NAMA : ISMI DZIKRINA

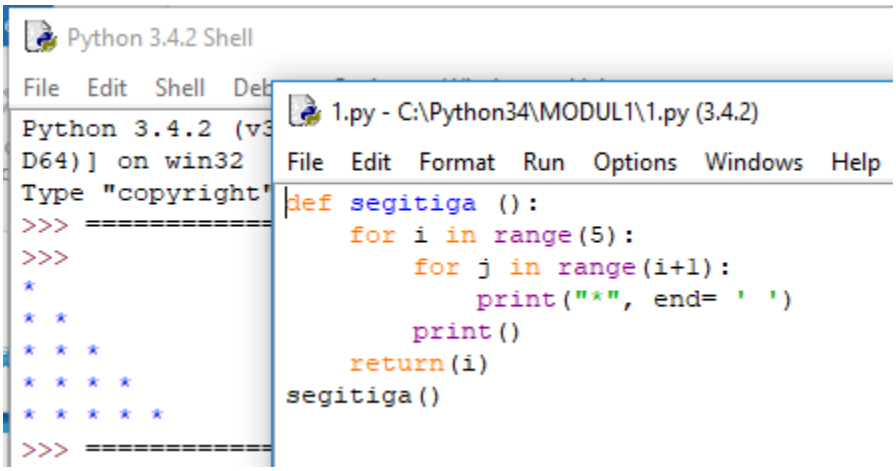
NIM : L200180010

KELAS : A

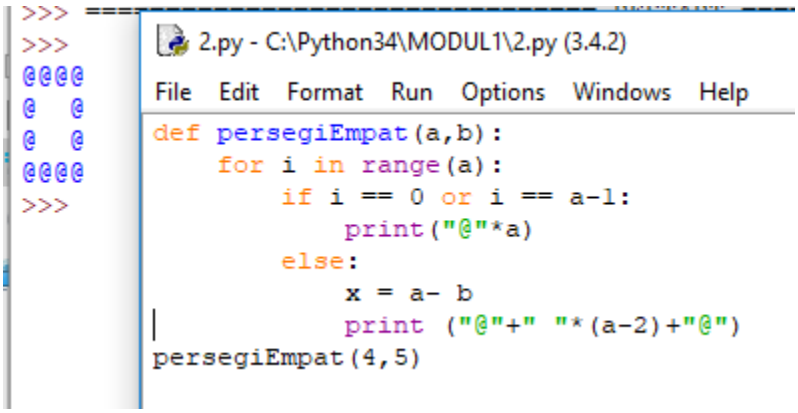
MODUL 1

PRAKTIKUM ALGORITMA DAN STRUKTUR DATA

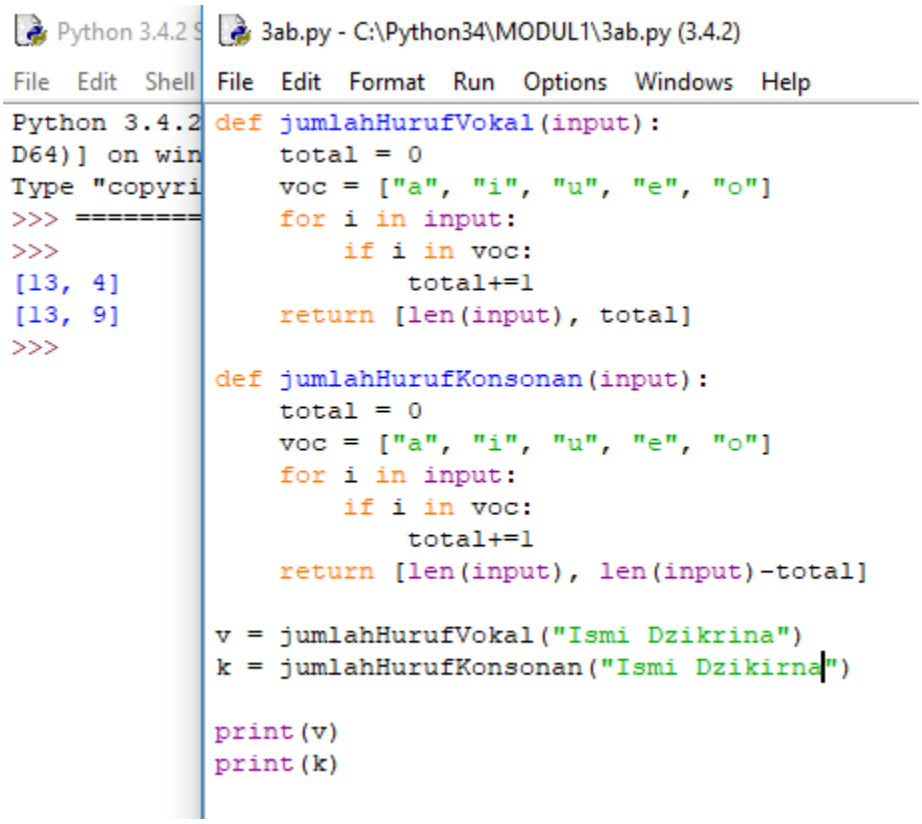
1.



2.



