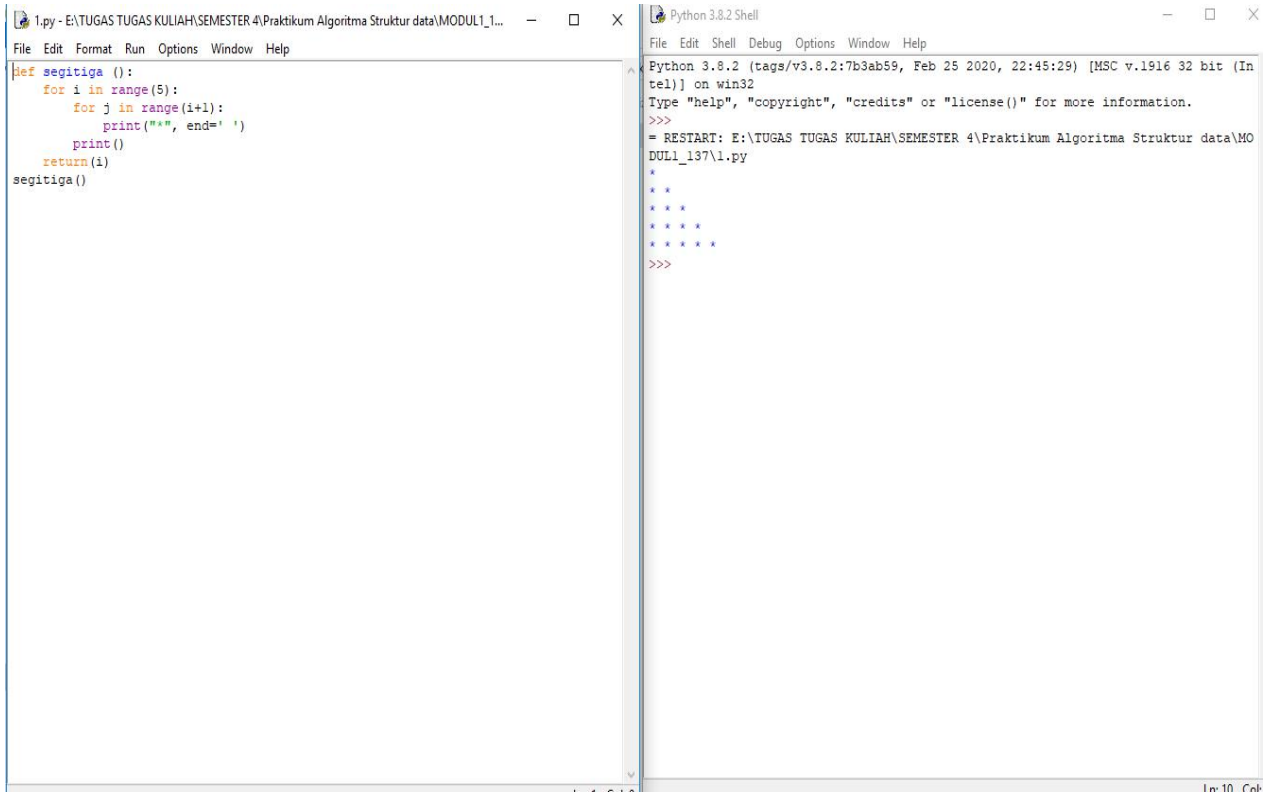
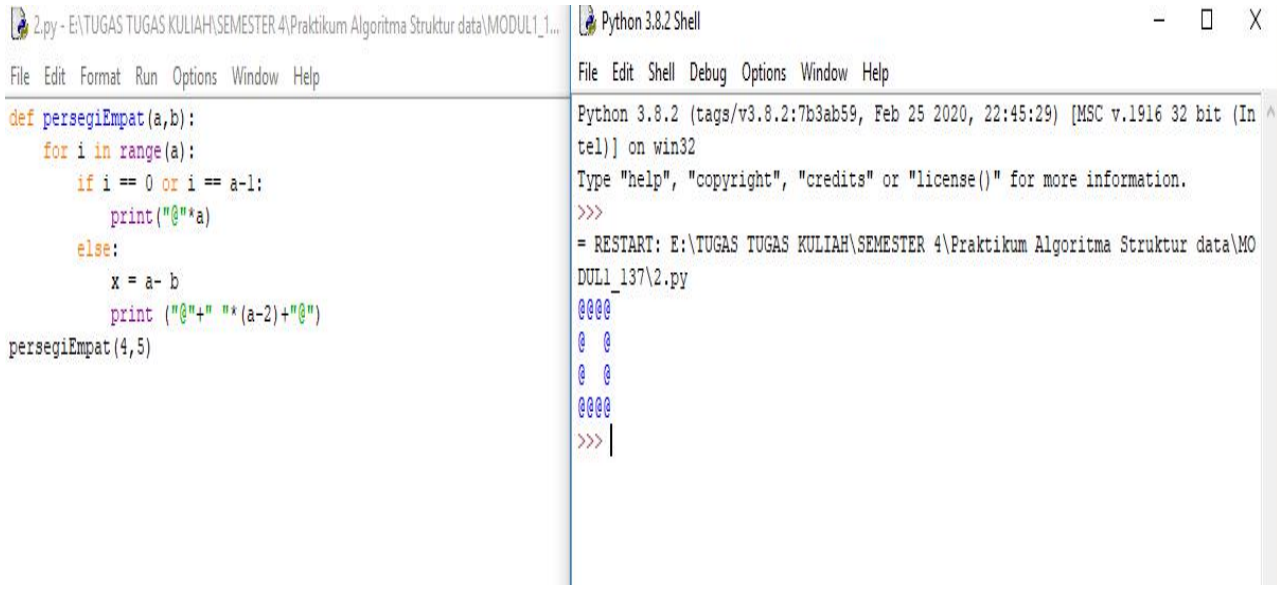
NAMA : NOVERA DYAH A.
NIM : L200180026
KELAS : B

