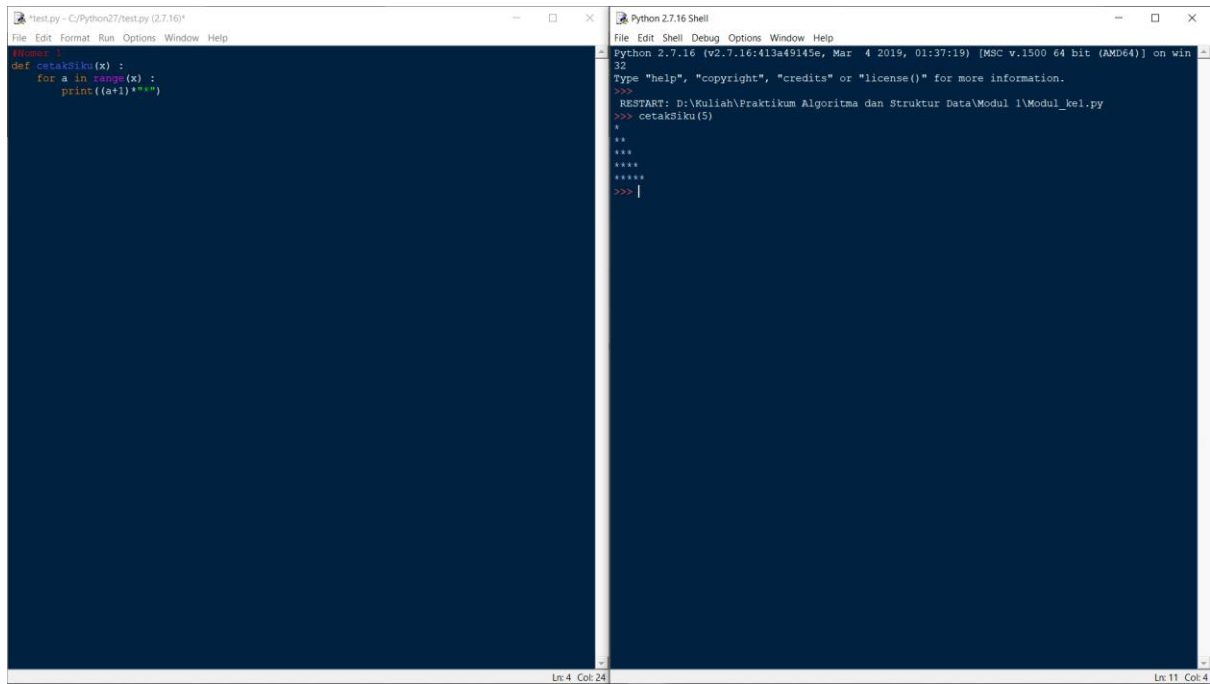


LAPORAN PRAKTIKUM  
ALGORITMA DAN STRUKTUR DATA  
MODUL 1

REYLIAN PREALDREAM ANAREKA  
L200180087  
KELAS D

Nomer 1



The screenshot shows a Python IDE with two windows. The left window, titled 'test.py - C:\Python27\test.py (2.7.16)', contains the following code:

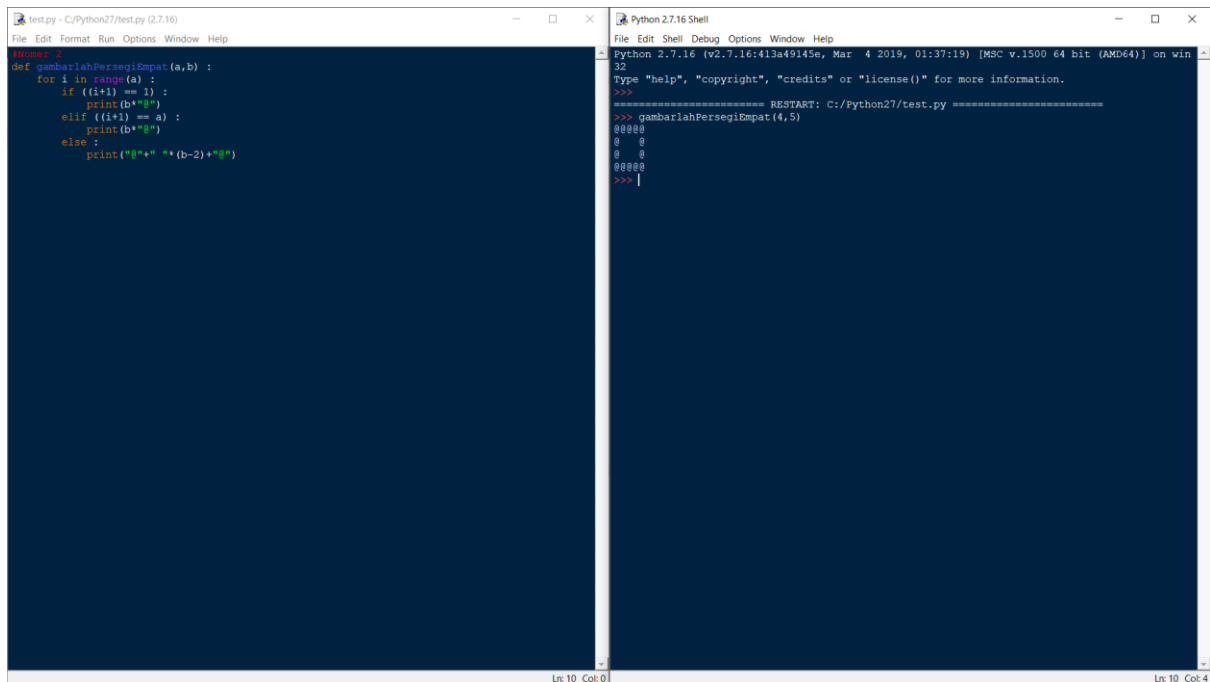
```
#!/usr/bin/python
def cetakSiku(x) :
    for a in range(x) :
        print((a+1)*" ")
```

