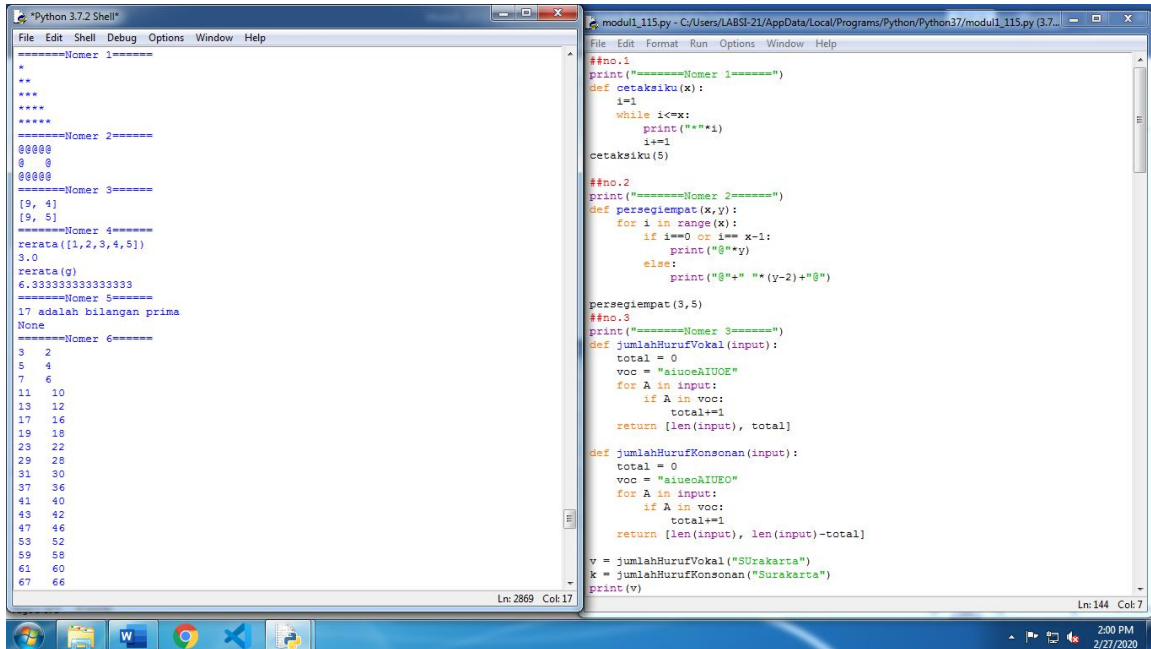


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Praktikum Algoritma Struktur Data



The image shows two windows from a Windows desktop. The left window is a "Python 3.7.2 Shell" displaying the output of a program. The right window is a text editor showing the source code for "modul1_115.py".

Python 3.7.2 Shell Output:

```
=====Nomor 1=====
*
**
***
****
=====Nomor 2=====
00000
0 0
00000
=====Nomor 3=====
[9, 4]
=====Nomor 4=====
rerata([1,2,3,4,5])
3.0
rerata(g)
6.333333333333333
=====Nomor 5=====
17 adalah bilangan prima
None
=====Nomor 6=====
3 2
5 4
7 6
11 10
13 12
17 16
19 18
23 22
29 28
31 30
37 36
41 40
43 42
47 46
53 52
59 58
61 60
67 66
```