3.



```
Python 3.4.2 Shell
File  Edit  Shell
Python 3.4.2
D64)] on win
Type "copyri
>>> ========
>>>
[13, 4]
[13, 9]
>>>
```

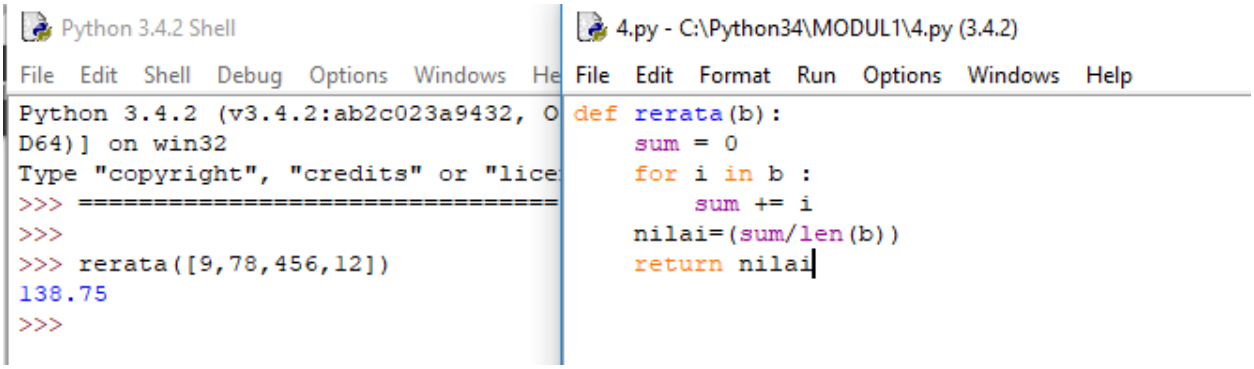
```
3ab.py - C:\Python34\MODUL1\3ab.py (3.4.2)
File  Edit  Format  Run  Options  Windows  Help
def jumlahHurufVokal(input):
    total = 0
    voc = ["a", "i", "u", "e", "o"]
    for i in input:
        if i in voc:
            total+=1
    return [len(input), total]

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("Ismi Dzikrina")
k = jumlahHurufKonsonan("Ismi Dzikirna")

print(v)
print(k)
```

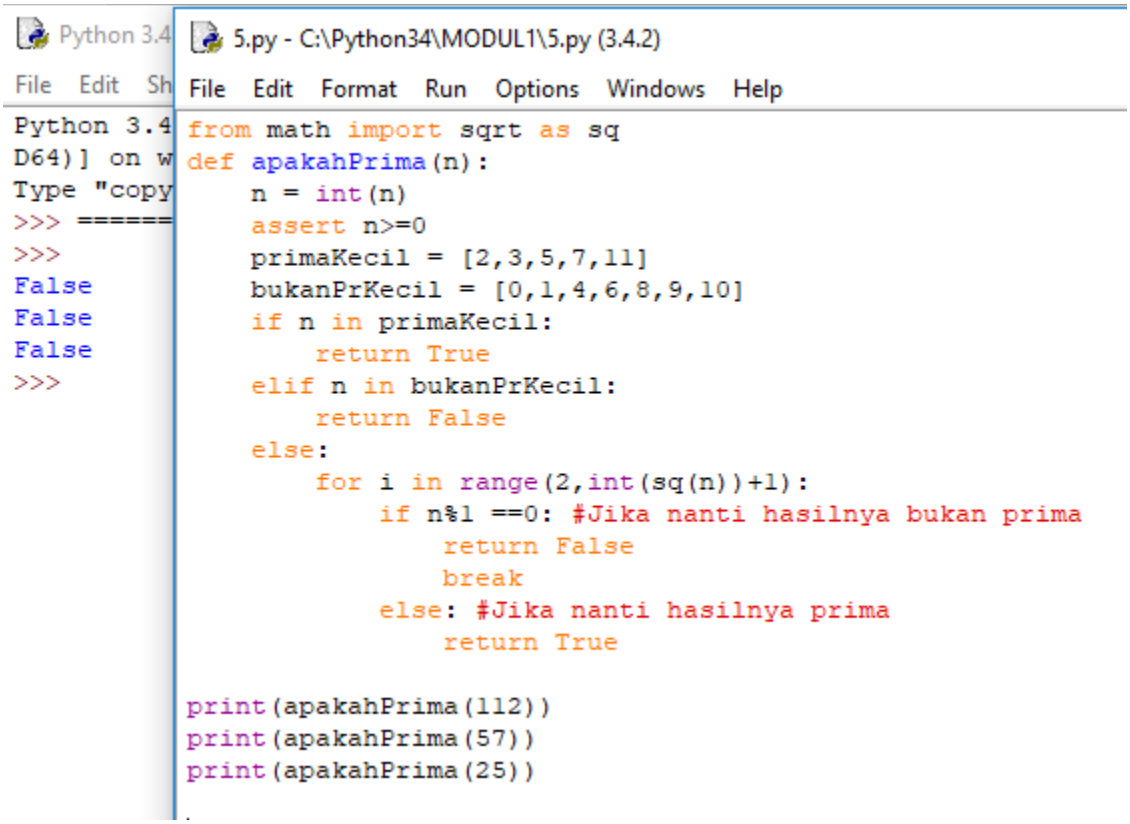
4.



