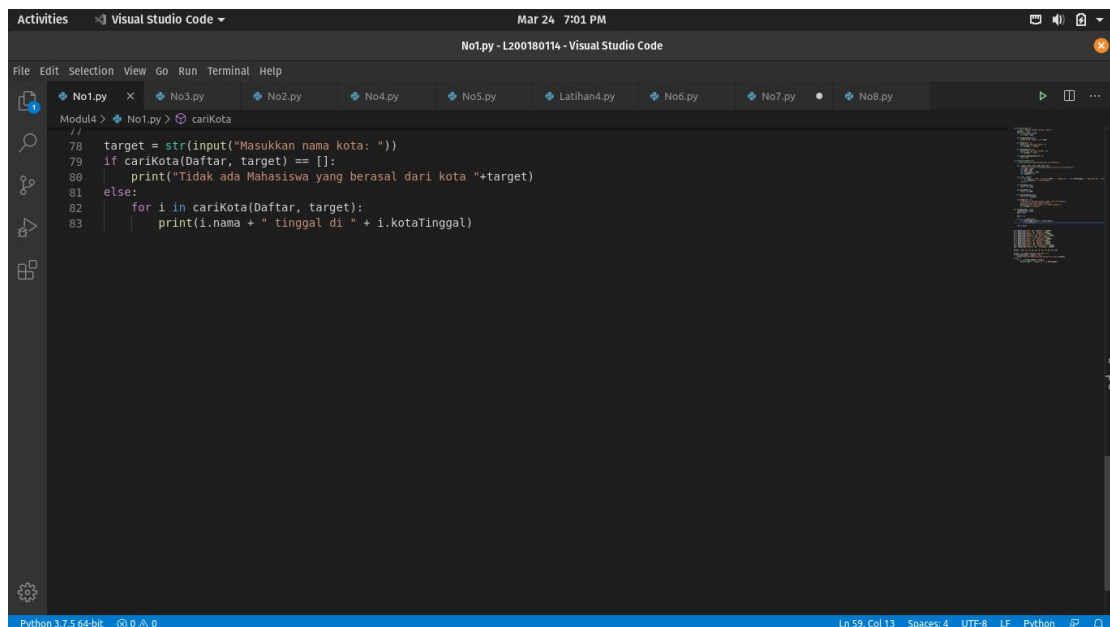
### Soal Nomer 1 Coding



```
File Edit Selection View Go Run Terminal Help
No1.py - L200180114 - Visual Studio Code

No1.py x No3.py No2.py No4.py No5.py Latihan4.py No6.py No7.py No8.py

Modul4 > No1.py > cariKota
51 def cariKota(daftar, cari):
52     listMahasiswa = daftar
53     kota = cari
54
55     hasil = []
56
57     for i in listMahasiswa:
58         if i.kotaTinggal.lower() == kota.lower():
59             hasil.append(i)
60
61     return hasil
62
63 c0 = Mahasiswa("Ika", 10, "Sukoharjo", 240000)
64 c1 = Mahasiswa("Budi", 51, "Sragen", 230000)
65 c2 = Mahasiswa("Ahmad", 2, "Surakarta", 250000)
66 c3 = Mahasiswa("Chandra", 18, "Surakarta", 235000)
67 c4 = Mahasiswa("Eka", 4, "Boyolali", 240000)
68 c5 = Mahasiswa("Fandi", 31, "Salatiga", 250000)
69 c6 = Mahasiswa("Deni", 13, "Klaten", 245000)
70 c7 = Mahasiswa("Galuh", 5, "Wonogiri", 245000)
71 c8 = Mahasiswa("Janto", 23, "Klaten", 245000)
72 c9 = Mahasiswa("Hasan", 64, "Karanganyar", 270000)
73 c10 = Mahasiswa("Khalid", 29, "Purwodadi", 265000)
74
75 Daftar = [c0, c1, c2, c3, c4, c5, c6, c7, c8, c9, c10]
76
77 target = str(input("Masukkan nama kota: "))
78 if cariKota(Daftar, target) == []:
79     print("Tidak ada Mahasiswa yang berasal dari kota "+target)
80 else:
81     for i in cariKota(Daftar, target):
82         print(i.nama + " tinggal di " + i.kotaTinggal)
```

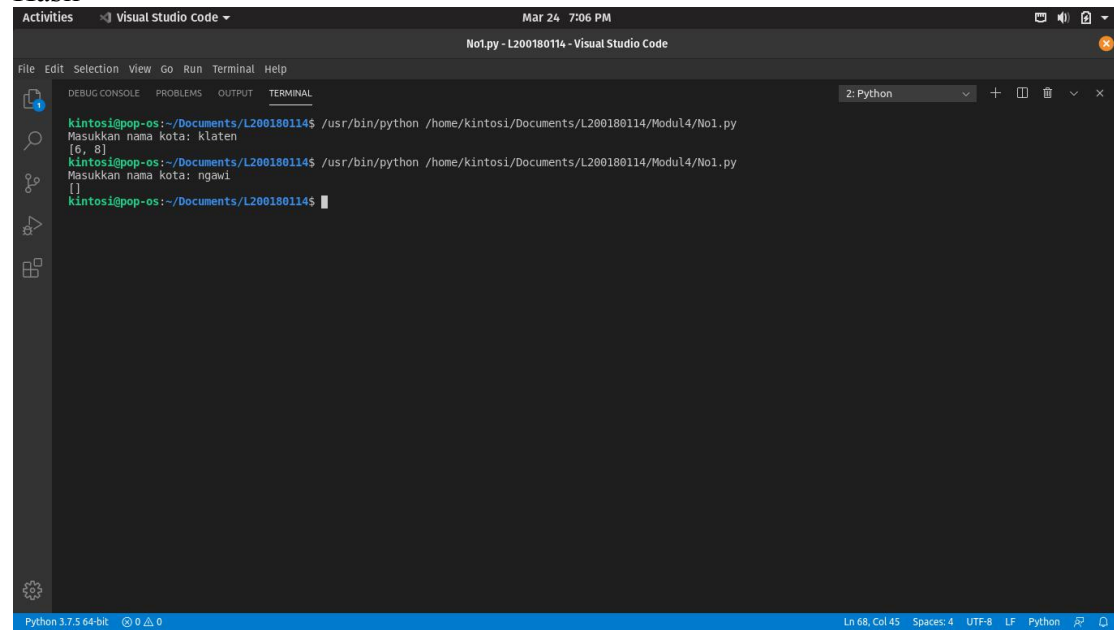


```
File Edit Selection View Go Run Terminal Help
No1.py - L200180114 - Visual Studio Code

No1.py x No3.py No2.py No4.py No5.py Latihan4.py No6.py No7.py No8.py

Modul4 > No1.py > cariKota
77 target = str(input("Masukkan nama kota: "))
78 if cariKota(Daftar, target) == []:
79     print("Tidak ada Mahasiswa yang berasal dari kota "+target)
80 else:
81     for i in cariKota(Daftar, target):
82         print(i.nama + " tinggal di " + i.kotaTinggal)
```

