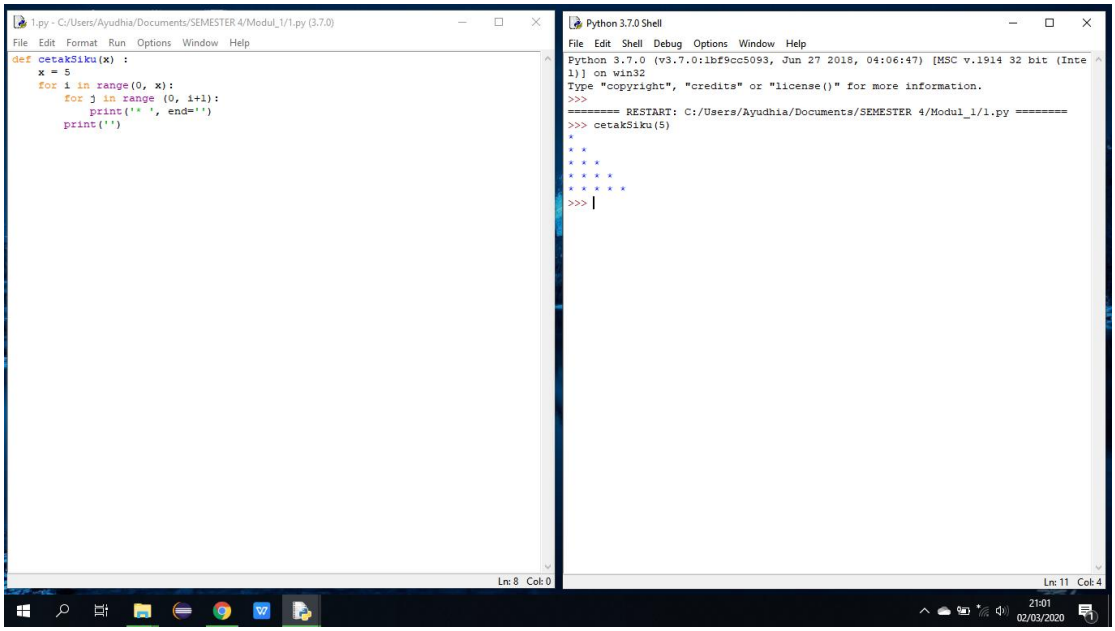
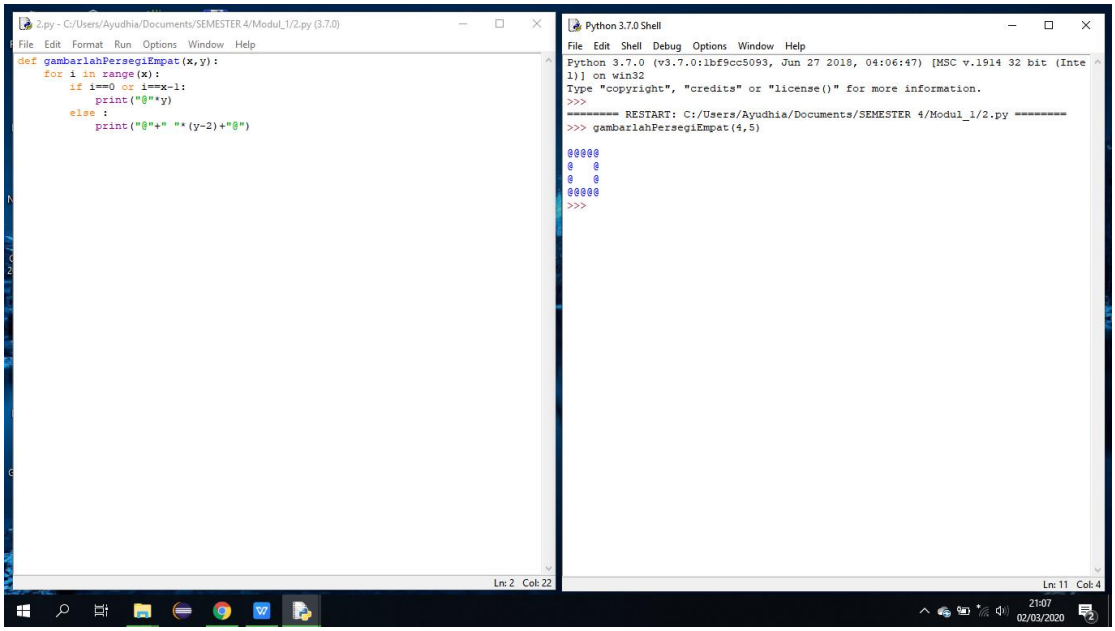
Nama : Ayudhia Isnafiani Fanada
NIM : L200180095
Kelas : D