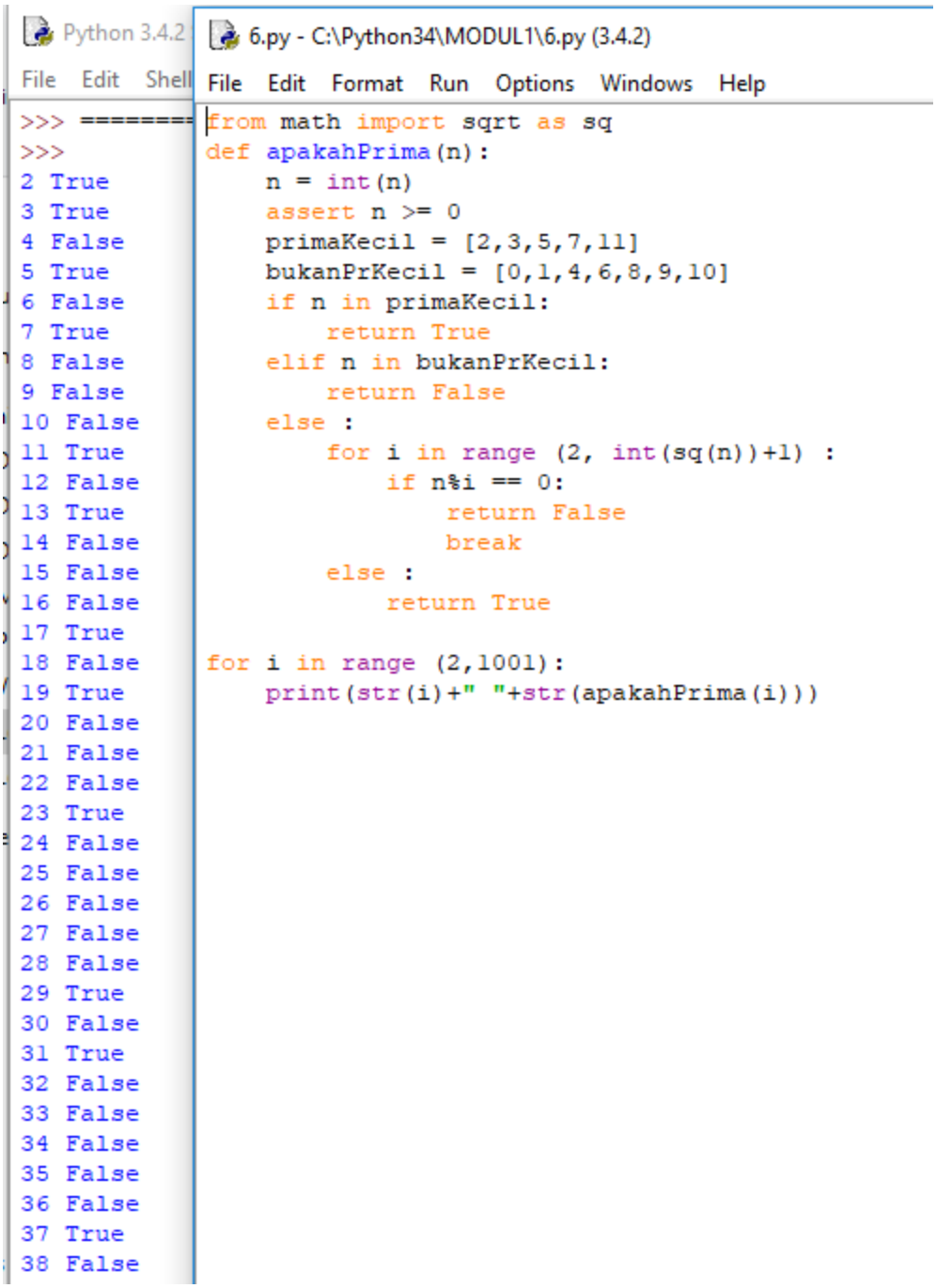
```
Python 3.4.2 Shell
File  Edit  Shell  Debug  Options  Windows  He
Python 3.4.2 (v3.4.2:ab2c023a9432, O
D64)] on win32
Type "copyright", "credits" or "lice
>>> ================================
>>>
>>> rerata([9,78,456,12])
138.75
>>>
```

```
4.py - C:\Python34\MODUL1\4.py (3.4.2)
File  Edit  Format  Run  Options  Windows  Help
def rerata(b):
    sum = 0
    for i in b :
        sum += i
    nilai=(sum/len(b))
    return nilai
```

5.


Python 3.4
File Edit Sh
Python 3.4
D64)] on w
Type "copy
>>> ======
>>>
False
False
False
>>>
5.py - C:\Python34\MODUL1\5.py (3.4.2)
File Edit Format Run Options Windows 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(112))
print(apakahPrima(57))
print(apakahPrima(25))

6.