MODUL 1

1.



2.



3.

3ab.py - E:\TUGAS TUGAS KULIAH\SEMESTER 4\Praktikum Algoritma Struktur data\MODUL1...

File Edit Format Run Options Window Help

```
def jumlahHurufVokal(input):
    total = 0
    voc = ["a", "i", "u", "e", "o"]
    for i in input:
        if i in voc:
            total+=1
    return [len(input), total]

def jumlahHurufKonsonan(input):
    total = 0
    voc = ["a", "i", "u", "e", "o"]
    for i in input:
        if i in voc:
            total+=1
    return [len(input), len(input)-total]

v = jumlahHurufVokal("Surakarta")
k = jumlahHurufKonsonan("Surakarta")

print(v)
print(k)
```

Python 3.8.2 Shell

File Edit Shell Debug Options Window Help

```
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 22:45:29) [MSC v.1916 32 bit (In
tel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:\TUGAS TUGAS KULIAH\SEMESTER 4\Praktikum Algoritma Struktur data\MO
DUL1_137\3ab.py
[9, 4]
[9, 5]
>>>
```

4.

4.py - E:\TUGAS TUGAS KULIAH\SEMESTER 4\Praktikum Algoritma Struktur data\MODUL1_1...

File Edit Format Run Options Window Help

```
def rerata(b):
    sum = 0
    for i in b :
        sum += i
    return(sum/len(b))
```

Python 3.8.2 Shell

File Edit Shell Debug Options Window Help

```
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 22:45:29) [MSC v.1916 32 bit (In
tel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:\TUGAS TUGAS KULIAH\SEMESTER 4\Praktikum Algoritma Struktur data\MO
DUL1_137\4.py
>>> rerata([1,2,3,4,5])
3.0
>>> g = [3,4,5,4,3,4,5,2,2,10,11,23]
>>> rerata(g)
6.333333333333333
>>>
```

5.

5.py - E:\TUGAS TUGAS KULIAH\SEMESTER 4\Praktikum Algoritma Struktur data\MODUL1_1...