modul1_115.py Code:

```
##no.1
print("=====Nomor 1=====")
def cetakaksiku(x):
    i=1
    while i<=x:
        print("*"*i)
        i+=1
    cetakaksiku(5)

##no.2
print("=====Nomor 2=====")
def rerata(x,y):
    for i in range(x):
        if i==0 or i== x-1:
            print("%g"%y)
        else:
            print("%g"+" "*(y-2)+"%g")

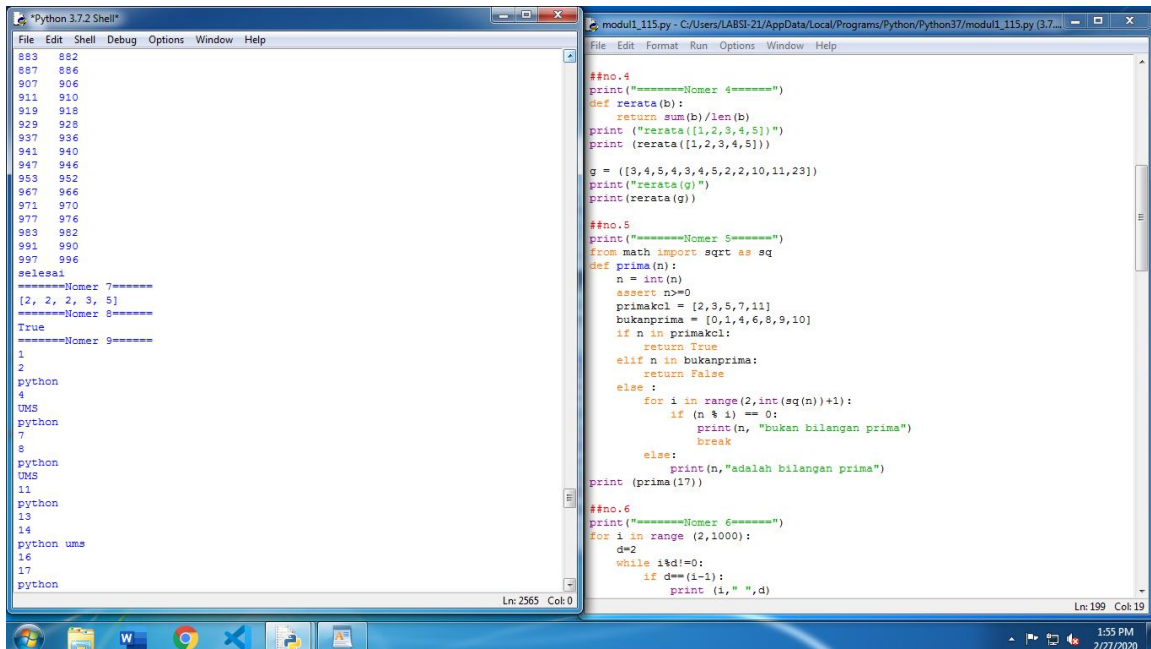
rerata(9,4)

##no.3
print("=====Nomor 3=====")
def rerata(b):
    return sum(b)/len(b)
print ("rerata([1,2,3,4,5])")
print (rerata([1,2,3,4,5]))

g = ([3,4,5,4,3,4,5,2,2,10,11,23])
print ("rerata(g)")
print (rerata(g))

##no.5
print("=====Nomor 5=====")
from math import sqrt as sq
def prima(n):
    n = int(n)
    assert n>0
    primakol = [2,3,5,7,11]
    bukanprima = [0,1,4,6,8,9,10]
    if n in primakol:
        return True
    elif n in bukanprima:
        return False
    else:
        for i in range(2,int(sq(n))+1):
            if (n % i) == 0:
                print(n, "bukan bilangan prima")
                break
        else:
            print(n,"adalah bilangan prima")
    print (prima(17))

##no.6
print("=====Nomor 6=====")
for i in range (2,1000):
    d=2
    while i%d!=0:
        if d==(i-1):
            print (i, " ",d)
```



The image shows two windows from a Windows desktop. The left window is a "Python 3.7.2 Shell" displaying the output of a program. The right window is a text editor showing the source code for "modul1_115.py".