ALGORITMA DAN STRUKTUR DATA
MODUL 1

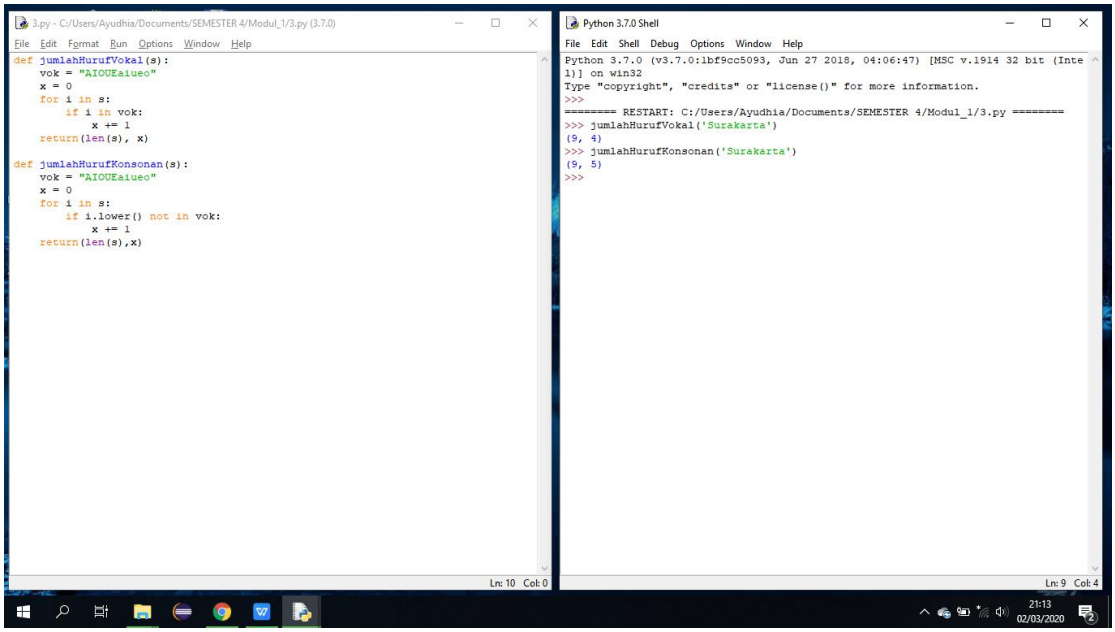
1.



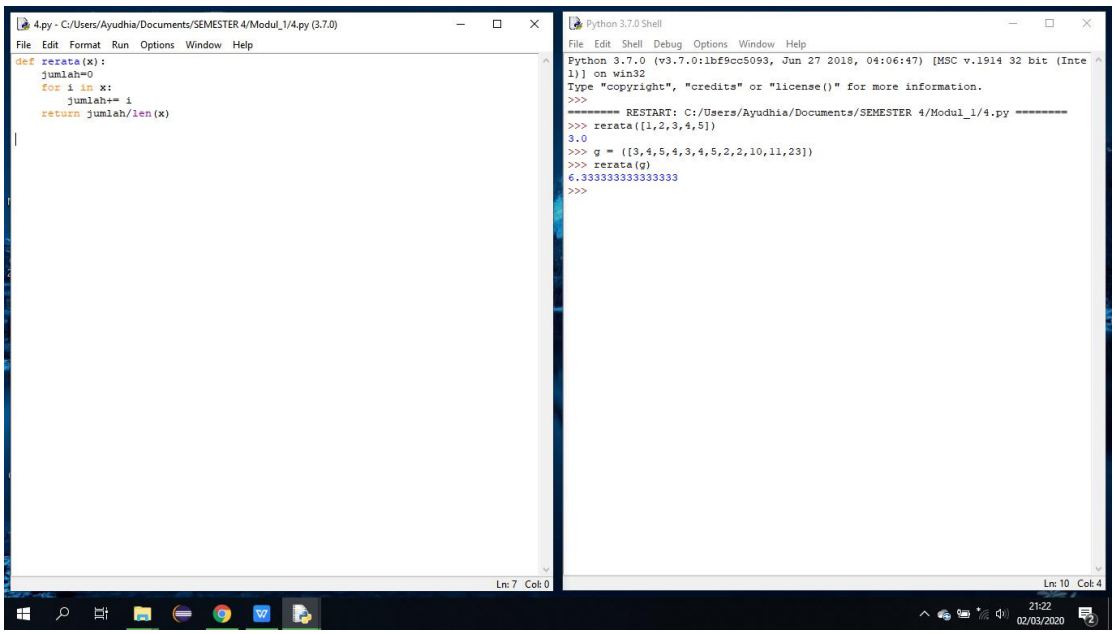
2.