File Edit Format Run Options Window Help

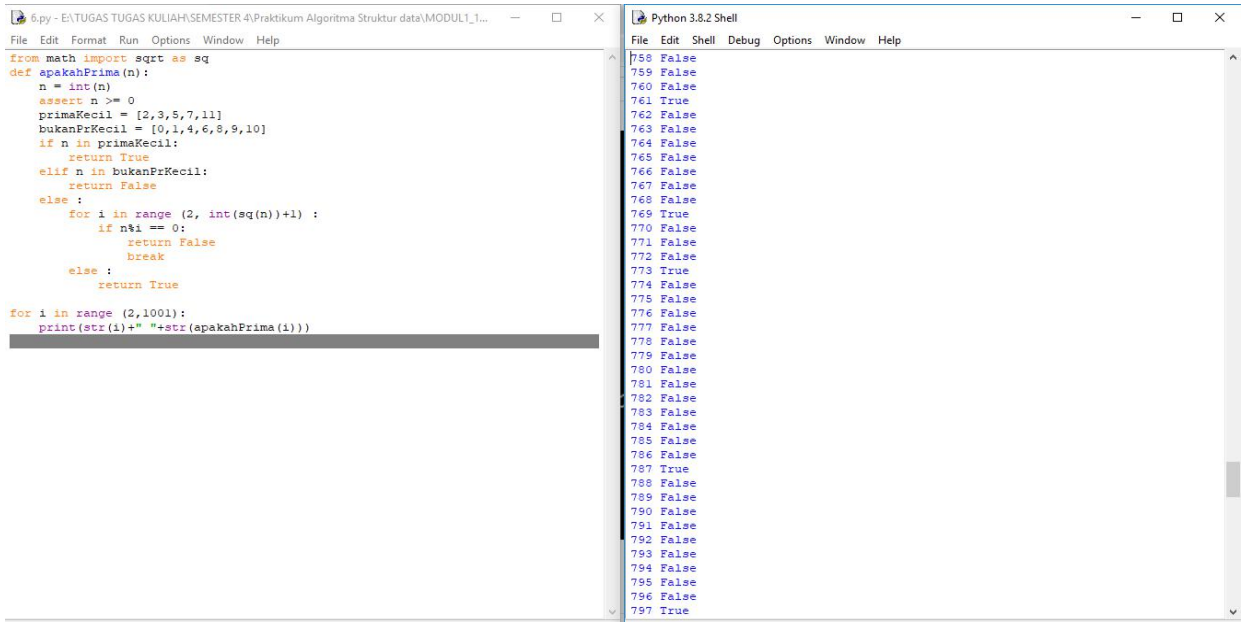
```
from math import sqrt as sq
def apakahPrima(n):
    n = int(n)
    assert n>=0
    primaKecil = [2,3,5,7,11]
    bukanPrKecil = [0,1,4,6,8,9,10]
    if n in primaKecil:
        return True
    elif n in bukanPrKecil:
        return False
    else:
        for i in range(2,int(sq(n))+1):
            if n%1 ==0: #Jika nanti hasilnya bukan prima
                return False
                break
            else: #Jika nanti hasilnya prima
                return True

print(apakahPrima(17))
print(apakahPrima(97))
print(apakahPrima(123))
```

Python 3.8.2 Shell

File Edit Shell Debug Options Window Help

```
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 22:45:29) [MSC v.1916 32 bit (In
tel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:\TUGAS TUGAS KULIAH\SEMESTER 4\Praktikum Algoritma Struktur data\MO
DUL1_137\5.py
False
False
False
>>>
```