Python 3.7.2 Shell Output:

```
883 882
887 886
907 906
911 910
919 918
929 928
937 936
941 940
947 946
953 952
967 966
971 970
977 976
983 982
991 990
997 996
selesai
=====Nomor 7=====
[2, 2, 2, 3, 5]
=====Nomor 8=====
True
=====Nomor 9=====
1
2
python
4
UNS
python
7
8
python
UNS
11
python
13
14
python uns
16
17
python
```

modul1_115.py Code:

```
##no.4
print("=====Nomor 4=====")
def rerata(b):
    return sum(b)/len(b)
print ("rerata([1,2,3,4,5])")
print (rerata([1,2,3,4,5]))

g = ([3,4,5,4,3,4,5,2,2,10,11,23])
print ("rerata(g)")
print (rerata(g))

##no.5
print("=====Nomor 5=====")
from math import sqrt as sq
def prima(n):
    n = int(n)
    assert n>0
    primakol = [2,3,5,7,11]
    bukanprima = [0,1,4,6,8,9,10]
    if n in primakol:
        return True
    elif n in bukanprima:
        return False
    else:
        for i in range(2,int(sq(n))+1):
            if (n % i) == 0:
                print(n, "bukan bilangan prima")
                break
        else:
            print(n,"adalah bilangan prima")
    print (prima(17))

##no.6
print("=====Nomor 6=====")
for i in range (2,1000):
    d=2
    while i%d!=0:
        if d==(i-1):
            print (i, " ",d)
```

```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
71 python
73 python
74 python ums
76 python
77 python
79 UMS
python
82 python
83 python
85 python
86 python
88 python
89 python ums
91 python
92 python
94 UMS
python
97 python
98 python
python
=====Homer 10=====
Determinan negatif. Persamaan tidak mempunyai akar real
=====Homer 11=====
Tahun Kabisat
=====Homer 12=====
saya menyimpan sebuah angka bulat antara 1 sampai 100. Coba tebak
masukan tebakan:>2
angka terlalu kecil. Coba lagi
masukan tebakan:>4
angka terlalu kecil. Coba lagi
masukan tebakan:>
Ln: 2869 Col: 17

modul1_115.py - C:/Users/LABSI-21/AppData/Local/Programs/Python/Python37/modul1_115.py (3.7...
File Edit Format Run Options Window Help
##no.6
print("=====Homer 6=====")
for i in range(2,1000):
    d=2
    while i%d!=0:
        if d==(i-1):
            print(i," ",d)
        d=d+1
    print("selesai")

##no.7
print("=====Homer 7=====")
def faktorprima(x):
    a=[]
    b=2
    while b<=x:
        if x%b==0:
            x/=b
            a.append(b)
        else:
            b+=1
    print(a)

faktorprima(120)

##no.8
print("=====Homer 8=====")
def apakah(r,u):
    if r in u:
        print("True")
    else:
        print("False")

r="shalom"
u="katakan shalom"

apakah(r,u)

##no.9
print("=====Homer 9=====")
```

```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
71 python
73 python
74 python ums
76 python
77 python
79 UMS
python
82 python
83 python
85 python
86 python
88 python
89 python ums
91 python
92 python
94 UMS
python
97 python
98 python
python
=====Homer 10=====
Determinan negatif. Persamaan tidak mempunyai akar real
=====Homer 11=====
Tahun Kabisat
=====Homer 12=====
saya menyimpan sebuah angka bulat antara 1 sampai 100. Coba tebak
masukan tebakan:>2
angka terlalu kecil. Coba lagi
masukan tebakan:>4
angka terlalu kecil. Coba lagi
masukan tebakan:>
Ln: 2869 Col: 17

modul1_115.py - C:/Users/LABSI-21/AppData/Local/Programs/Python/Python37/modul1_115.py (3.7...
File Edit Format Run Options Window Help
##no.9
print("=====Homer 9=====")
for i in range(1,100):
    if ((i%3)==0) and ((i%5)!=0):
        print("python ums")
    elif (i%3) == 0 :
        print("python")
    elif (i%5) == 0 :
        print("UMS")
    else:
        print(i)

##no.10
print("=====Homer 10=====")
from math import sqrt as s
def selesaikanABC(a,b,c):
    a=float(a)
    b=float(b)
    c=float(c)