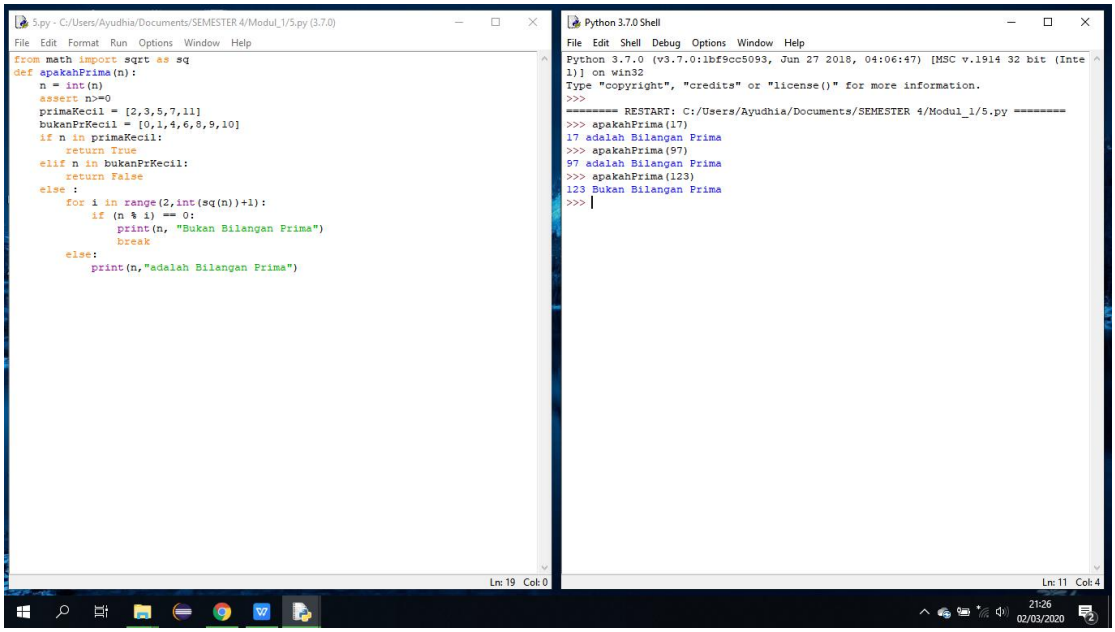
3.


3.py - C:/Users/Ayudhia/Documents/SEMESTER 4/Modul_1/3.py (3.7.0)
File Edit Format Run Options Window Help
def jumlahHurufVokal(s):
vok = "AIOUEaiueo"
x = 0
for i in s:
if i in vok:
x += 1
return(len(s), x)
def jumlahHurufKonsonan(s):
vok = "AIOUEaiueo"
x = 0
for i in s:
if i.lower() not in vok:
x += 1
return(len(s),x)
Ln: 10 Col: 0
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:06:47) [MSC v.1914 32 bit (Inte
l)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
======== RESTART: C:/Users/Ayudhia/Documents/SEMESTER 4/Modul_1/3.py ========
>>> jumlahHurufVokal('Surakarta')
(9, 4)
>>> jumlahHurufKonsonan('Surakarta')
(9, 5)
>>>
Ln: 9 Col: 4
21:13
02/03/2020

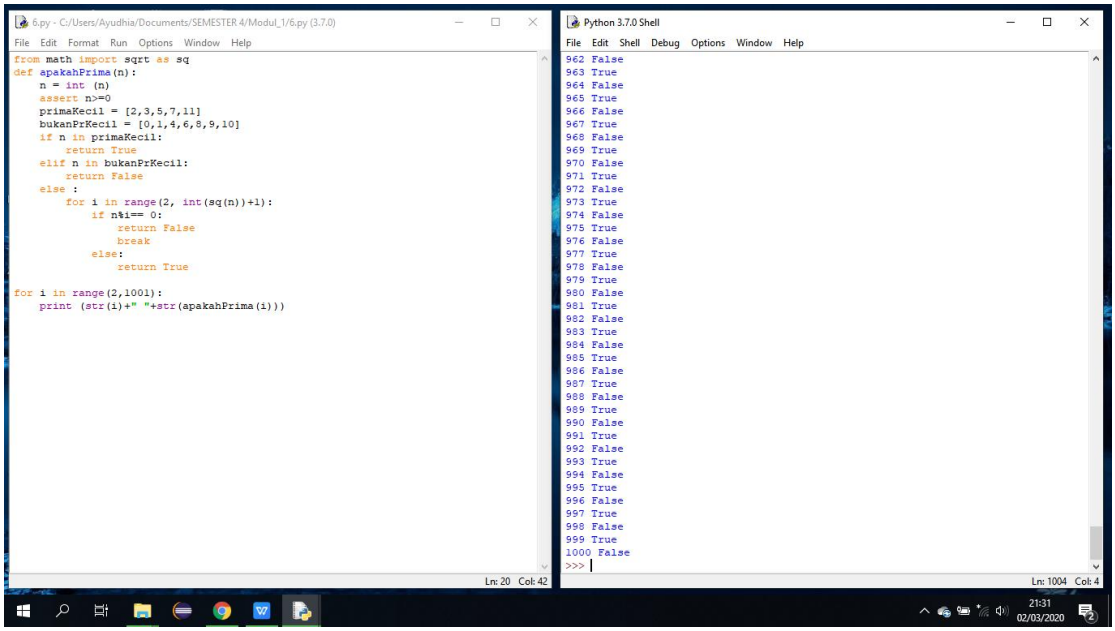
4.