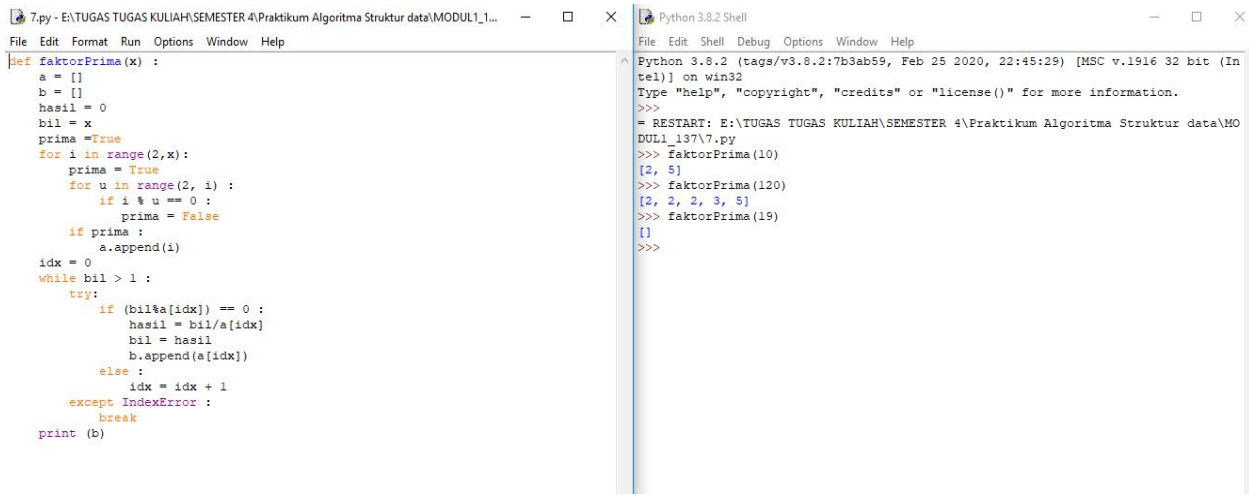
6.



```
from math import sqrt as sq
def apakahPrima(n):
    n = int(n)
    assert n >= 0
    primaKecil = [2,3,5,7,11]
    bukanPrKecil = [0,1,4,6,8,9,10]
    if n in primaKecil:
        return True
    elif n in bukanPrKecil:
        return False
    else :
        for i in range (2, int(sq(n))+1) :
            if n%i == 0:
                return False
                break
        else :
            return True

for i in range (2,1001):
    print(str(i)+" "+str(apakahPrima(i)))
```

```
758 False
759 False
760 False
761 True
762 False
763 False
764 False
765 False
766 False
767 False
768 False
769 True
770 False
771 False
772 False
773 True
774 False
775 False
776 False
777 False
778 False
779 False
780 False
781 False
782 False
783 False
784 False
785 False
786 False
787 True
788 False
789 False
790 False
791 False
792 False
793 False
794 False
795 False
796 False
797 True
```

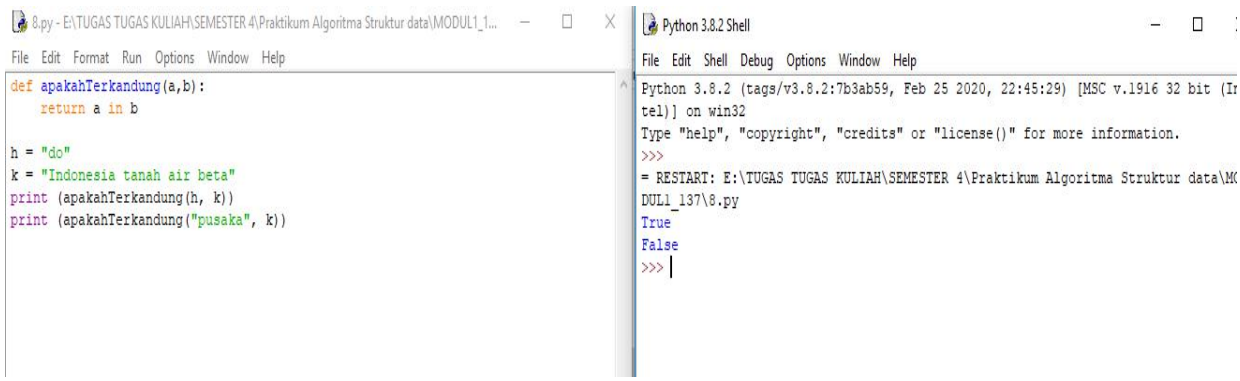
7.



```
def faktorPrima(x) :
    a = []
    b = []
    hasil = 0
    bil = x
    prima =True
    for i in range(2,x):
        prima = True
        for u in range(2, i) :
            if i % u == 0 :
                prima = False
        if prima :
            a.append(i)
    idx = 0
    while bil > 1 :
        try:
            if (bil%a[idx]) == 0 :
                hasil = bil/a[idx]
                bil = hasil
                b.append(a[idx])
            else :
                idx = idx + 1
        except IndexError :
            break
    print (b)
```

```
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 22:45:29) [MSC v.1916 32 bit (In
tel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:\TUGAS TUGAS KULIAH\SEMESTER 4\Praktikum Algoritma Struktur data\MO
DUL1_137\7.py
>>> faktorPrima(10)
[2, 5]
>>> faktorPrima(120)
[2, 2, 2, 3, 5]
>>> faktorPrima(19)
[]
>>>
```