    D=(b**2)-(4*a*c)
    if D>0:
        x1=(-b+s(D))/(2*a)
        x2=(-b-s(D))/(2*a)
        hasil=(x1,x2)
        print(hasil)
    else:
        print("Determinan negatif. Persamaan tidak mempunyai akar real")

selesaikanABC(1,2,3)

##no.11
print("=====Homer 11=====")
def apakahkabisat(x):
    if (x % 4) == 0:
        if (x % 100) == 0:
            if (x % 400) == 0:
                print("Tahun Kabisat")
            else:
                print("Bukan Tahun Kabisat")
        else:
            print("Bukan Tahun Kabisat")
    else:
        print("Bukan Tahun Kabisat")
```

```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
71 python
73
74 python ums
76
77 python
79 UMS
82 python
83 UMS
86 python
88
89 python ums
91
92 python
94 UMS
97 python
98
python
=====Homer 10=====
Determinan negatif. Persamaan tidak mempunyai akar real
=====Homer 11=====
Tahun Kabisat
=====Homer 12=====
saya menyimpan sebuah angka bulat antara 1 sampai 100. Coba tebak
masukan tebakan:>2
angka terlalu kecil. Coba lagi
masukan tebakan:>4
angka terlalu kecil. Coba lagi
masukan tebakan:>

modul1_115.py - C:/Users/LABSI-21/AppData/Local/Programs/Python/Python37/modul1_115.py (3.7...)
File Edit Format Run Options Window Help

##no.11
print("=====Homer 11=====")
def apakahkabisat(x):
    if (x % 4) == 0:
        if (x % 100) == 0:
            if (x % 400) == 0:
                print ("Tahun Kabisat")
            else:
                print ("Bukan Tahun Kabisat")
        else:
            print ("Tahun Kabisat")
    else:
        print ("Bukan Tahun Kabisat")

apakahkabisat(2020)

##no.12
print("=====Homer 12=====")
from random import *
x = randint(1, 100)
print("saya menyimpan sebuah angka bulat antara 1 sampai 100. Coba tebak")
while True:
    a=int(input("masukan tebakan:>"))
    if a<x:
        print("angka terlalu kecil. Coba lagi")
    elif a>x:
        print("angka terlalu besar. Coba lagi")
    else:
        print("waw! anda benar")
        break

##no.13
print("=====Homer 13=====")
def katakan(a):
    angka=["", "satu", "dua", "tiga", "empat", "lima", "enam", "tujuh", "delapan", "sembi
    hasil=""
    n=int(a)
    if n >=0 and n<=11:
        return hasil

Ln: 2869 Col: 17
Ln: 144 Col: 7
1:57 PM
2/27/2020
```

```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
71 python
73
74 python ums
76
77 python
79 UMS
82 python
83 UMS
86 python
88
89 python ums
91
92 python
94 UMS
97 python
98
python
=====Homer 10=====
Determinan negatif. Persamaan tidak mempunyai akar real
=====Homer 11=====
Tahun Kabisat
=====Homer 12=====
saya menyimpan sebuah angka bulat antara 1 sampai 100. Coba tebak
masukan tebakan:>2
angka terlalu kecil. Coba lagi
masukan tebakan:>4
angka terlalu kecil. Coba lagi
masukan tebakan:>

modul1_115.py - C:/Users/LABSI-21/AppData/Local/Programs/Python/Python37/modul1_115.py (3.7...)
File Edit Format Run Options Window Help

##no.13
print("=====Homer 13=====")
def katakan(a):
    angka=["", "satu", "dua", "tiga", "empat", "lima", "enam", "tujuh", "delapan", "sembi
    hasil=""
    n=int(a)
    if n >=0 and n<=11:
        hasil=hasil+angka[n]
    elif n<20:
        hasil=angka[(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<100000000:
        hasil=katakan(n/1000000)+" juta "+katakan(n%1000000)
    return hasil
print(katakan(3123550))

##no.14
print("=====Homer 14=====")
def fmtRupiah(x):
    a=str(x)
    b=""
    i = -1
    while i >= -len(a):
        if ((i+1)%3==0 and (i+1)!=0):
            b="."+b
        b=a[i]+b
        i-=1
    return "Rp "+b
print(fmtRupiah(3400))

Ln: 2869 Col: 17
Ln: 144 Col: 7
1:57 PM
2/27/2020
```