4.py - C:/Users/Ayudhia/Documents/SEMESTER 4/Modul_1/4.py (3.7.0)
File Edit Format Run Options Window Help
def rerata(x):
jumlah=0
for i in x:
jumlah+= i
return jumlah/len(x)
Ln: 7 Col: 0
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:06:47) [MSC v.1914 32 bit (Inte
l)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
======== RESTART: C:/Users/Ayudhia/Documents/SEMESTER 4/Modul_1/4.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
>>>
Ln: 10 Col: 4
21:22
02/03/2020

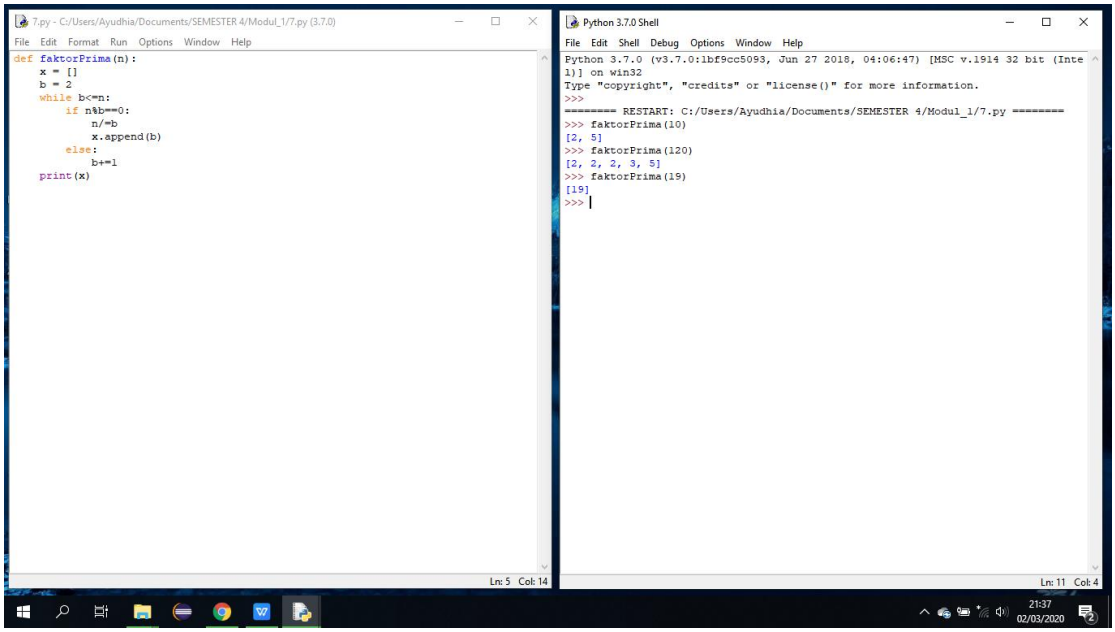
5.


5.py - C:/Users/Ayudhia/Documents/SEMESTER 4/Modul_1/5.py (3.7.0)
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 % i) == 0:
print(n, "Bukan Bilangan Prima")
break
else:
print(n,"adalah Bilangan Prima")
Ln: 19 Col: 0
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:06:47) [MSC v.1914 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
======== RESTART: C:/Users/Ayudhia/Documents/SEMESTER 4/Modul_1/5.py ========
>>> apakahPrima(17)
17 adalah Bilangan Prima
>>> apakahPrima(97)
97 adalah Bilangan Prima
>>> apakahPrima(123)
123 Bukan Bilangan Prima
>>>
Ln: 11 Col: 4
21:26
02/03/2020