8.



```
def apakahTerkandung(a,b):
    return a in b

h = "do"
k = "Indonesia tanah air beta"
print (apakahTerkandung(h, k))
print (apakahTerkandung("pusaka", k))
```

```
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 22:45:29) [MSC v.1916 32 bit (In
tel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:\TUGAS TUGAS KULIAH\SEMESTER 4\Praktikum Algoritma Struktur data\MO
DUL1_137\8.py
True
False
>>>
```

9.

```
for i in range(1,100):
    if(i % 3) == 0 and (i % 5) == 0 :
        i = "Python UMS"
    elif(i % 3) == 0:
        i = "Python"
    elif(i % 5) == 0:
        i = "UMS"
    print(i)
```

```
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
```

10.

```
from math import sqrt as akar
def selesaikanABC(a,b,c):
    a = float(a)
    b = float(b)
    c = float(c)
    D = b**2 - 4*a*c
    if (D < 0):
        print("Determinan negatif. Persamaan tidak mempunyai akar real.")
    else:
        x1 = (-b + akar(D))/(2*a)
        x2 = (-b - akar(D))/(2*a)
        hasil = (x1,x2)
        return hasil
```

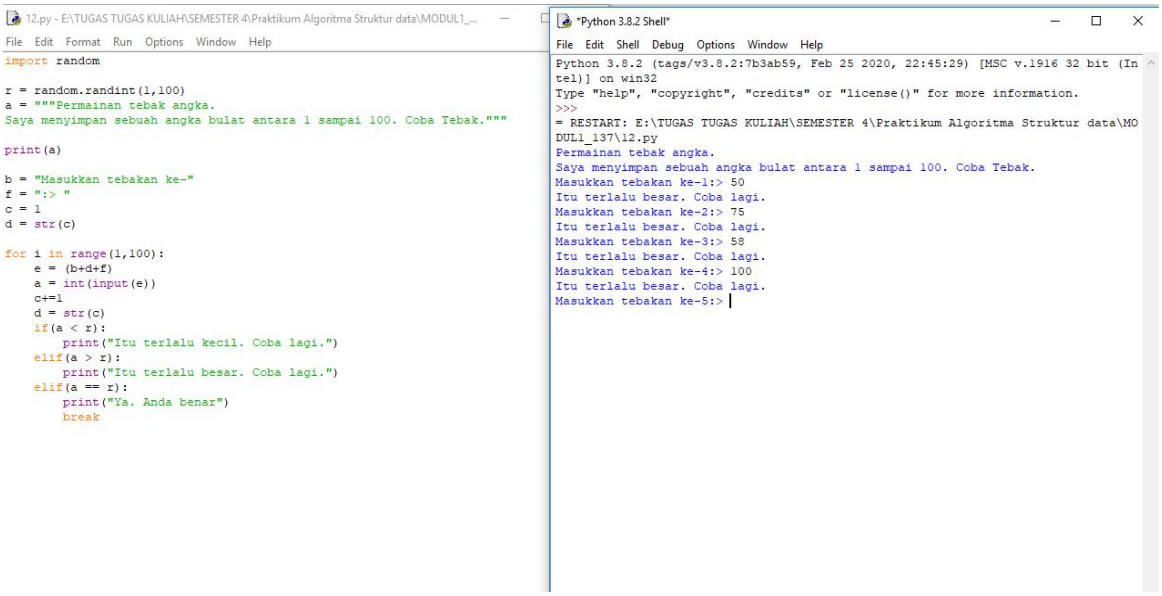
```
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 22:45:29) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:\TUGAS TUGAS KULIAH\SEMESTER 4\Praktikum Algoritma Struktur data\MODUL1_137\10.py
>>> selesaikanABC(1,2,3)
Determinan negatif. Persamaan tidak mempunyai akar real.
>>>
```