# Hasil

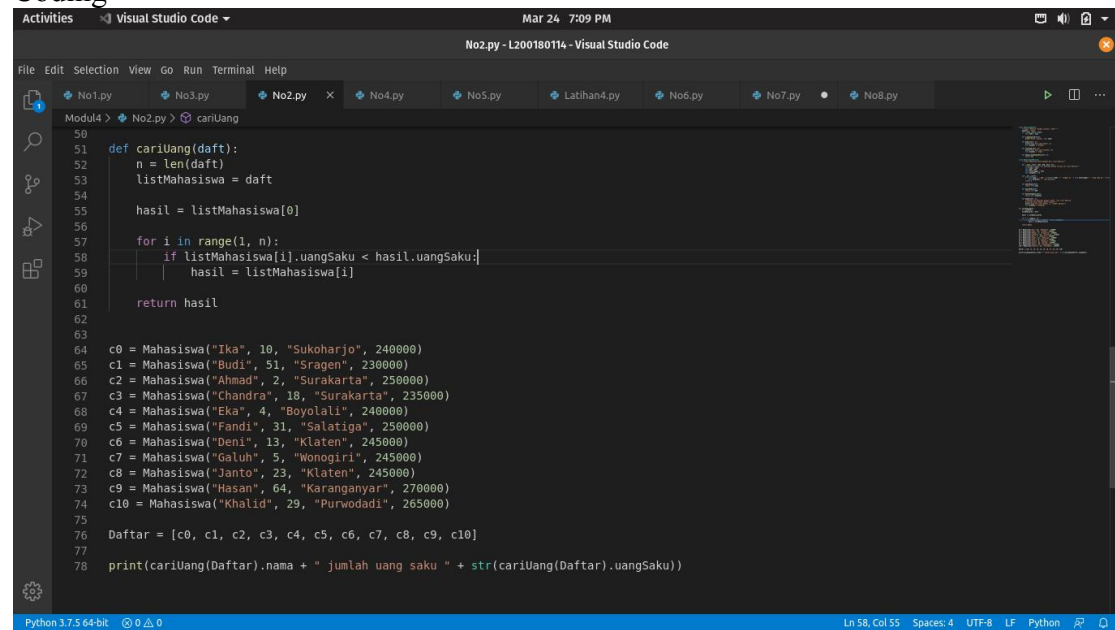


The screenshot shows a Visual Studio Code window with a terminal open. The terminal displays the execution of a Python script named `No1.py`. The script prompts the user to enter a name and a city. The first input is `klaten`, which results in the output `[6, 8]`. The second input is `ngawi`, which results in the output `[]`. The terminal window is titled `No1.py - L200180114 - Visual Studio Code`. The status bar at the bottom indicates the Python version is 3.7.5 64-bit, and the file encoding is UTF-8.

```
kintosi@pop-os:~/Documents/L200180114$ /usr/bin/python /home/kintosi/Documents/L200180114/Modul4/No1.py
Masukkan nama kota: klaten
[6, 8]
kintosi@pop-os:~/Documents/L200180114$ /usr/bin/python /home/kintosi/Documents/L200180114/Modul4/No1.py
Masukkan nama kota: ngawi
[]
kintosi@pop-os:~/Documents/L200180114$
```