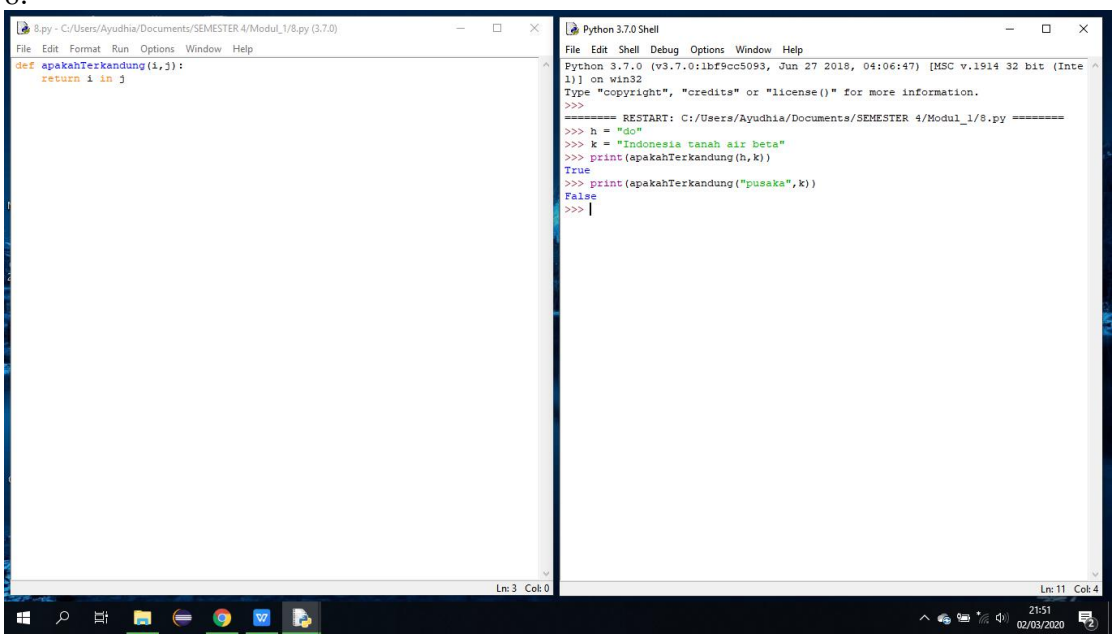
6.


6.py - C:/Users/Ayudhia/Documents/SEMESTER 4/Modul_1/6.py (3.7.0)
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%i== 0:
return False
break
else:
return True
for i in range(2,1001):
print (str(i)+" "+str(apakahPrima(i)))
Ln: 20 Col: 42
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
962 False
963 True
964 False
965 True
966 False
967 True
968 False
969 True
970 False
971 True
972 False
973 True
974 False
975 True
976 False
977 True
978 False
979 True
980 False
981 True
982 False
983 True
984 False
985 True
986 False
987 True
988 False
989 True
990 False
991 True
992 False
993 True
994 False
995 True
996 False
997 True
998 False
999 True
1000 False
>>>
Ln: 1004 Col: 4
21:31
02/03/2020

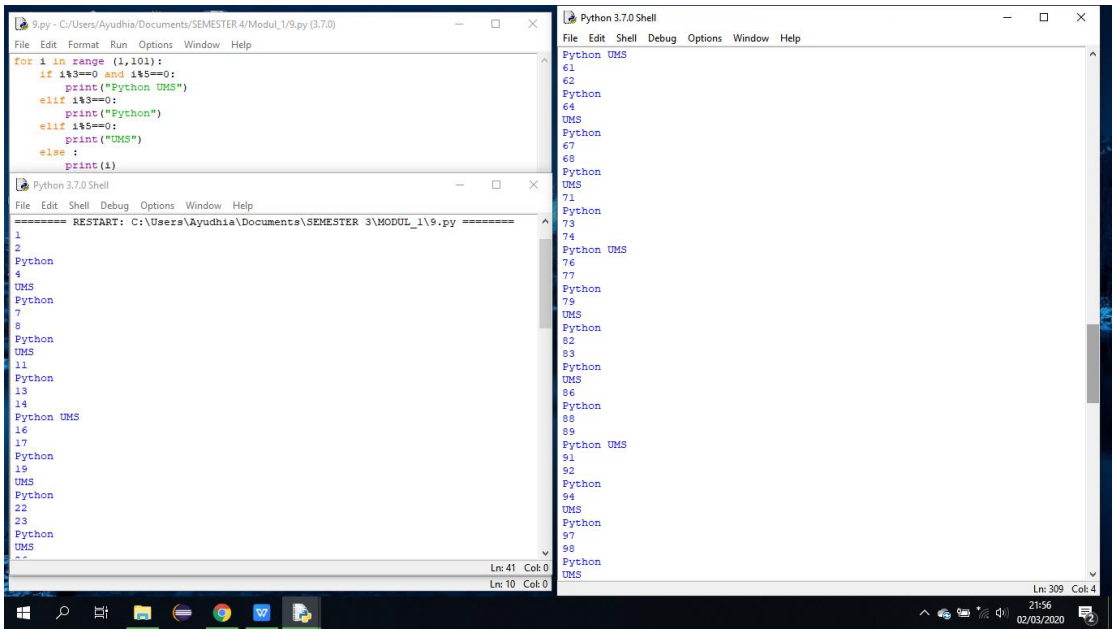
7.