11.

```
def apakahKabisat(n):
    if n%4==0:
        if n%100==0 and n%400==0:
            return True
        elif n%100==0 and n%400!=0:
            return False
        return True
    return False

print(apakahKabisat(1896))
print(apakahKabisat(1897))
print(apakahKabisat(1900))
print(apakahKabisat(2000))
print(apakahKabisat(2004))
print(apakahKabisat(2100))
print(apakahKabisat(2400))
```

```
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 22:45:29) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:\TUGAS TUGAS KULIAH\SEMESTER 4\Praktikum Algoritma Struktur data\MODUL1_137\11.py
True
False
False
True
True
False
True
>>>
```

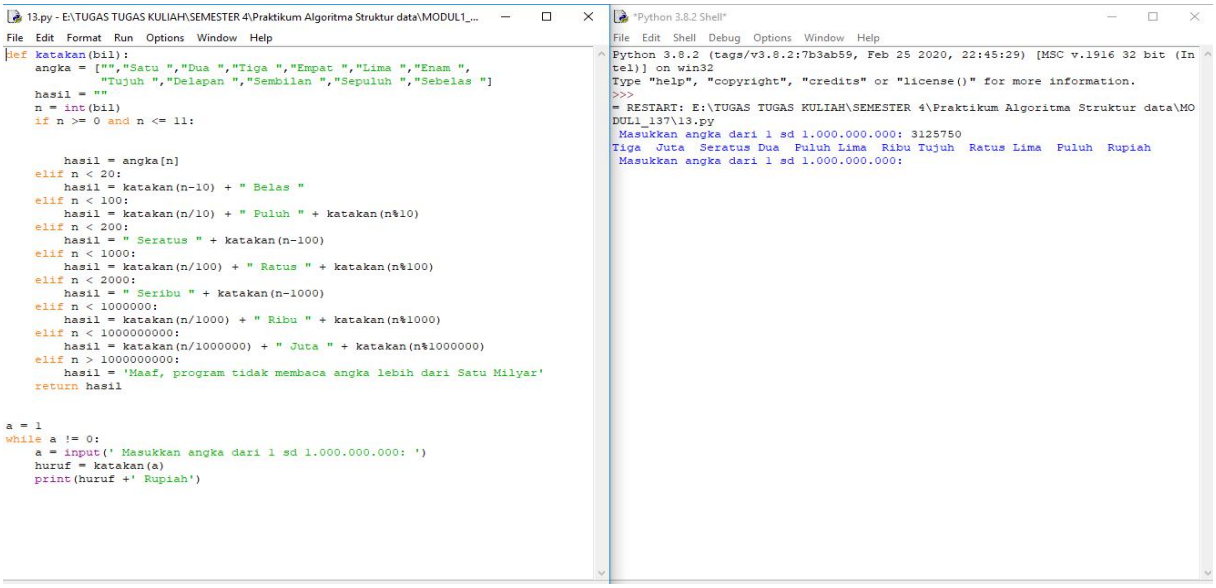
12.



```
12.py - E:\TUGAS TUGAS KULIAH\SEMESTER 4\Praktikum Algoritma Struktur data\MODUL1_...
File  Edit  Format  Run  Options  Window  Help
import random

r = random.randint(1,100)
a = """Permainan tebak angka.
Saya menyimpan sebuah angka bulat antara 1 sampai 100. Coba Tebak."""

print(a)

b = "Masukkan tebakan ke-"
f = ":> "
c = 1
d = str(c)

for i in range(1,100):
    e = (b+d+f)
    a = int(input(e))
    c+=1
    d = str(c)
    if(a < r):
        print("Itu terlalu kecil. Coba lagi.")
    elif(a > r):
        print("Itu terlalu besar. Coba lagi.")
    elif(a == r):
        print("Ya. Anda benar")
        break
```

```
*Python 3.8.2 Shell*
File  Edit  Shell  Debug  Options  Window  Help
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 22:45:29) [MSC v.1916 32 bit (In
tel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:\TUGAS TUGAS KULIAH\SEMESTER 4\Praktikum Algoritma Struktur data\MO
DUL1_137\12.py
Permainan tebak angka.
Saya menyimpan sebuah angka bulat antara 1 sampai 100. Coba Tebak.
Masukkan tebakan ke-1:> 50
Itu terlalu besar. Coba lagi.
Masukkan tebakan ke-2:> 75
Itu terlalu besar. Coba lagi.
Masukkan tebakan ke-3:> 58
Itu terlalu besar. Coba lagi.
Masukkan tebakan ke-4:> 100
Itu terlalu besar. Coba lagi.
Masukkan tebakan ke-5:>
```