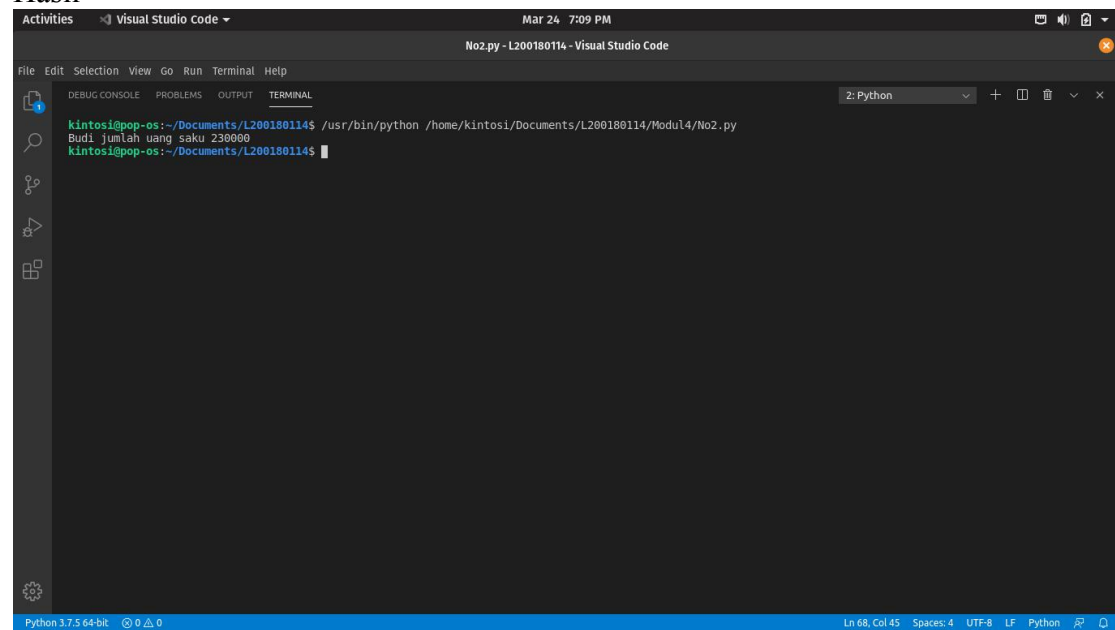
## Soal Nomer 2

### Coding



```
50
51 def cariUang(daftar):
52     n = len(daftar)
53     listMahasiswa = daftar
54
55     hasil = listMahasiswa[0]
56
57     for i in range(1, n):
58         if listMahasiswa[i].uangSaku < hasil.uangSaku:
59             hasil = listMahasiswa[i]
60
61     return hasil
62
63
64 c0 = Mahasiswa("Ika", 10, "Sukoharjo", 240000)
65 c1 = Mahasiswa("Budi", 51, "Sragen", 230000)
66 c2 = Mahasiswa("Ahmad", 2, "Surakarta", 250000)
67 c3 = Mahasiswa("Chandra", 18, "Surakarta", 235000)
68 c4 = Mahasiswa("Eka", 4, "Boyolali", 240000)
69 c5 = Mahasiswa("Fandi", 31, "Salatiga", 250000)
70 c6 = Mahasiswa("Deni", 13, "Klaten", 245000)
71 c7 = Mahasiswa("Galuh", 5, "Wonogiri", 245000)
72 c8 = Mahasiswa("Janto", 23, "Klaten", 245000)
73 c9 = Mahasiswa("Hasan", 64, "Karanganyar", 270000)
74 c10 = Mahasiswa("Khalid", 29, "Purwodadi", 265000)
75
76 Daftar = [c0, c1, c2, c3, c4, c5, c6, c7, c8, c9, c10]
77
78 print(cariUang(Daftar).nama + " jumlah uang saku " + str(cariUang(Daftar).uangSaku))
```

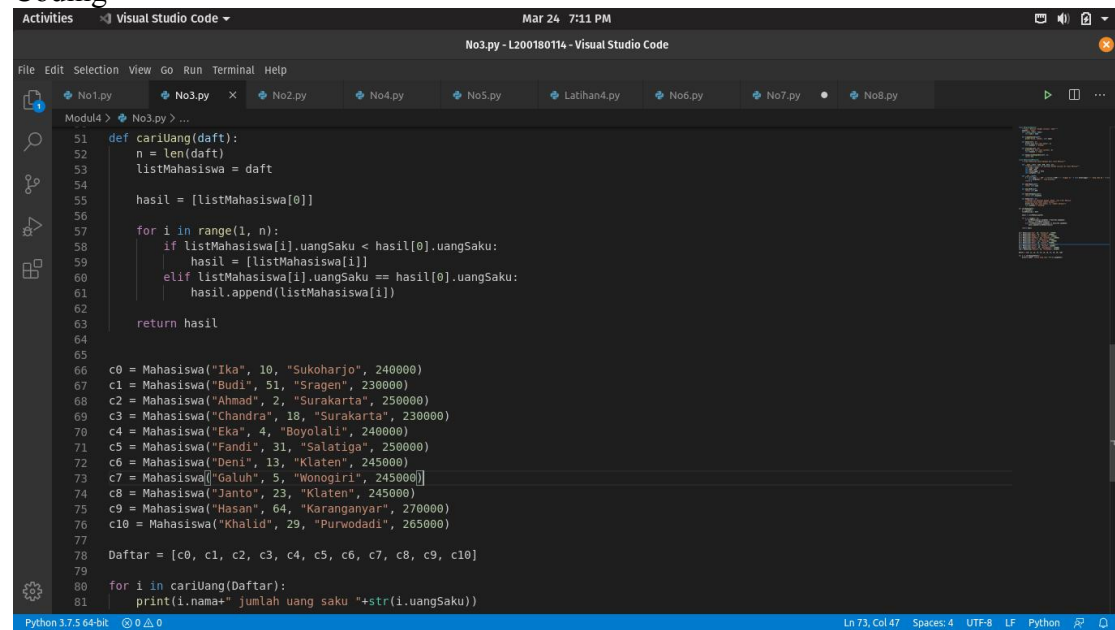
## Hasil



```
kintosi@pop-os:~/Documents/L200180114$ /usr/bin/python /home/kintosi/Documents/L200180114/Modul4/No2.py
Budi jumlah uang saku 230000
kintosi@pop-os:~/Documents/L200180114$
```