The right window, titled 'Python 2.7.16 Shell', shows the execution of the code:

```
Python 2.7.16 (v2.7.16:413a49145e, Mar  4 2019, 01:37:19) [MSC v.1500 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
RESTART: D:\Kuliah\Praktikum Algoritma dan Struktur Data\Modul 1\Modul_kel.py
>>> cetakSiku(5)
+
++
+++
++++
*****
>>> |
```

The status bar at the bottom of the left window shows 'Ln 4 Col: 24' and the right window shows 'Ln 11 Col: 4'.

Nomer 2



The screenshot shows a Python IDE with two windows. The left window, titled 'test.py - C:\Python27\test.py (2.7.16)', contains the following code:

```
#!/usr/bin/python
def gambarlahPersegiEmpat(a,b) :
    for i in range(a) :
        if ((i+1) == 1) :
            print(b*"0")
        elif ((i+1) == a) :
            print(b*"0")
        else :
            print("0"+" "*(b-2)+"0")
```

The right window, titled 'Python 2.7.16 Shell', shows the execution of the code:

```
Python 2.7.16 (v2.7.16:413a49145e, Mar  4 2019, 01:37:19) [MSC v.1500 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:\Python27\test.py
>>> gambarlahPersegiEmpat(4,5)
0000
0 0
0 0
0000
>>> |
```

The status bar at the bottom of the left window shows 'Ln 10 Col: 0' and the right window shows 'Ln 10 Col: 4'.

### Nomer 3

```
test.py - C:/Python27/test.py (2.7.16)
File Edit Format Run Options Window Help

#Nomer 3
def jumlahHurufVokal(ch) :
    b = len(ch)
    a = 0
    for i in ch :
        if (i=='a' or i=='A' or i=='e' or i=='E' or i=='i' or i=='I' or i=='o' or i=='O' or i=='u' or i=='U') :
            a += 1
    return b,a

def jumlahHurufKonsonan(ch) :
    b = len(ch)
    a = 0
    for i in ch :
        if (i=='a' or i=='A' or i=='e' or i=='E' or i=='i' or i=='I' or i=='o' or i=='O' or i=='u' or i=='U') :
            a += 1
    return b,b-a

Python 2.7.16 Shell
File Edit Shell Debug Options Window Help
Python 2.7.16 (v2.7.16:413a49145e, Mar  4 2019, 01:37:19) [MSC v.1500 64 bit (AMD64)] on win
32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Python27/test.py =====
>>> jumlahHurufVokal("Reylian Frealdream Anareka")
(26, 11)
>>> jumlahHurufKonsonan("Reylian Frealdream Anareka")
(26, 15)
>>> |
```

### Nomer 4

```
test.py - C:/Python27/test.py (2.7.16)
File Edit Format Run Options Window Help

#Nomer 4
def rerata(x) :
    a = 0
    b = 0
    for i in x :
        a += 1
        b = b + i
    a = float(a)
    b = float(b)
    return(b/a)

Python 2.7.16 Shell
File Edit Shell Debug Options Window Help
Python 2.7.16 (v2.7.16:413a49145e, Mar  4 2019, 01:37:19) [MSC v.1500 64 bit (AMD64)] on win
32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Python27/test.py =====
>>> rerata([1,2,3,4,5])
3.0
>>> |
```