Python 3.4.2
File Edit Shell
>>> ========
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2 True
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23 True
24 False
25 False
26 False
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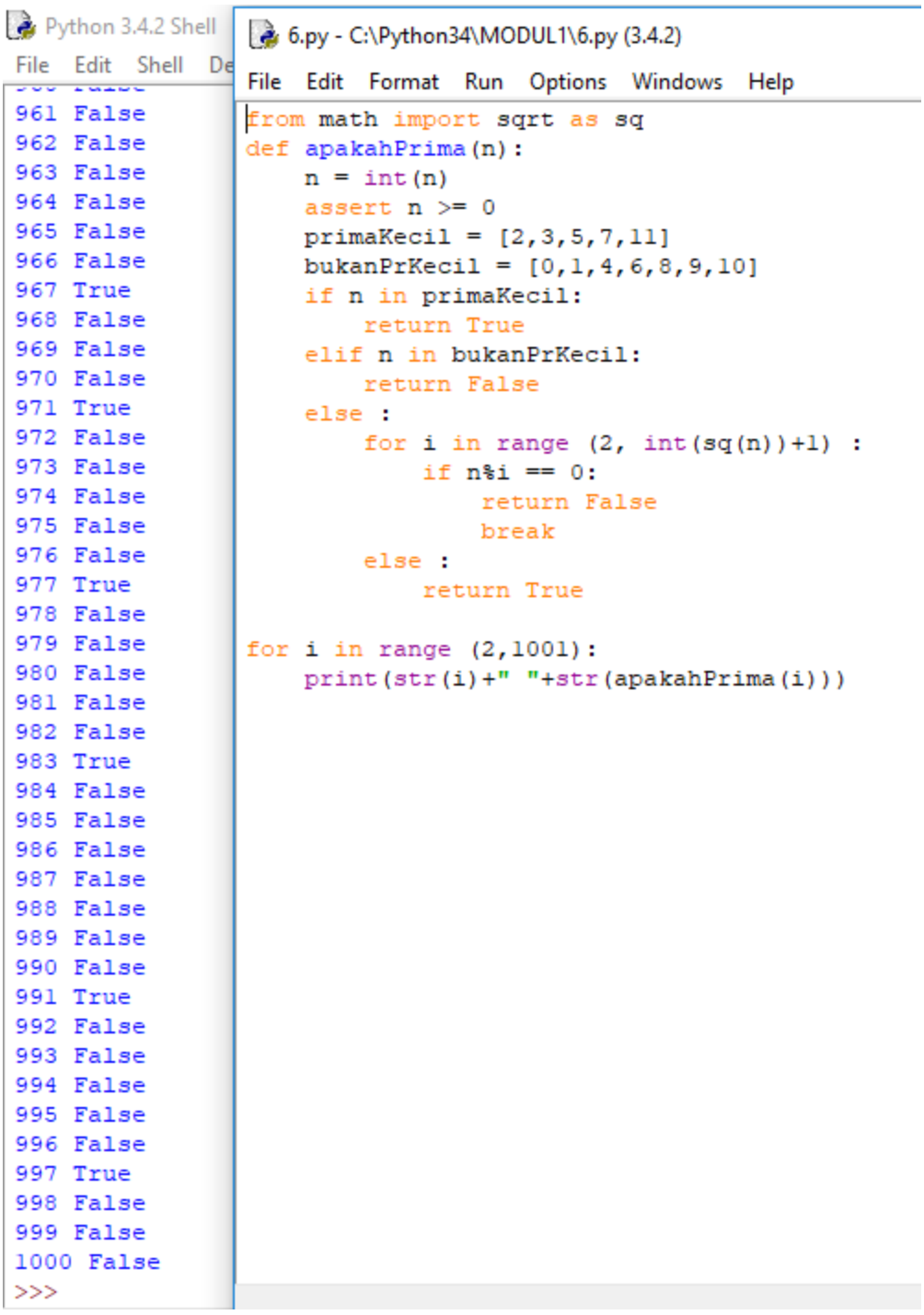
32 False
33 False
34 False
35 False
36 False
37 True
38 False
6.py - C:\Python34\MODUL1\6.py (3.4.2)
File Edit Format Run Options Windows Help
from math import sqrt as sq
def apakahPrima(n):
n = int(n)
assert n >= 0
primaKecil = [2,3,5,7,11]
bukanPrKecil = [0,1,4,6,8,9,10]
if n in primaKecil:
return True
elif n in bukanPrKecil:
return False
else :
for i in range (2, int(sq(n))+1) :
if n%i == 0:
return False
break
else :
return True
for i in range (2,1001):
print(str(i)+" "+str(apakahPrima(i)))