7.py - C:/Users/Ayudhia/Documents/SEMESTER 4/Modul_1/7.py (3.7.0)
File Edit Format Run Options Window Help
def faktorPrima(n):
x = []
b = 2
while b<=n:
if n%b==0:
n/=b
x.append(b)
else:
b+=1
print(x)
Ln: 5 Col: 14
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:06:47) [MSC v.1914 32 bit (Inte
l)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
======== RESTART: C:/Users/Ayudhia/Documents/SEMESTER 4/Modul_1/7.py ========
>>> faktorPrima(10)
[2, 5]
>>> faktorPrima(120)
[2, 2, 2, 3, 5]
>>> faktorPrima(19)
[19]
>>>
Ln: 11 Col: 4
21:37
02/03/2020

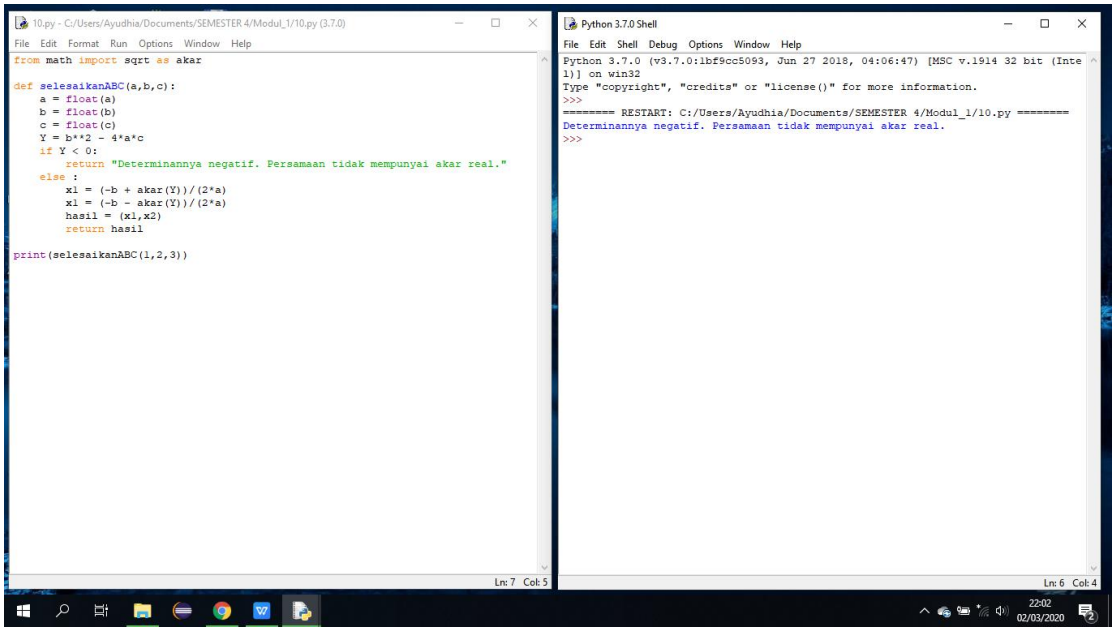
8.


8.py - C:/Users/Ayudhia/Documents/SEMESTER 4/Modul_1/8.py (3.7.0)
File Edit Format Run Options Window Help
def apakahTerkandung(i,j):
return i in j
Ln: 3 Col: 0
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:06:47) [MSC v.1914 32 bit (Inte
l)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
======== RESTART: C:/Users/Ayudhia/Documents/SEMESTER 4/Modul_1/8.py ========
>>> h = "do"
>>> k = "Indonesia tanah air beta"
>>> print(apakahTerkandung(h,k))
True
>>> print(apakahTerkandung("pusaka",k))
False
>>>
Ln: 11 Col: 4
21:51
02/03/2020

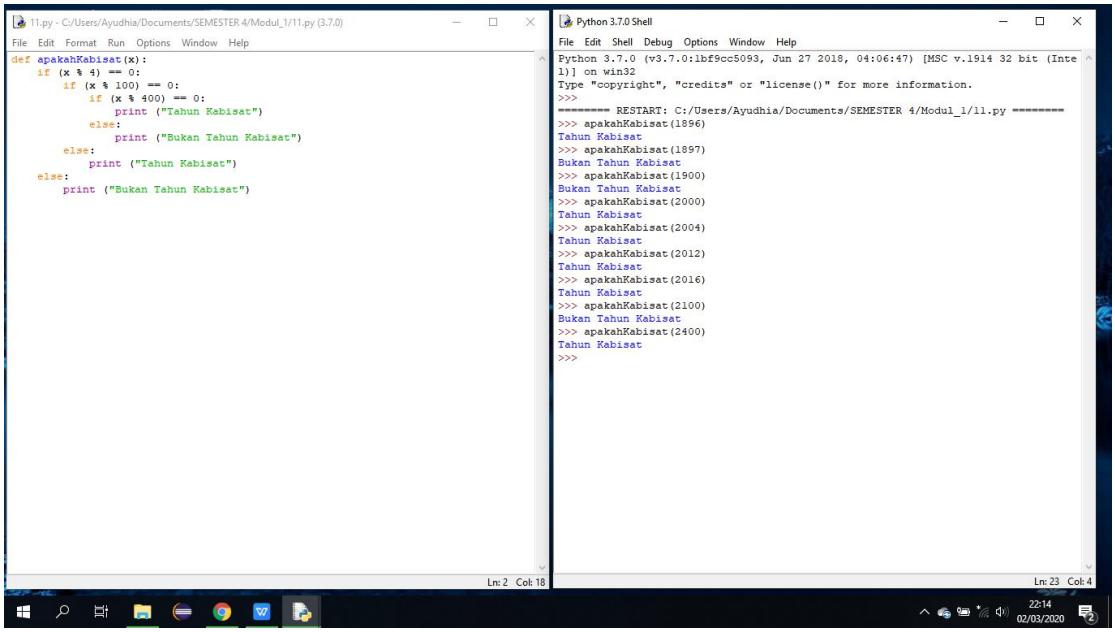
9.