## Nomer 5

```
test.py - C:/Python27/test.py (2.7.16)
File Edit Format Run Options Window Help
#Nomer 5
def apakahPrima(a) :
    x = 0
    for i in range(a) :
        if a % (i+1) == 0 :
            x += 1
    if x == 2 :
        print("YA")
    else :
        print("TIDAK")

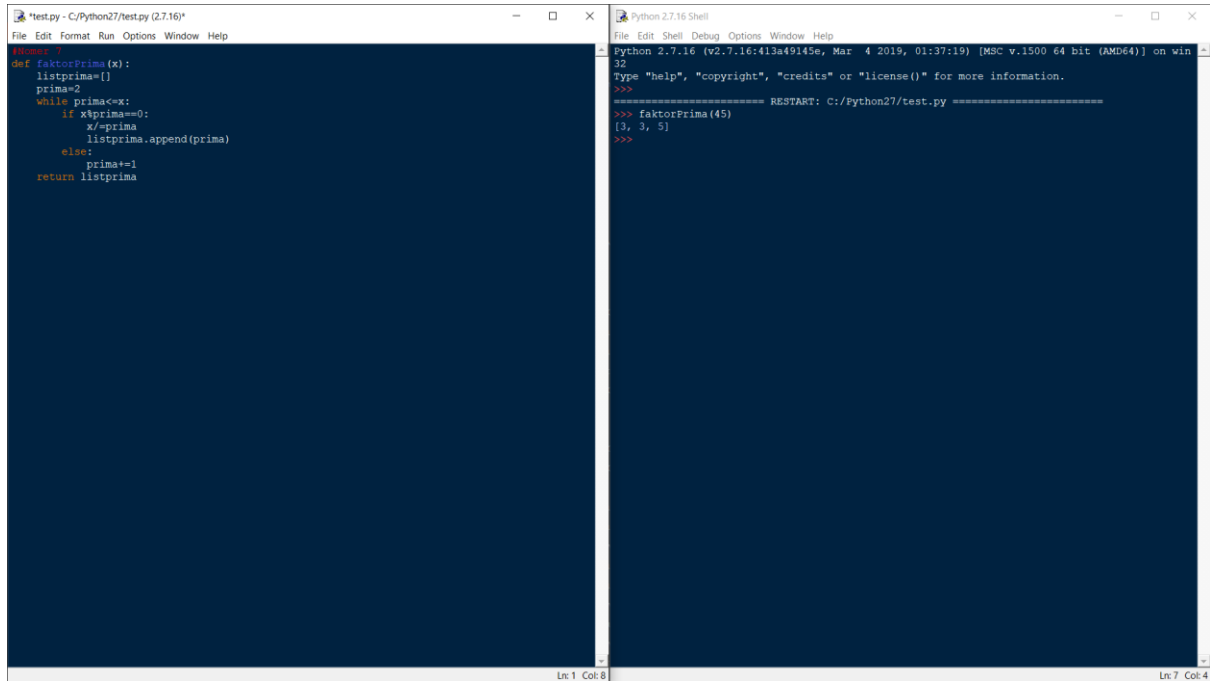
Python 2.7.16 Shell
File Edit Shell Debug Options Window Help
Python 2.7.16 (v2.7.16:413a49145e, Mar  4 2019, 01:37:19) [MSC v.1500 64 bit (AMD64)] on win
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Python27/test.py =====
>>> apakahPrima(63)
TIDAK
>>> apakahPrima(67)
YA
>>> [
```

## Nomer 6

```
test.py - C:/Python27/test.py (2.7.16)
File Edit Format Run Options Window Help
#Nomer 6
def cekPrima(i) :
    y = range(1001)
    for i in range(2,1001) :
        x = 0
        for j in range(i) :
            if i % (j+1) == 0 :
                x += 1
        if x == 2 :
            print(i)

Python 2.7.16 Shell
File Edit Shell Debug Options Window Help
Python 2.7.16 (v2.7.16:413a49145e, Mar  4 2019, 01:37:19) [MSC v.1500 64 bit (AMD64)] on win
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Python27/test.py =====
>>> cekPrima()
2
3
5
7
11
13
17
19
23
29
31
37
41
43
47
53
59
61
67
71
73
79
83
89
97
101
103
107
109
113
127
131
137
139
149
151
157
163
167
173
179
181
191
193
```

## Nomer 7



The screenshot shows a Python IDE with two windows. The left window, titled 'test.py - C:/Python27/test.py (2.7.16)', contains the following code:

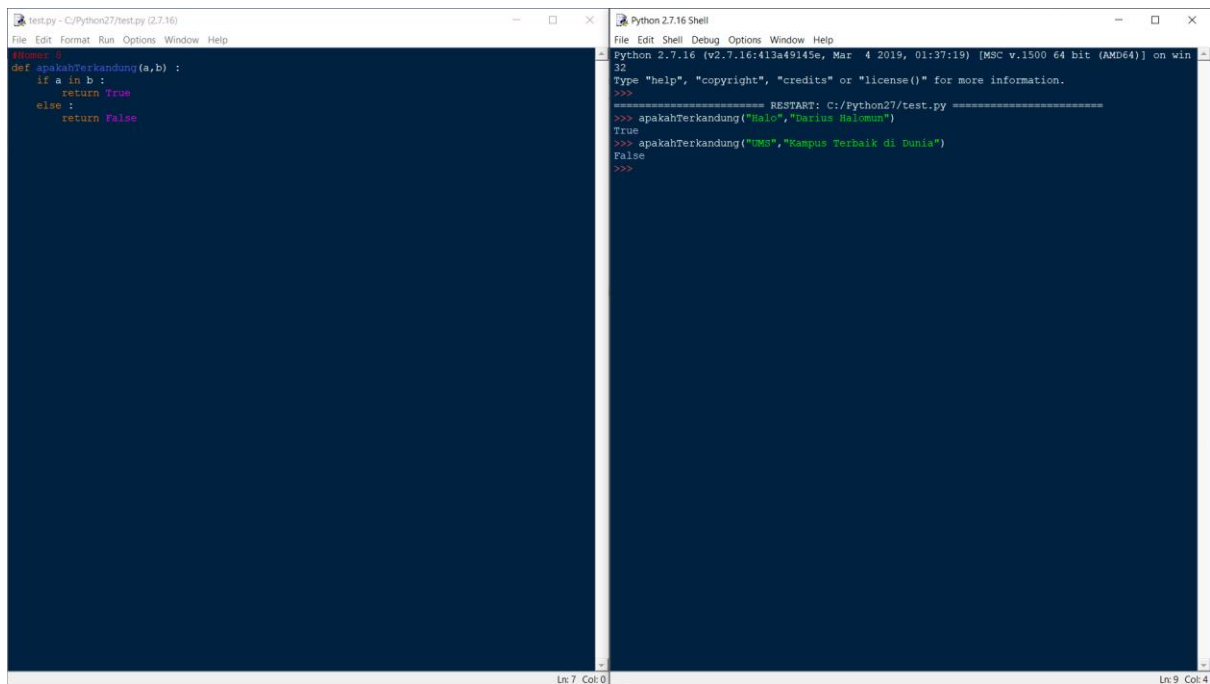
```
#Nomer 7
def faktorPrima(x):
    listprima=[]
    prima=2
    while prima<=x:
        if x%prima==0:
            x/=prima
            listprima.append(prima)
        else:
            prima+=1
    return listprima
```

The right window, titled 'Python 2.7.16 Shell', shows the execution of the code:

```
Python 2.7.16 (v2.7.16:413a49145e, Mar  4 2019, 01:37:19) [MSC v.1500 64 bit (AMD64)] on win
32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Python27/test.py =====
>>> faktorPrima(45)
[3, 3, 5]
>>>
```

The status bar at the bottom indicates 'Ln: 1 Col: 8' for the editor and 'Ln: 7 Col: 4' for the shell.

## Nomer 8



The screenshot shows a Python IDE with two windows. The left window, titled 'test.py - C:/Python27/test.py (2.7.16)', contains the following code:

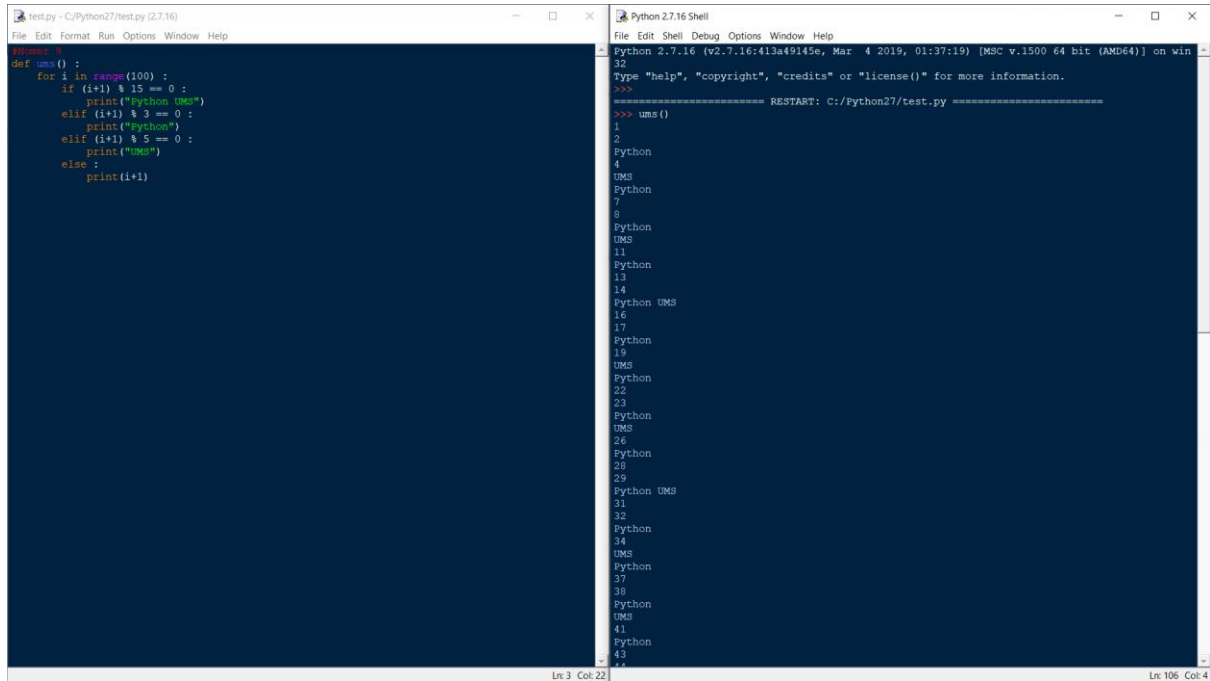
```
#Nomer 8
def apakahTerkandung(a,b) :
    if a in b :
        return True
    else :
        return False
```

The right window, titled 'Python 2.7.16 Shell', shows the execution of the code:

```
Python 2.7.16 (v2.7.16:413a49145e, Mar  4 2019, 01:37:19) [MSC v.1500 64 bit (AMD64)] on win
32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Python27/test.py =====
>>> apakahTerkandung("Halo","Darius Halomun")
True
>>> apakahTerkandung("UMG","Kampus Terbaik di Dunia")
False
>>>
```

The status bar at the bottom indicates 'Ln: 7 Col: 0' for the editor and 'Ln: 9 Col: 4' for the shell.

## Nomer 9

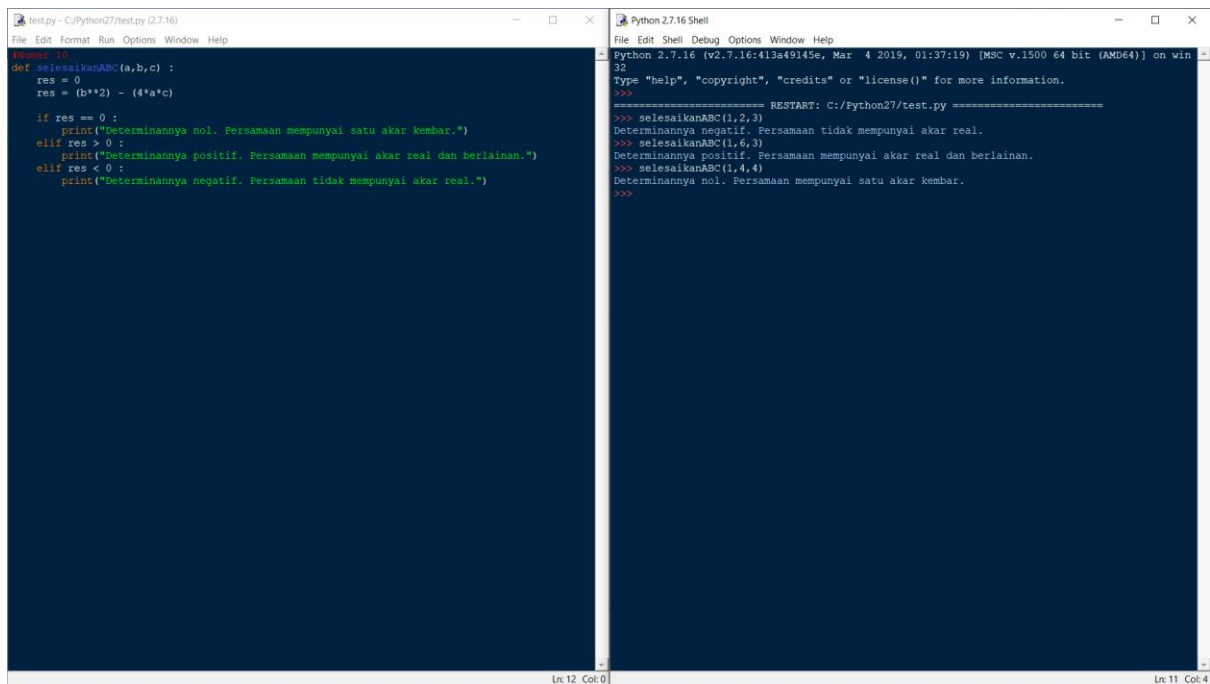


```
test.py - C:/Python27/test.py (2.7.16)
File Edit Format Run Options Window Help

#Nomer 9
def ums():
    for i in range(100):
        if (i+1) % 15 == 0:
            print("Python UMS")
        elif (i+1) % 3 == 0:
            print("Python")
        elif (i+1) % 5 == 0:
            print("UMS")
        else:
            print(i+1)

Python 2.7.16 Shell
File Edit Shell Debug Options Window Help
Python 2.7.16 (v2.7.16:413a49145e, Mar  4 2019, 01:37:19) [MSC v.1500 64 bit (AMD64)] on win
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Python27/test.py =====
>>> ums()
1
2
Python
4
UMS
Python
7
8
Python
UMS
11
Python
13
14
Python UMS
16
17
Python
19
UMS
Python
22
23
Python
UMS
26
Python
28
29
Python UMS
31
32
Python
34
UMS
Python
37
38
Python
UMS
41
Python
43
44
```