Python 3.4.2 Shell
File Edit Shell De
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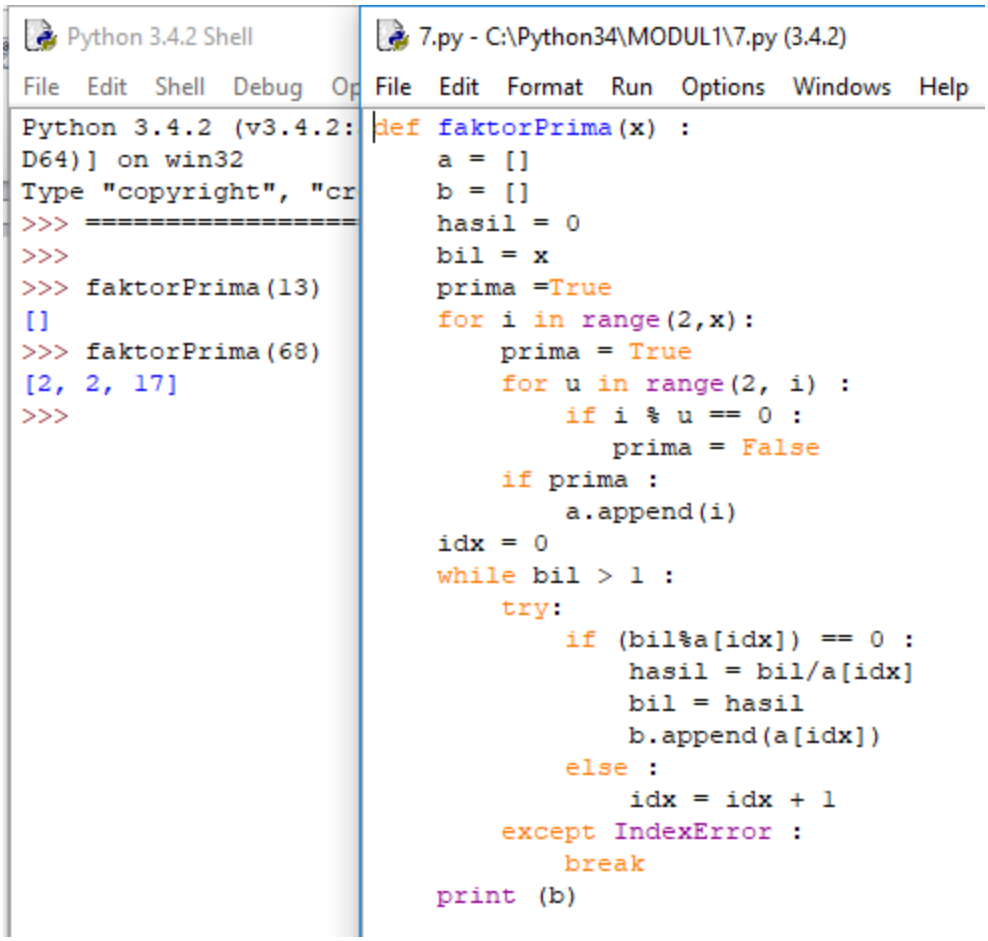
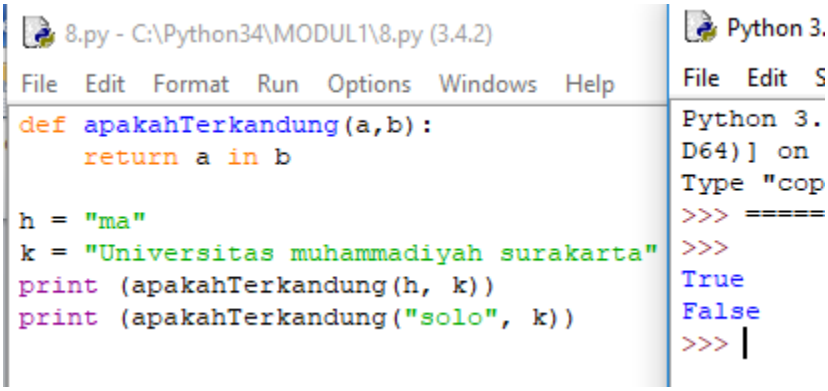
999 False
1000 False
>>>
6.py - C:\Python34\MODUL1\6.py (3.4.2)
File Edit Format Run Options Windows Help
from math import sqrt as sq
def apakahPrima(n):
n = int(n)
assert n >= 0
primaKecil = [2,3,5,7,11]
bukanPrKecil = [0,1,4,6,8,9,10]
if n in primaKecil:
return True
elif n in bukanPrKecil:
return False
else :
for i in range (2, int(sq(n))+1) :
if n%i == 0:
return False
break
else :
return True
for i in range (2,1001):
print(str(i)+" "+str(apakahPrima(i)))