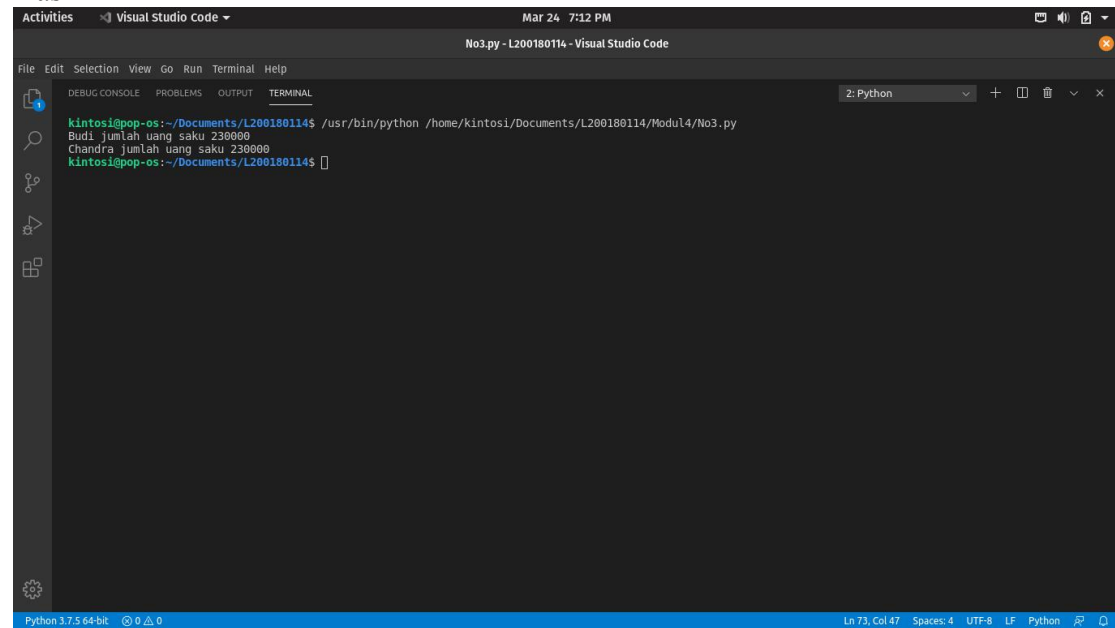
## Soal Nomer 3

### Coding



```
51 def cariUang(daftar):
52     n = len(daftar)
53     listMahasiswa = daftar
54
55     hasil = [listMahasiswa[0]]
56
57     for i in range(1, n):
58         if listMahasiswa[i].uangSaku < hasil[0].uangSaku:
59             hasil = [listMahasiswa[i]]
60         elif listMahasiswa[i].uangSaku == hasil[0].uangSaku:
61             hasil.append(listMahasiswa[i])
62
63     return hasil
64
65
66 c0 = Mahasiswa("Ika", 10, "Sukoharjo", 240000)
67 c1 = Mahasiswa("Budi", 51, "Sragen", 230000)
68 c2 = Mahasiswa("Ahmad", 2, "Surakarta", 250000)
69 c3 = Mahasiswa("Chandra", 18, "Surakarta", 230000)
70 c4 = Mahasiswa("Eka", 4, "Boyolali", 240000)
71 c5 = Mahasiswa("Fandi", 31, "Salatiga", 250000)
72 c6 = Mahasiswa("Deni", 13, "Klaten", 245000)
73 c7 = Mahasiswa("Galuh", 5, "Wonogiri", 245000)
74 c8 = Mahasiswa("Janto", 23, "Klaten", 245000)
75 c9 = Mahasiswa("Hasan", 64, "Karanganyar", 270000)
76 c10 = Mahasiswa("Khalid", 29, "Purwodadi", 265000)
77
78 Daftar = [c0, c1, c2, c3, c4, c5, c6, c7, c8, c9, c10]
79
80 for i in cariUang(Daftar):
81     print(i.nama+" jumlah uang saku "+str(i.uangSaku))
```

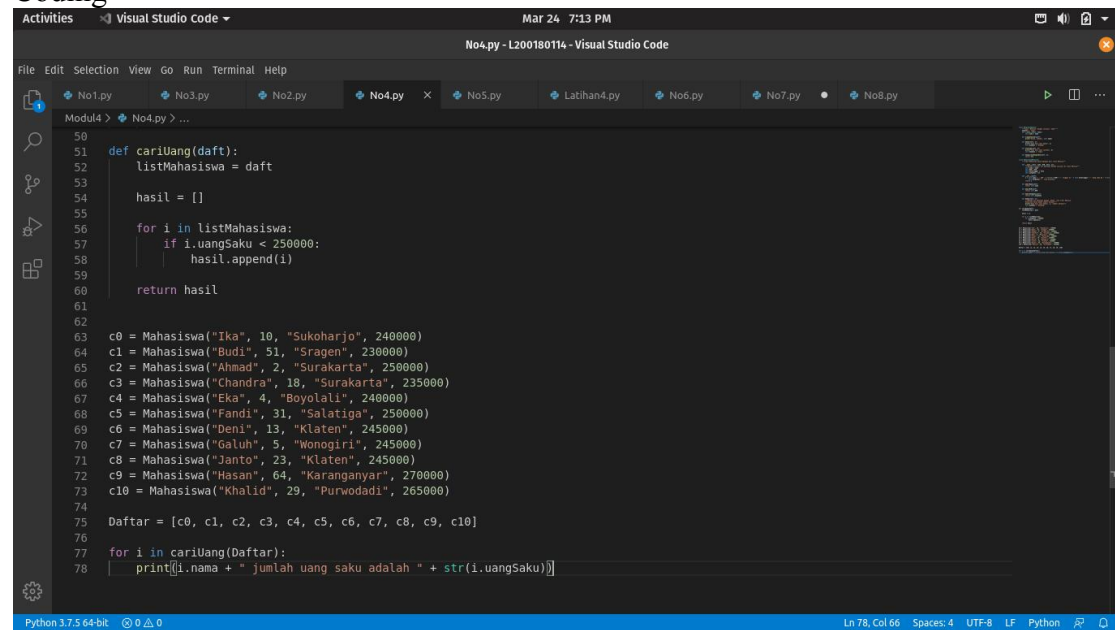
## Hasil



```
kintosi@pop-os:~/Documents/L200180114$ /usr/bin/python /home/kintosi/Documents/L200180114/Modul4/No3.py
Budi jumlah uang saku 230000
Chandra jumlah uang saku 230000
kintosi@pop-os:~/Documents/L200180114$
```