13.



```
13.py - E:\TUGAS TUGAS KULIAH\SEMESTER 4\Praktikum Algoritma Struktur data\MODUL1_...
File  Edit  Format  Run  Options  Window  Help
def katakan(bil):
    angka = ["","Satu ","Dua ","Tiga ","Empat ","Lima ","Enam ",
             "Tujuh ","Delapan ","Sembilan ","Sepuluh ","Sebelas "]
    hasil = ""
    n = int(bil)
    if n >= 0 and n <= 11:


        hasil = angka[n]
    elif n < 20:
        hasil = katakan(n-10) + " Belas "
    elif n < 100:
        hasil = katakan(n/10) + " Puluh " + katakan(n%10)
    elif n < 200:
        hasil = " Seratus " + katakan(n-100)
    elif n < 1000:
        hasil = katakan(n/100) + " Ratus " + katakan(n%100)
    elif n < 2000:
        hasil = " Seribu " + katakan(n-1000)
    elif n < 1000000:
        hasil = katakan(n/1000) + " Ribu " + katakan(n%1000)
    elif n < 1000000000:
        hasil = katakan(n/1000000) + " Juta " + katakan(n%1000000)
    elif n > 1000000000:
        hasil = 'Maaf, program tidak membaca angka lebih dari Satu Milyar'
    return hasil


a = 1
while a != 0:
    a = input(' Masukkan angka dari 1 sd 1.000.000.000: ')
    huruf = katakan(a)
    print(huruf +' Rupiah')
```

```
*Python 3.8.2 Shell*
File  Edit  Shell  Debug  Options  Window  Help
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 22:45:29) [MSC v.1916 32 bit (In
tel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:\TUGAS TUGAS KULIAH\SEMESTER 4\Praktikum Algoritma Struktur data\MO
DUL1_137\13.py
 Masukkan angka dari 1 sd 1.000.000.000: 3125750
Tiga  Juta  Seratus Dua  Puluh Lima  Ribu Tujuh  Ratus Lima  Puluh  Rupiah
 Masukkan angka dari 1 sd 1.000.000.000:
```

14.

```
14.py - E:\TUGAS TUGAS KULIAH\SEMESTER 4\Praktikum Algoritma Struktur data\MODUL1_...
File  Edit  Format  Run  Options  Window  Help
def formatRupiah(n):
    y = str(n)
    if len(y) <= 3 :
        return 'Rp ' + y
    else:
        p = y[-3:]
        q = y[:-3]
        return (formatRupiah(q) + '.' + p)
        print ('Rp' + (formatRupiah(q)) + '.' + p)
```

```
Python 3.8.2 Shell
File  Edit  Shell  Debug  Options  Window  Help
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 22:45:29) [MSC v.1916 32 bit (In
tel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:\TUGAS TUGAS KULIAH\SEMESTER 4\Praktikum Algoritma Struktur data\MO
DUL1_137\14.py
>>> formatRupiah(1500)
'Rp 1.500'
>>> formatRupiah(2560000)
'Rp 2.560.000'
>>>
```