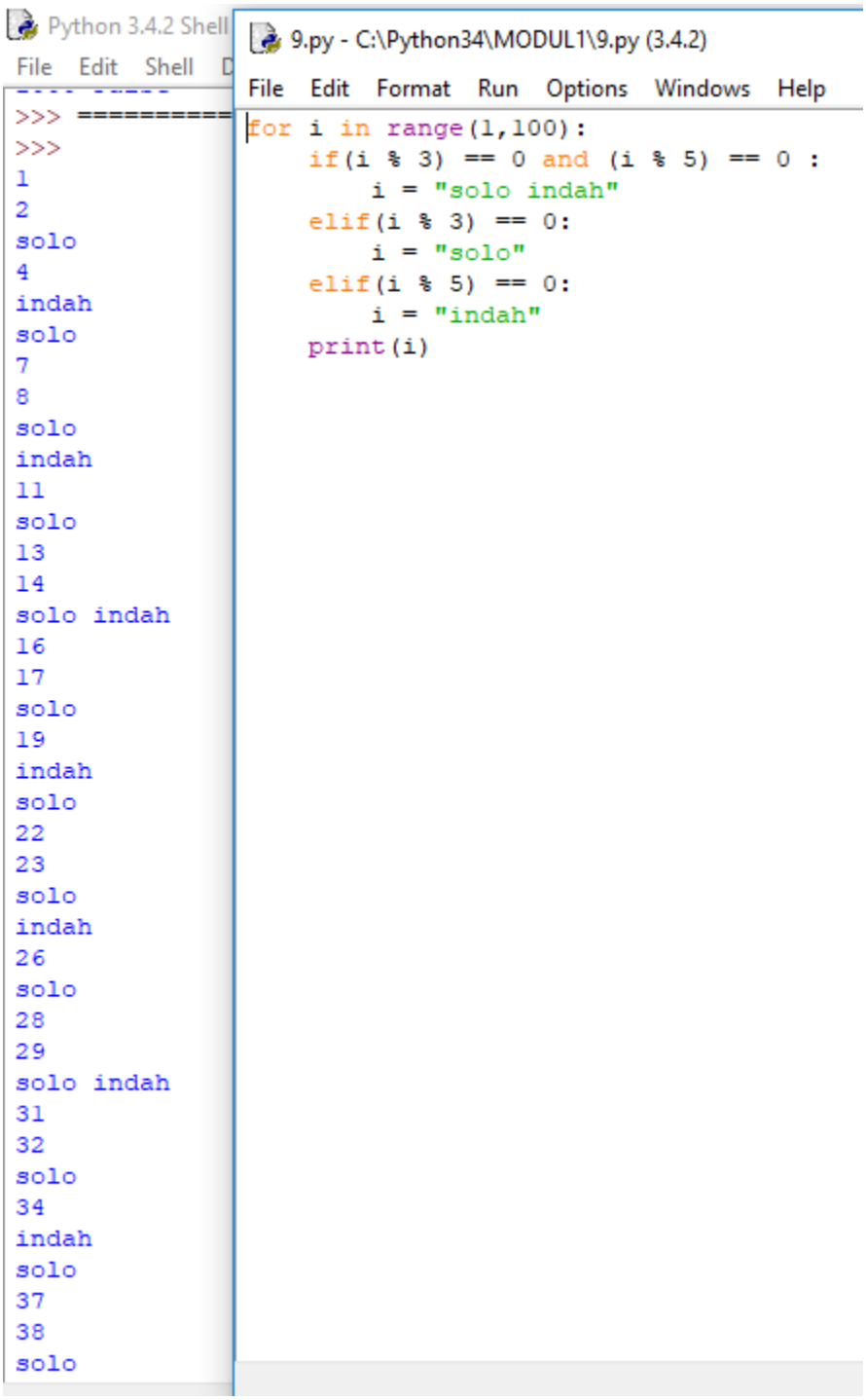
7.