## Nomer 10



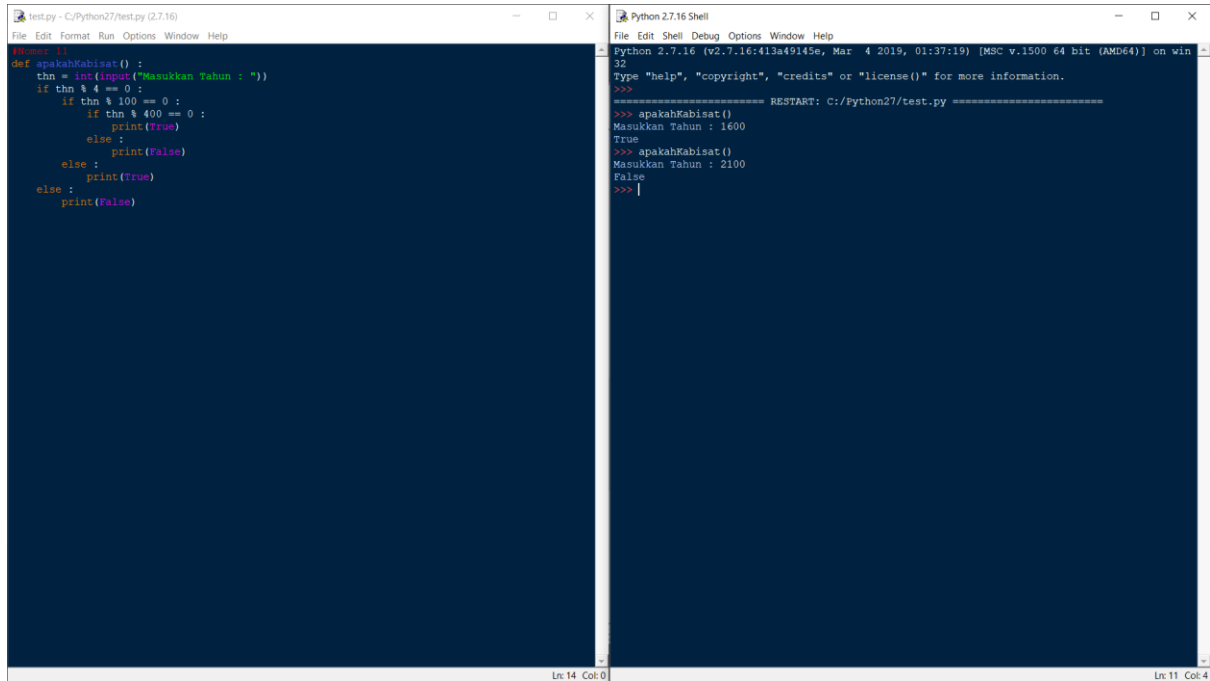
```
test.py - C:/Python27/test.py (2.7.16)
File Edit Format Run Options Window Help

#Nomer 10
def selesaikanABC(a,b,c):
    res = 0
    res = (b**2) - (4*a*c)

    if res == 0:
        print("Determinannya nol. Persamaan mempunyai satu akar kembar.")
    elif res > 0:
        print("Determinannya positif. Persamaan mempunyai akar real dan berlainan.")
    elif res < 0:
        print("Determinannya negatif. Persamaan tidak mempunyai akar real.")

Python 2.7.16 Shell
File Edit Shell Debug Options Window Help
Python 2.7.16 (v2.7.16:413a49145e, Mar  4 2019, 01:37:19) [MSC v.1500 64 bit (AMD64)] on win
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Python27/test.py =====
>>> selesaikanABC(1,2,3)
Determinannya negatif. Persamaan tidak mempunyai akar real.
>>> selesaikanABC(1,6,3)
Determinannya positif. Persamaan mempunyai akar real dan berlainan.
>>> selesaikanABC(1,4,4)
Determinannya nol. Persamaan mempunyai satu akar kembar.
>>>
```