9.py - C:/Users/Ayudhia/Documents/SEMESTER 4/Modul_1/9.py (3.7.0)
File Edit Format Run Options Window Help
for i in range (1,101):
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)
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
======== RESTART: C:\Users\Ayudhia\Documents\SEMESTER 3\MODUL_1\9.py ========
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
Ln: 41 Col: 0
Ln: 10 Col: 0
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python UMS
61
62
Python
64
UMS
Python
67
68
Python
UMS
71
Python
73
74
Python UMS
76
77
Python
79
UMS
Python
82
83
Python
UMS
86
Python
88
89
Python UMS
91
92
Python
94
UMS
Python
97
98
Python
UMS
Ln: 309 Col: 4
21:56
02/03/2020

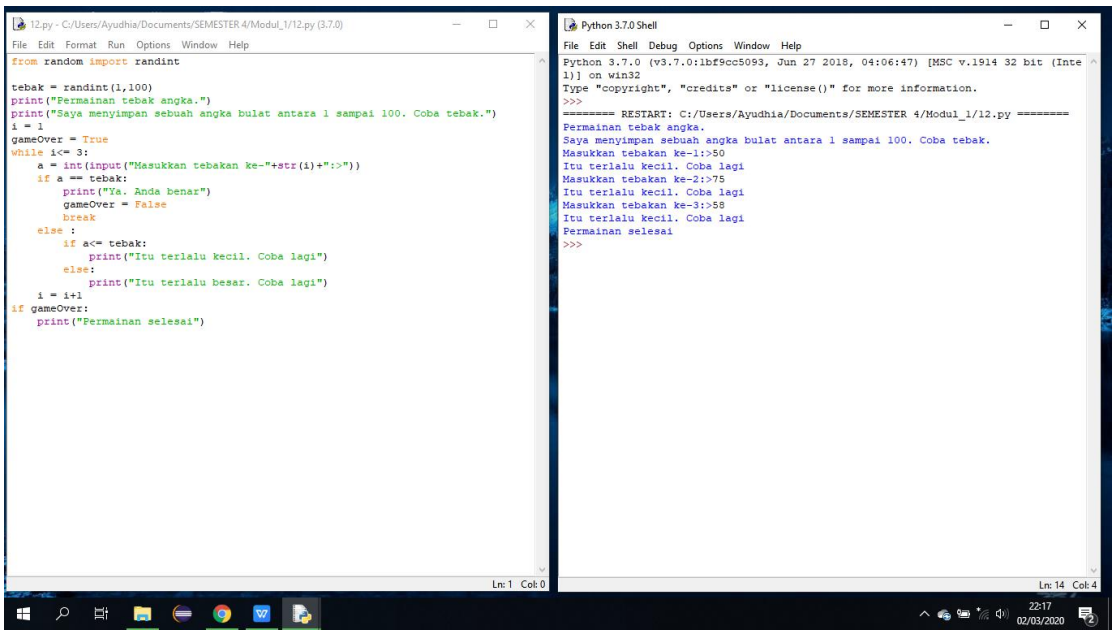
10.


10.py - C:/Users/Ayudhia/Documents/SEMESTER 4/Modul_1/10.py (3.7.0)
File Edit Format Run Options Window Help
from math import sqrt as akar
def selesaikanABC(a,b,c):
a = float(a)
b = float(b)
c = float(c)
Y = b**2 - 4*a*c
if Y < 0:
return "Determinannya negatif. Persamaan tidak mempunyai akar real."
else :
x1 = (-b + akar(Y))/(2*a)
x1 = (-b - akar(Y))/(2*a)
hasil = (x1,x2)
return hasil
print(selesaikanABC(1,2,3))
Ln: 7 Col: 5
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:06:47) [MSC v.1914 32 bit (Inte
l)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
======== RESTART: C:/Users/Ayudhia/Documents/SEMESTER 4/Modul_1/10.py ========
Determinannya negatif. Persamaan tidak mempunyai akar real.
>>>
Ln: 6 Col: 4
22:02
02/03/2020