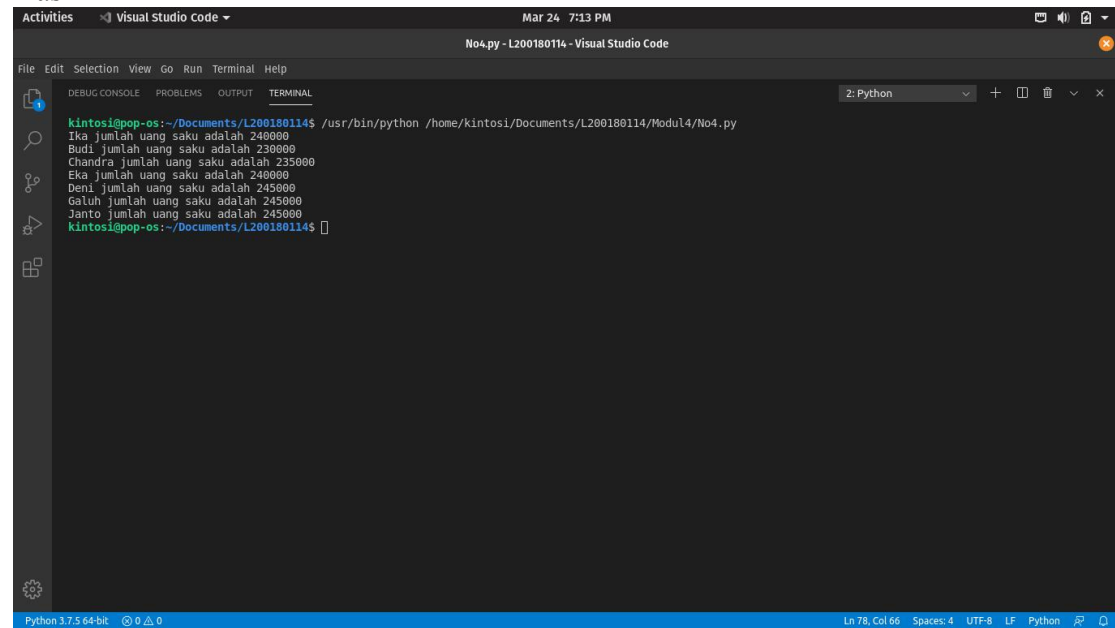
## Soal Nomer 4

### Coding



```
50
51 def cariUang(daftar):
52     listMahasiswa = daftar
53
54     hasil = []
55
56     for i in listMahasiswa:
57         if i.uangSaku < 250000:
58             hasil.append(i)
59
60     return hasil
61
62
63 c0 = Mahasiswa("Ika", 10, "Sukoharjo", 240000)
64 c1 = Mahasiswa("Budi", 51, "Sragen", 230000)
65 c2 = Mahasiswa("Ahmad", 2, "Surakarta", 250000)
66 c3 = Mahasiswa("Chandra", 18, "Surakarta", 235000)
67 c4 = Mahasiswa("Eka", 4, "Boyolali", 240000)
68 c5 = Mahasiswa("Fandi", 31, "Salatiga", 250000)
69 c6 = Mahasiswa("Deni", 13, "Klaten", 245000)
70 c7 = Mahasiswa("Galuh", 5, "Wonogiri", 245000)
71 c8 = Mahasiswa("Janto", 23, "Klaten", 245000)
72 c9 = Mahasiswa("Hasan", 64, "Karanganyar", 270000)
73 c10 = Mahasiswa("Khalid", 29, "Purwodadi", 265000)
74
75 Daftar = [c0, c1, c2, c3, c4, c5, c6, c7, c8, c9, c10]
76
77 for i in cariUang(Daftar):
78     print(i.nama + " jumlah uang saku adalah " + str(i.uangSaku))
```

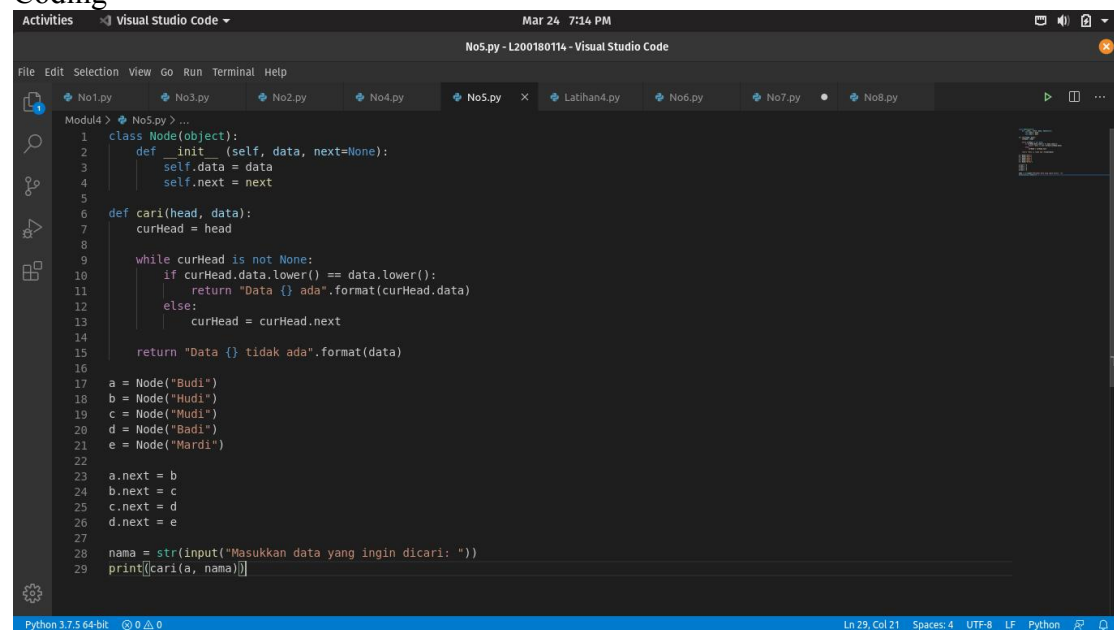
## Hasil



```
DEBUG CONSOLE  PROBLEMS  OUTPUT  TERMINAL
2: Python
kintosi@pop-os: ~/Documents/L200180114$ /usr/bin/python /home/kintosi/Documents/L200180114/Modul4/No4.py
Ika jumlah uang saku adalah 240000
Budi jumlah uang saku adalah 230000
Chandra jumlah uang saku adalah 235000
Eka jumlah uang saku adalah 240000
Deni jumlah uang saku adalah 245000
Galuh jumlah uang saku adalah 245000
Janto jumlah uang saku adalah 245000
Hasan jumlah uang saku adalah 270000
Janto jumlah uang saku adalah 245000
Khalid jumlah uang saku adalah 265000
kintosi@pop-os: ~/Documents/L200180114$
```