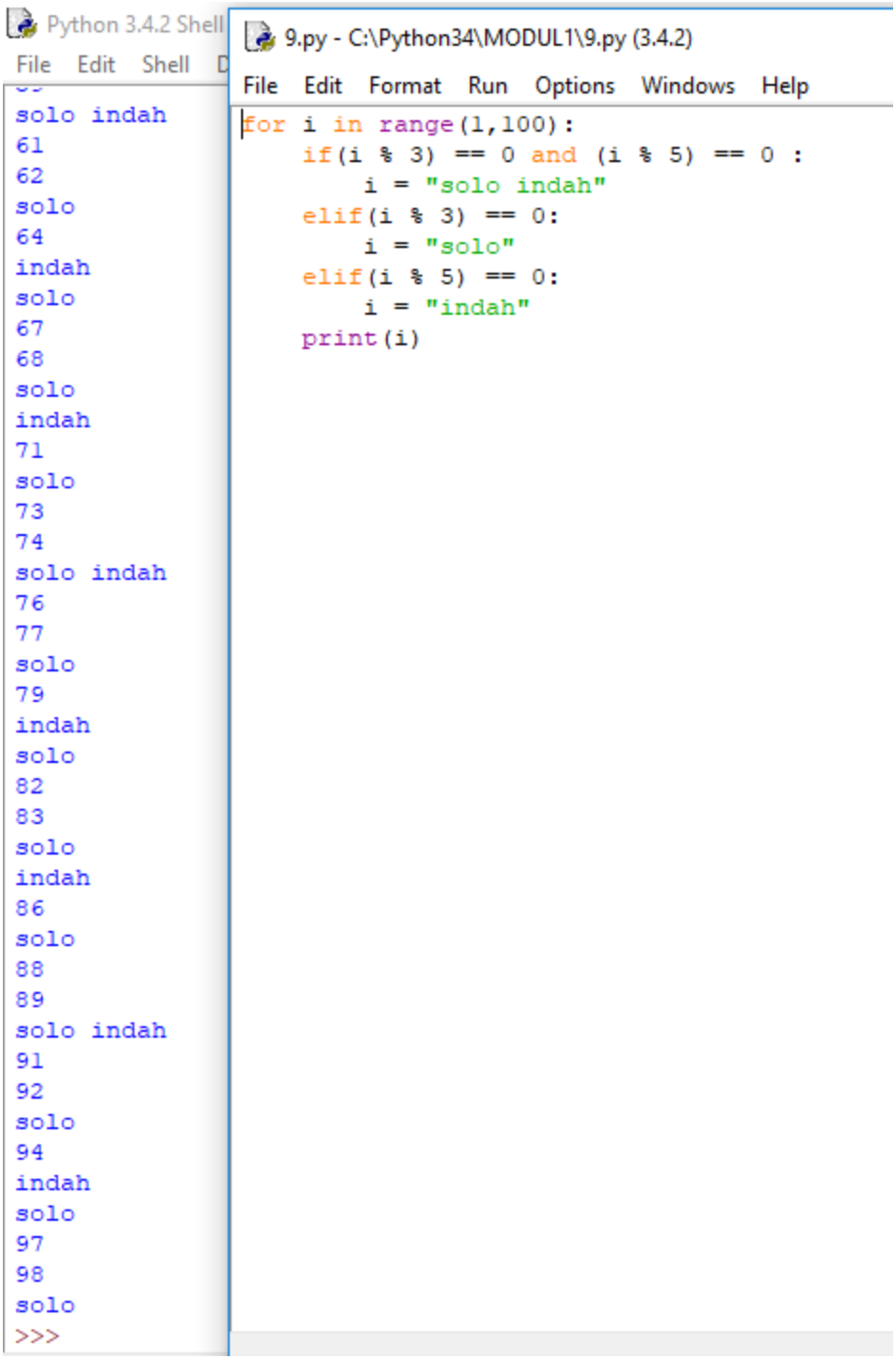

Python 3.4.2 Shell
File Edit Shell Debug Op
Python 3.4.2 (v3.4.2:
D64)] on win32
Type "copyright", "cr
>>> ==========
>>>
>>> faktorPrima(13)
[]
>>> faktorPrima(68)
[2, 2, 17]
>>>
7.py - C:\Python34\MODUL1\7.py (3.4.2)
File Edit Format Run Options Windows Help
def faktorPrima(x) :
a = []
b = []
hasil = 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)

8.


8.py - C:\Python34\MODUL1\8.py (3.4.2)
File Edit Format Run Options Windows Help
def apakahTerkandung(a,b):
return a in b
h = "ma"
k = "Universitas muhammadiyah surakarta"
print (apakahTerkandung(h, k))
print (apakahTerkandung("solo", k))
Python 3.
File Edit S
Python 3.
D64)] on
Type "cop
>>> =====
>>>
True
False
>>>

9.


Python 3.4.2 Shell
File Edit Shell
>>> ==========
>>>
1
2
solo
4
indah
solo
7
8
solo
indah
11
solo
13
14
solo indah
16
17
solo
19
indah
solo
22
23
solo
indah
26
solo
28
29
solo indah
31
32
solo
34
indah
solo
37
38
solo
9.py - C:\Python34\MODUL1\9.py (3.4.2)
File Edit Format Run Options Windows Help
for i in range(1,100):
if(i % 3) == 0 and (i % 5) == 0 :
i = "solo indah"
elif(i % 3) == 0:
i = "solo"
elif(i % 5) == 0:
i = "indah"
print(i)


Python 3.4.2 Shell
File Edit Shell
solo indah
61
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solo
64
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67
68
solo
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71
solo
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solo indah
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82
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solo
indah
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89
solo indah
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92
solo
94
indah
solo
97
98
solo
>>>
9.py - C:\Python34\MODUL1\9.py (3.4.2)
File Edit Format Run Options Windows Help
for i in range(1,100):
if(i % 3) == 0 and (i % 5) == 0 :
i = "solo indah"
elif(i % 3) == 0:
i = "solo"
elif(i % 5) == 0:
i = "indah"
print(i)

10.

10.py - C:\Python34\MODUL1\10.py (3.4.2)

File Edit Format Run Options Windows Help

```
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 3.4.2 Shell

File Edit Shell Debug Options Windows Help

```
Python 3.4.2 (v3.4.2:ab2c023a9432, Oct  6 2014,
D64)] on win32
Type "copyright", "credits" or "license()" for
>>> ================================ RESTART ==
>>>
>>> selesaikanABC(5,9,2)
(-0.2596875762567151, -1.5403124237432848)
>>>
```

11.

Python 3.4 | 11.py - C:\Python34\MODUL1\11.py (3.4.2)

File Edit Sh | File Edit Format Run Options Windows Help