## Nomer 11



```
test.py - C:/Python27/test.py (2.7.16)
File Edit Format Run Options Window Help

#Nomer 11
def apakahKabisat() :
    thn = int(input("Masukkan Tahun : "))
    if thn % 4 == 0 :
        if thn % 100 == 0 :
            if thn % 400 == 0 :
                print(True)
            else :
                print(False)
        else :
            print(True)
    else :
        print(False)

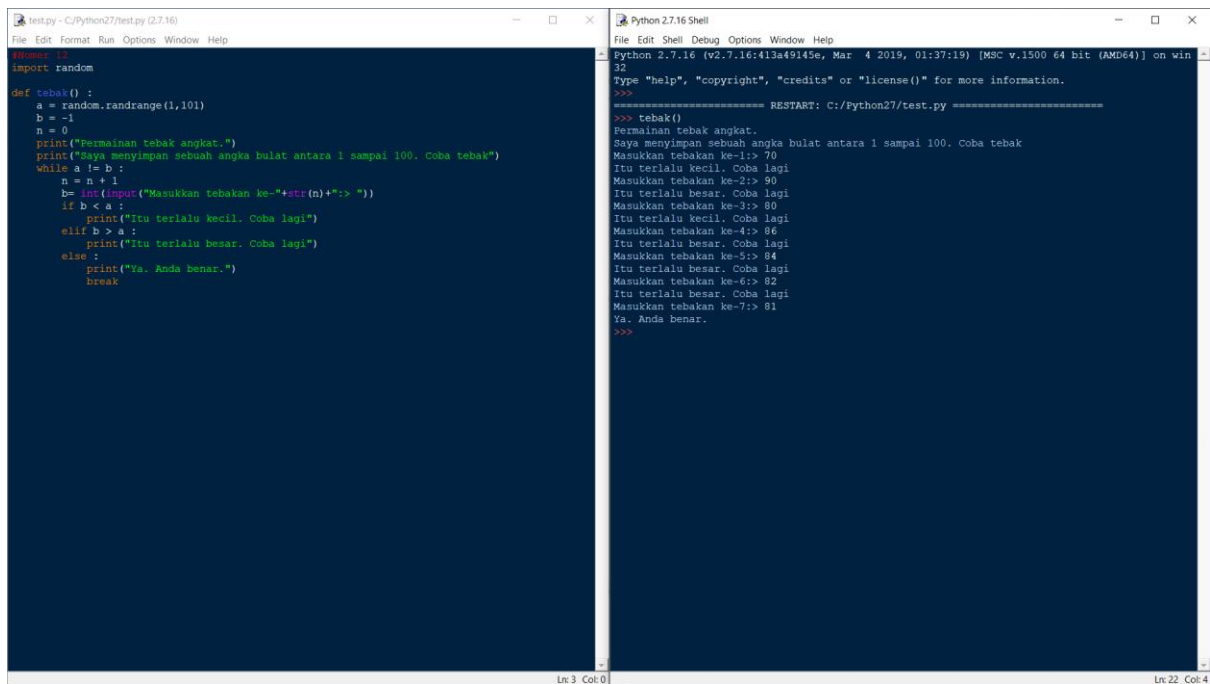
Ln 14 Col 0

Python 2.7.16 Shell
File Edit Shell Debug Options Window Help

Python 2.7.16 [v2.7.16:413a49145e, Mar  4 2019, 01:37:19] [MSC v.1500 64 bit (AMD64)] on win
32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Python27/test.py =====
>>> apakahKabisat()
Masukkan Tahun : 1600
True
>>> apakahKabisat()
Masukkan Tahun : 2100
False
>>> ]

Ln 11 Col 4
```