## Soal Nomer 5

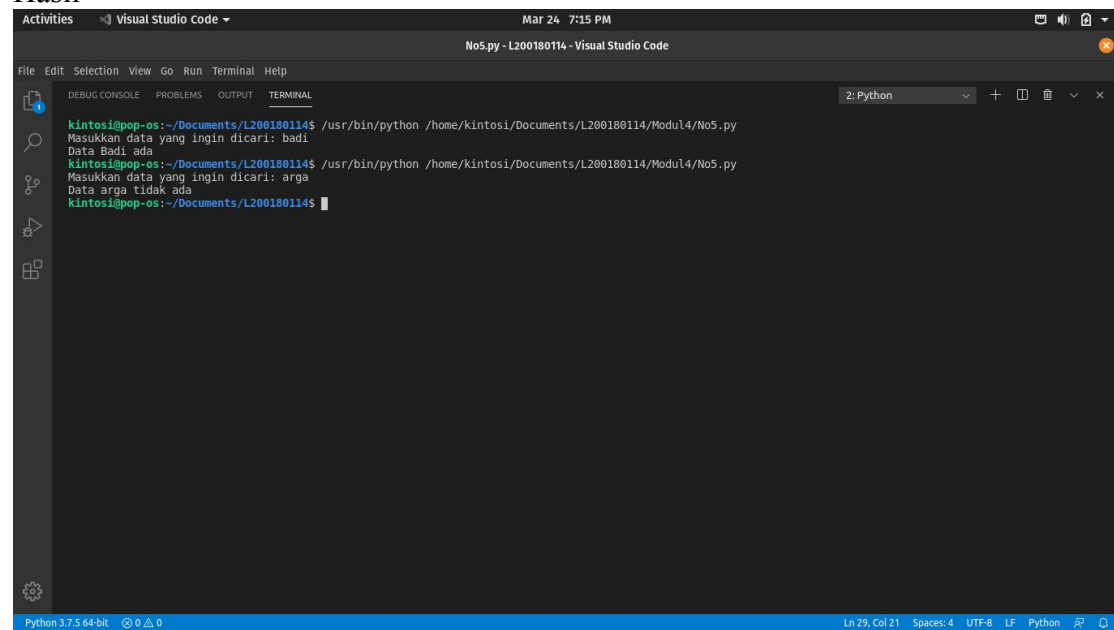
### Coding



The screenshot shows the Visual Studio Code editor with a Python file named 'No5.py'. The code implements a linked list structure and a search function. The linked list has five nodes with data: 'Budi', 'Hudi', 'Mudi', 'Badi', and 'Mardi'. The search function 'cari' takes a head pointer and a target data value. It iterates through the list, comparing the target (case-insensitive) with the data in each node. If found, it returns a formatted string; otherwise, it returns a message indicating the data is not found. The script creates the nodes, links them, and prompts the user for input.

```
1 class Node(object):
2     def __init__(self, data, next=None):
3         self.data = data
4         self.next = next
5
6 def cari(head, data):
7     curHead = head
8
9     while curHead is not None:
10        if curHead.data.lower() == data.lower():
11            return "Data {} ada".format(curHead.data)
12        else:
13            curHead = curHead.next
14
15    return "Data {} tidak ada".format(data)
16
17 a = Node("Budi")
18 b = Node("Hudi")
19 c = Node("Mudi")
20 d = Node("Badi")
21 e = Node("Mardi")
22
23 a.next = b
24 b.next = c
25 c.next = d
26 d.next = e
27
28 nama = str(input("Masukkan data yang ingin dicari: "))
29 print([cari(a, nama)])
```

## Hasil

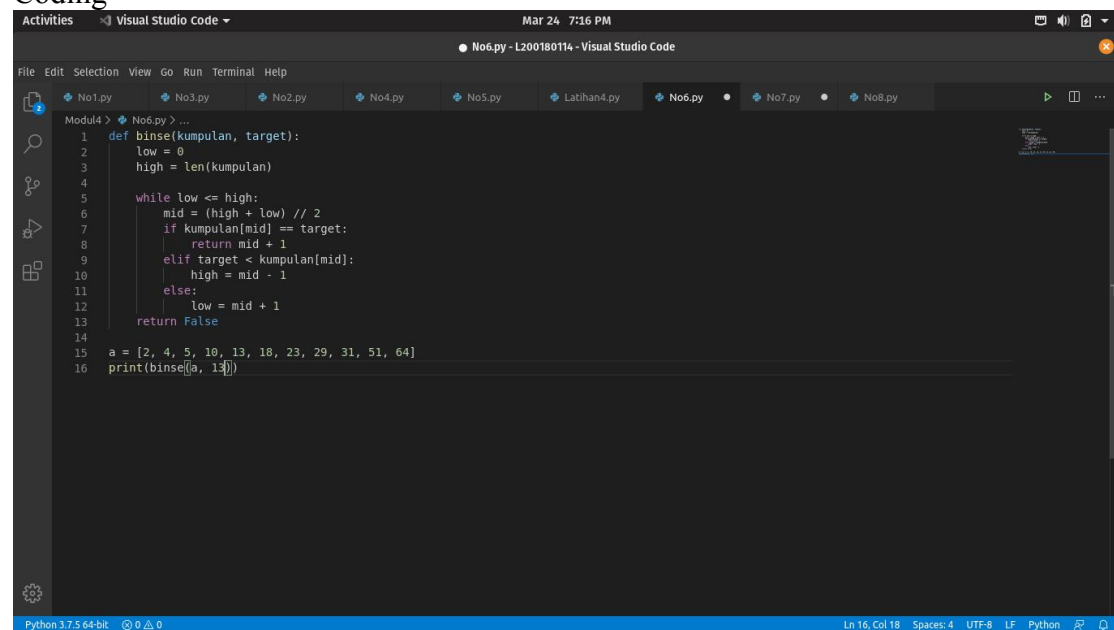


The screenshot shows the terminal output of the Python script. The user enters 'badi' as the search data. The program outputs 'Data Badi ada'. When the user enters 'arga', the program outputs 'Data arga tidak ada'.

```
kintosi@pop-os:~/Documents/L200180114$ /usr/bin/python /home/kintosi/Documents/L200180114/Modul4/No5.py
Masukkan data yang ingin dicari: badi
Data Badi ada
kintosi@pop-os:~/Documents/L200180114$ /usr/bin/python /home/kintosi/Documents/L200180114/Modul4/No5.py
Masukkan data yang ingin dicari: arga
Data arga tidak ada
kintosi@pop-os:~/Documents/L200180114$
```