```
Python 3.4                  def apakahKabisat(n):
D64)] on w                      if n%4==0:
Type "copy                          if n%100==0 and n%400==0:
>>> ======                              return True
>>>                                 elif n%100==0 and n%400!=0:
False                                   return False
False                               return True
True                            return False
True
>>>                         print(apakahKabisat(1851))
                            print(apakahKabisat(1900))
                            print(apakahKabisat(2000))
                            print(apakahKabisat(2400))
```

12.

Python 3.4.2 Shell

File Edit Shell Debug Options Windows Help

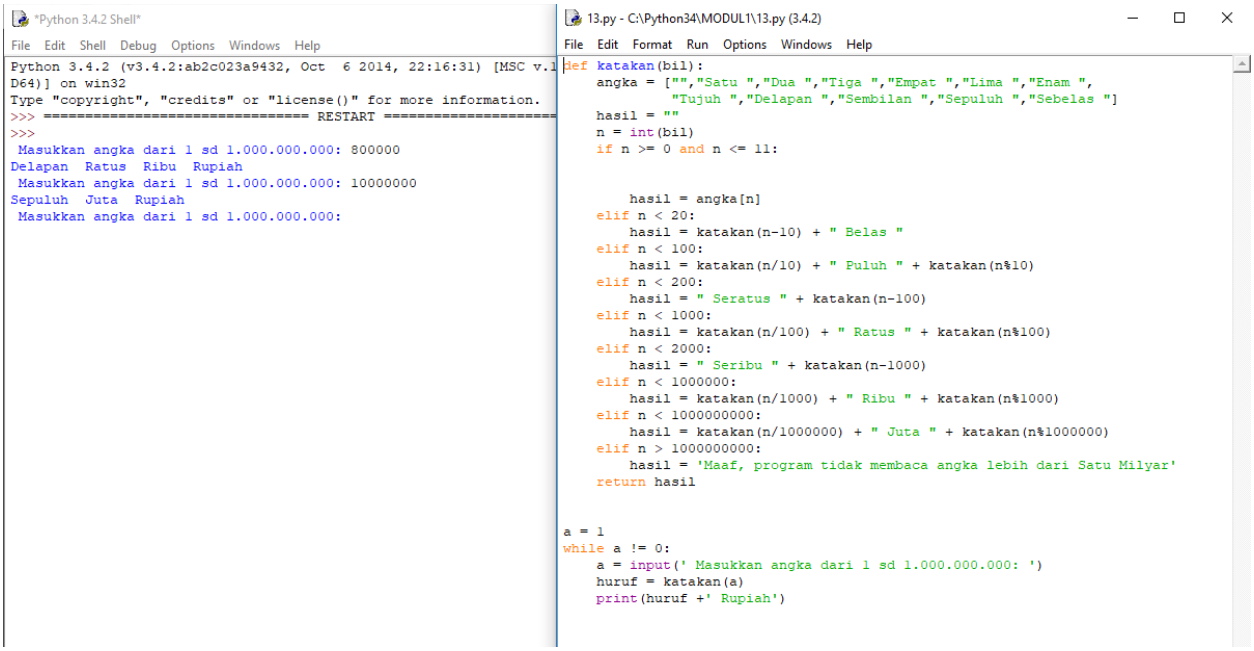
```
Python 3.4.2 (v3.4.2:ab2c023a9432, Oct  6 2014, 22:16:31) [MSC v.1600 64 bit (AM
D64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>> ================================ RESTART ================================
>>>
Permainan tebak angka.
Saya menyimpan sebuah angka bulat antara 1 sampai 100. Coba Tebak.
Masukkan tebakan ke-1:> 18
Itu terlalu besar. Coba lagi.
Masukkan tebakan ke-2:> 52
Itu terlalu besar. Coba lagi.
Masukkan tebakan ke-3:> 57
Itu terlalu besar. Coba lagi.
Masukkan tebakan ke-4:> 15
Itu terlalu besar. Coba lagi.
Masukkan tebakan ke-5:> 10
benar
>>>
```

12.py - C:\Python34\MODUL1\12.py (3.4.2)

File Edit Format Run Options Windows 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("benar")
        break
```

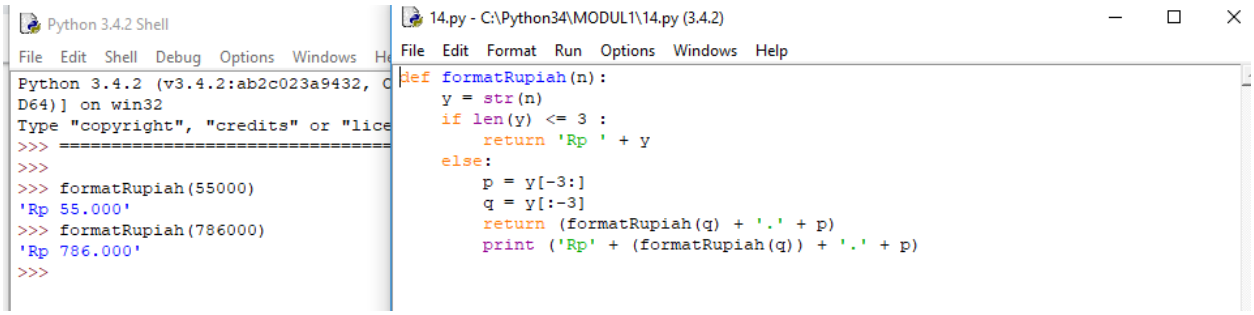
13.



```
*Python 3.4.2 Shell*
File  Edit  Shell  Debug  Options  Windows  Help
Python 3.4.2 (v3.4.2:ab2c023a9432, Oct  6 2014, 22:16:31) [MSC v.1
D64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>> ================================ RESTART ================================
>>>
 Masukkan angka dari 1 sd 1.000.000.000: 800000
Delapan  Ratus  Ribu  Rupiah
 Masukkan angka dari 1 sd 1.000.000.000: 10000000
Sepuluh  Juta  Rupiah
 Masukkan angka dari 1 sd 1.000.000.000:
```

```
13.py - C:\Python34\MODUL1\13.py (3.4.2)
File  Edit  Format  Run  Options  Windows  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')
```

14.



```
Python 3.4.2 Shell
File  Edit  Shell  Debug  Options  Windows  He
Python 3.4.2 (v3.4.2:ab2c023a9432, O
D64)] on win32
Type "copyright", "credits" or "lice
>>> ================================
>>>
>>> formatRupiah(55000)
'Rp 55.000'
>>> formatRupiah(786000)
'Rp 786.000'
>>>
```

```
14.py - C:\Python34\MODUL1\14.py (3.4.2)
File  Edit  Format  Run  Options  Windows  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)
```