## Nomer 12



```
test.py - C:/Python27/test.py (2.7.16)
File Edit Format Run Options Window Help

#Nomer 12
import random

def tebak() :
    a = random.randrange(1,101)
    b = -1
    n = 0
    print("Permainan tebak angkat.")
    print("Saya menyimpan sebuah angka bulat antara 1 sampai 100. Coba tebak")
    while a != b :
        n = n + 1
        b = int(input("Masukkan tebakan ke-"+str(n)+"> "))
        if b < a :
            print("Itu terlalu kecil. Coba lagi")
        elif b > a :
            print("Itu terlalu besar. Coba lagi")
        else :
            print("Ya. Anda benar.")
            break

Ln 3 Col 0

Python 2.7.16 Shell
File Edit Shell Debug Options Window Help

Python 2.7.16 [v2.7.16:413a49145e, Mar  4 2019, 01:37:19] [MSC v.1500 64 bit (AMD64)] on win
32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Python27/test.py =====
>>> tebak()
Permainan tebak angkat.
Saya menyimpan sebuah angka bulat antara 1 sampai 100. Coba tebak
Masukkan tebakan ke-1> 70
Itu terlalu kecil. Coba lagi
Masukkan tebakan ke-2> 90
Itu terlalu besar. Coba lagi
Masukkan tebakan ke-3> 80
Itu terlalu kecil. Coba lagi
Masukkan tebakan ke-4> 86
Itu terlalu besar. Coba lagi
Masukkan tebakan ke-5> 84
Itu terlalu besar. Coba lagi
Masukkan tebakan ke-6> 82
Itu terlalu besar. Coba lagi
Masukkan tebakan ke-7> 81
Ya. Anda benar.
>>>

Ln 22 Col 4
```

## Nomer 13

```
test.py - C:\Python27\test.py (2.7.16)
File Edit Format Run Options Window Help

#Nomer 13
def katakan(x):
    satuan = ['','satu','dua','tiga','empat','lima','enam','tujuh','delapan','sembil']
    hasil = ""
    if x <= 0:
        hasil += "Bilangan Haruslah Positif\ndan Bilangan Asli"
    elif x < 12:
        hasil += satuan[x]
    elif x < 20:
        hasil += katakan(x-10) + " belas "
    elif x < 100:
        hasil += katakan(int(x/10)) + " puluh " + katakan(x%10)
    elif x < 200:
        hasil += "seratus " + katakan(x-100)
    elif x < 1000:
        hasil += katakan(int(x/100)) + " ratus " + katakan(x%100)
    elif x < 2000:
        hasil += "seribu " + katakan(x-1000)
    elif x < 1000000:
        hasil += katakan(int(x/1000)) + " ribu " + katakan(x%1000)
    elif x < 1000000000:
        hasil += katakan(int(x/1000000)) + " juta " + katakan(x%1000000)
    elif x >= 1000000000:
        hasil += katakan(int(x/1000000000)) + " milyar " + katakan(x%1000000000)

Python 2.7.16 Shell
File Edit Shell Debug Options Window Help

Python 2.7.16 (v2.7.16:413a49145e, Mar  4 2019, 01:37:19) [MSC v.1500 64 bit (AMD64)] on win
32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
RESTART: D:\Kuliah\Praktikum Algoritma dan Struktur Data\Modul 1\Modul_kel.py
>>> katakan(1234567)
'satu juta dua ratus tiga puluh empat ribu lima ratus enam puluh tujuh'
>>> katakan(123456789)
'seratus dua puluh tiga juta empat ratus lima puluh enam ribu tujuh ratus delapan puluh sem
ilan'
>>> ]

Ln 25 Col: 0
Ln 9 Col: 4
```

## Nomer 14

```
test.py - C:\Python27\test.py (2.7.16)
File Edit Format Run Options Window Help

#Nomer 14
def formatRupiah(a):
    a = list(str(a))
    b = len(a)
    if b % 3 == 0:
        b = int(b/3) - 1
    else:
        b = int(b/3)
    n = 0
    for i in range(b):
        x = -3*(i+1)
        a.insert(int(x)+n, ",")
        n = n - 1
    a = "".join(a)
    print("Rp "+a)

Python 2.7.16 Shell
File Edit Shell Debug Options Window Help

Python 2.7.16 (v2.7.16:413a49145e, Mar  4 2019, 01:37:19) [MSC v.1500 64 bit (AMD64)] on win
32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:\Python27\test.py
>>> formatRupiah(125000000)
Rp 12.500.000
>>> formatRupiah(12400)
Rp 12.400
>>> ]

Ln 16 Col: 0
Ln 9 Col: 4
```