## Soal Nomer 6

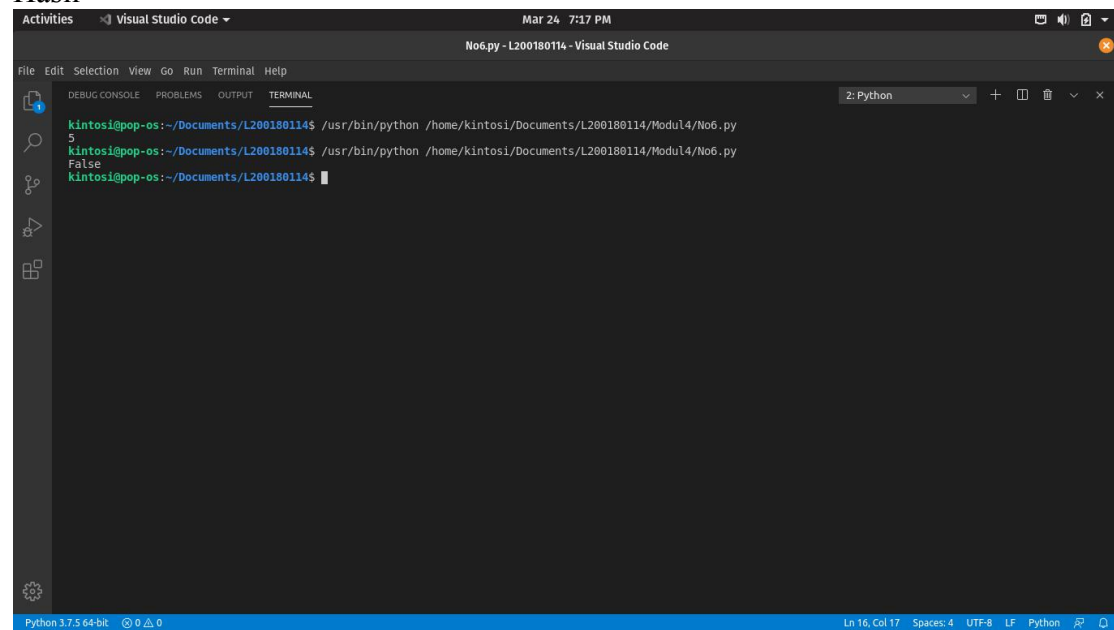
### Coding



The screenshot shows the Visual Studio Code editor with a Python file named 'No6.py'. The code implements a binary search function 'binse(kumpulan, target)'. The function initializes 'low' to 0 and 'high' to the length of the list 'kumpulan'. It enters a 'while' loop that continues as long as 'low' is less than or equal to 'high'. Inside the loop, it calculates 'mid' as the average of 'low' and 'high'. It then checks if 'kumpulan[mid]' is equal to 'target'. If true, it returns 'mid + 1'. If 'target' is less than 'kumpulan[mid]', it updates 'high' to 'mid - 1'. Otherwise, it updates 'low' to 'mid + 1'. After the loop, it returns 'False'. Below the function, a list 'a' is defined with the values [2, 4, 5, 10, 13, 18, 23, 29, 31, 51, 64], and the function is called with 'binse(a, 13)' and the result is printed.

```
1 def binse(kumpulan, target):
2     low = 0
3     high = len(kumpulan)
4
5     while low <= high:
6         mid = (high + low) // 2
7         if kumpulan[mid] == target:
8             return mid + 1
9         elif target < kumpulan[mid]:
10            high = mid - 1
11        else:
12            low = mid + 1
13    return False
14
15 a = [2, 4, 5, 10, 13, 18, 23, 29, 31, 51, 64]
16 print(binse(a, 13))
```

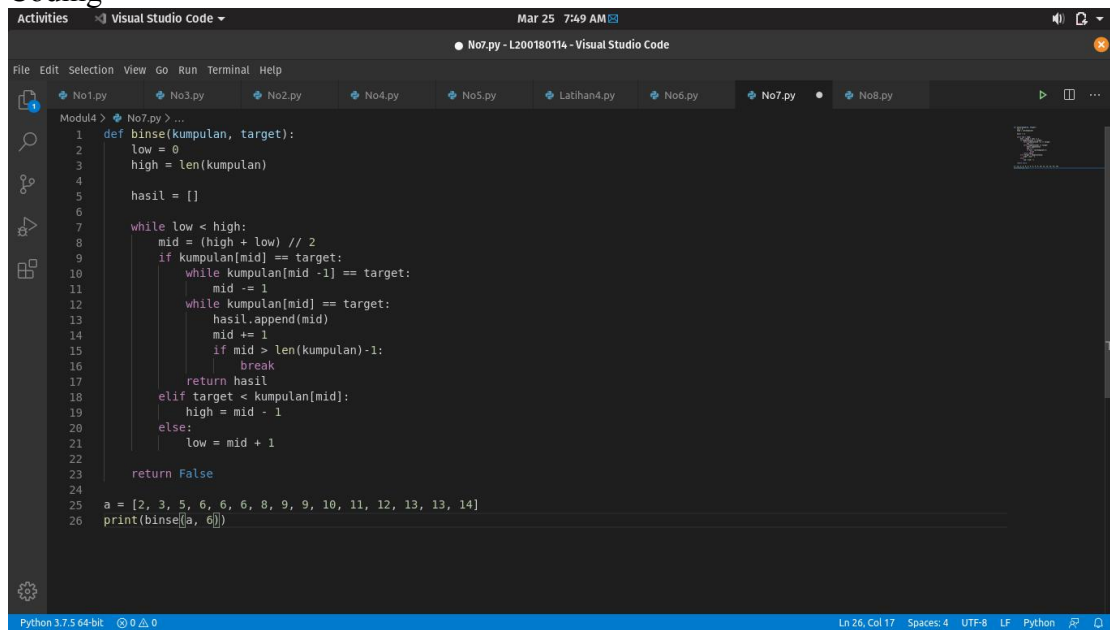
## Hasil



The screenshot shows the terminal output of the Python script. The user runs the command 'python /home/kintosi/Documents/L200180114/Modul4/No6.py' in the terminal. The output shows the number '5' on the first line, followed by 'False' on the second line, indicating that the target value 13 was not found in the list.

```
kintosi@pop-os:~/Documents/L200180114$ /usr/bin/python /home/kintosi/Documents/L200180114/Modul4/No6.py
5
kintosi@pop-os:~/Documents/L200180114$ /usr/bin/python /home/kintosi/Documents/L200180114/Modul4/No6.py
False
kintosi@pop-os:~/Documents/L200180114$
```

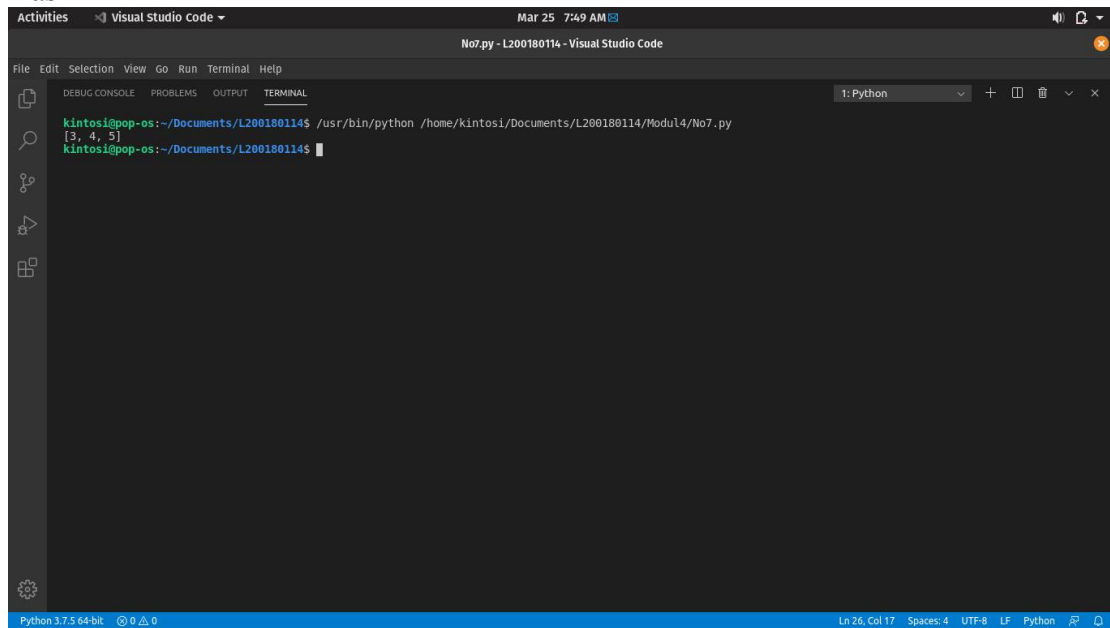
## Soal Nomer 7 Coding



The screenshot shows the Visual Studio Code editor with a Python file named `No7.py`. The code implements a binary search function `binse(kumpulan, target)` that returns a list of indices where the target is found. The list `a` is defined as `[2, 3, 5, 6, 6, 6, 8, 9, 9, 10, 11, 12, 13, 13, 14]`, and the target is `6`. The status bar at the bottom indicates Python 3.7.5 64-bit, UTF-8 encoding, and LF line endings.

```
1 def binse(kumpulan, target):
2     low = 0
3     high = len(kumpulan)
4     hasil = []
5
6     while low < high:
7         mid = (high + low) // 2
8         if kumpulan[mid] == target:
9             while kumpulan[mid] == target:
10                 hasil.append(mid)
11                 mid += 1
12             while kumpulan[mid] == target:
13                 hasil.append(mid)
14                 mid += 1
15                 if mid > len(kumpulan)-1:
16                     break
17             return hasil
18         elif target < kumpulan[mid]:
19             high = mid - 1
20         else:
21             low = mid + 1
22
23     return False
24
25 a = [2, 3, 5, 6, 6, 6, 8, 9, 9, 10, 11, 12, 13, 13, 14]
26 print(binse(a, 6))
```

## Hasil



The screenshot shows the terminal output of the Python script. The command `/usr/bin/python /home/kintosi/Documents/L200180114/Modul4/No7.py` was executed, resulting in the output `[3, 4, 5]`. The status bar at the bottom indicates Python 3.7.5 64-bit, UTF-8 encoding, and LF line endings.

```
kintosi@pop-os:~/Documents/L200180114$ /usr/bin/python /home/kintosi/Documents/L200180114/Modul4/No7.py
[3, 4, 5]
kintosi@pop-os:~/Documents/L200180114$
```



## Soal Nomer 8

### Coding

```
1 from random import choice
2
3 def jawab(pilih, sumPilih):
4     hasil = int(input("Masukkan jawaban ke-1: "))
5     for i in range(2, sumPilih+1):
6         if hasil == pilih:
7             return "Selamat!!! Jawaban {} anda benar".format(hasil)
8         else:
9             if hasil < pilih:
10                print("Jawaban terlalu kecil. Coba lagi")
11                hasil = int(input("Masukkan jawaban ke-"+str(i)+" : "))
12            else:
13                print("Jawaban terlalu besar. Coba lagi")
14                hasil = int(input("Masukkan jawaban ke-"+str(i)+" : "))
15    return "{} kesempatan anda udah habis. Coba lagi".format(sumPilih)
16
17 a = [i for i in range(1, 100+1)]
18
19 select = choice(a)
20 pilih = 0
21
22 if len(a) < 1000:
23     pilih = 7
24 else:
25     pilih = 10
26
27 print(jawab(select, pilih))
```

## Hasil

```
kintosi@pop-os:~/Documents/L200180114$ /usr/bin/python /home/kintosi/Documents/L200180114/Modul4/No8.py
Masukkan jawaban ke-1: 12
Jawaban terlalu kecil. Coba lagi
Masukkan jawaban ke-2: 15
Jawaban terlalu kecil. Coba lagi
Masukkan jawaban ke-3: 50
Jawaban terlalu besar. Coba lagi
Masukkan jawaban ke-4: 90
Jawaban terlalu besar. Coba lagi
Masukkan jawaban ke-5: 25
Jawaban terlalu kecil. Coba lagi
Masukkan jawaban ke-6: 27
Jawaban terlalu kecil. Coba lagi
Masukkan jawaban ke-7: 28
7 kesempatan anda udah habis. Coba lagi
kintosi@pop-os:~/Documents/L200180114$ /usr/bin/python /home/kintosi/Documents/L200180114/Modul4/No8.py
Masukkan jawaban ke-1: 50
Jawaban terlalu kecil. Coba lagi
Masukkan jawaban ke-2: 80
Jawaban terlalu kecil. Coba lagi
Masukkan jawaban ke-3: 100
Jawaban terlalu besar. Coba lagi
Masukkan jawaban ke-4: 90
Selamat!!! Jawaban 90 anda benar
kintosi@pop-os:~/Documents/L200180114$
```