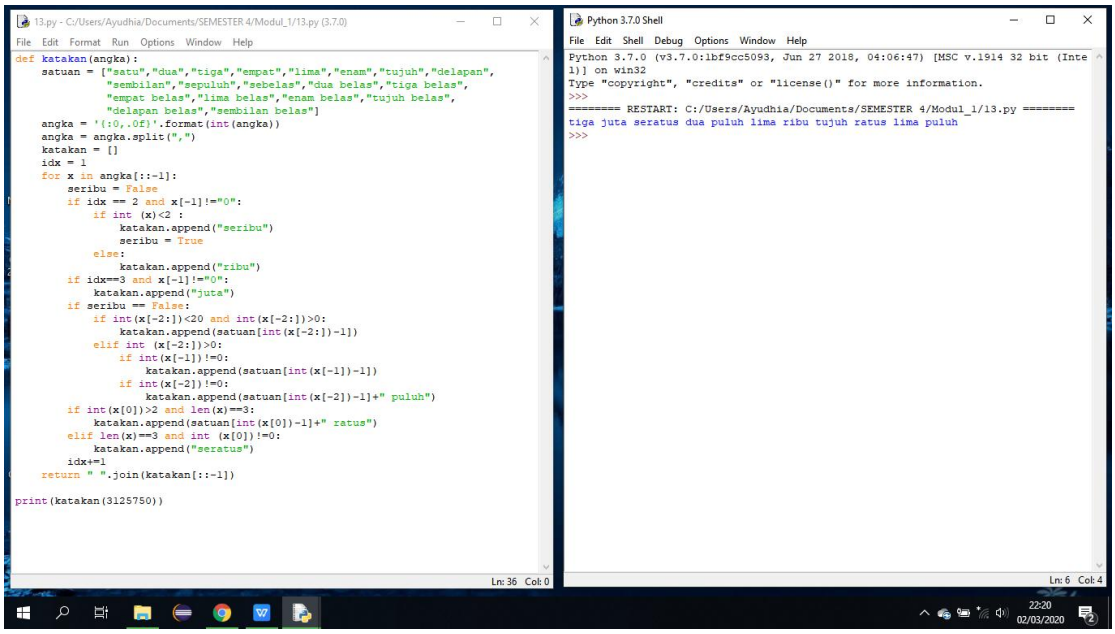
11.


11.py - C:/Users/Ayudhia/Documents/SEMESTER 4/Modul_1/11.py (3.7.0)
File Edit Format Run Options Window Help
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")
Ln: 2 Col: 18
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:06:47) [MSC v.1914 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
======== RESTART: C:/Users/Ayudhia/Documents/SEMESTER 4/Modul_1/11.py ========
>>> apakahKabisat(1896)
Tahun Kabisat
>>> apakahKabisat(1897)
Bukan Tahun Kabisat
>>> apakahKabisat(1900)
Bukan Tahun Kabisat
>>> apakahKabisat(2000)
Tahun Kabisat
>>> apakahKabisat(2004)
Tahun Kabisat
>>> apakahKabisat(2012)
Tahun Kabisat
>>> apakahKabisat(2016)
Tahun Kabisat
>>> apakahKabisat(2100)
Bukan Tahun Kabisat
>>> apakahKabisat(2400)
Tahun Kabisat
>>>
Ln: 23 Col: 4
22:14
02/03/2020

12.


12.py - C:/Users/Ayudhia/Documents/SEMESTER 4/Modul_1/12.py (3.7.0)
File Edit Format Run Options Window Help
from random import randint
tebak = randint(1,100)
print("Permainan tebak angka.")
print("Saya menyimpan sebuah angka bulat antara 1 sampai 100. Coba tebak.")
i = 1
gameOver = True
while i<= 3:
a = int(input("Masukkan tebakan ke-"+str(i)+":>"))
if a == tebak:
print("Ya. Anda benar")
gameOver = False
break
else :
if a<= tebak:
print("Itu terlalu kecil. Coba lagi")
else:
print("Itu terlalu besar. Coba lagi")
i = i+1
if gameOver:
print("Permainan selesai")
Ln: 1 Col: 0
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:06:47) [MSC v.1914 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
======== RESTART: C:/Users/Ayudhia/Documents/SEMESTER 4/Modul_1/12.py ========
Permainan tebak angka.
Saya menyimpan sebuah angka bulat antara 1 sampai 100. Coba tebak.
Masukkan tebakan ke-1:>50
Itu terlalu kecil. Coba lagi
Masukkan tebakan ke-2:>75
Itu terlalu kecil. Coba lagi
Masukkan tebakan ke-3:>58
Itu terlalu kecil. Coba lagi
Permainan selesai
>>>
Ln: 14 Col: 4
22:17
02/03/2020

13.

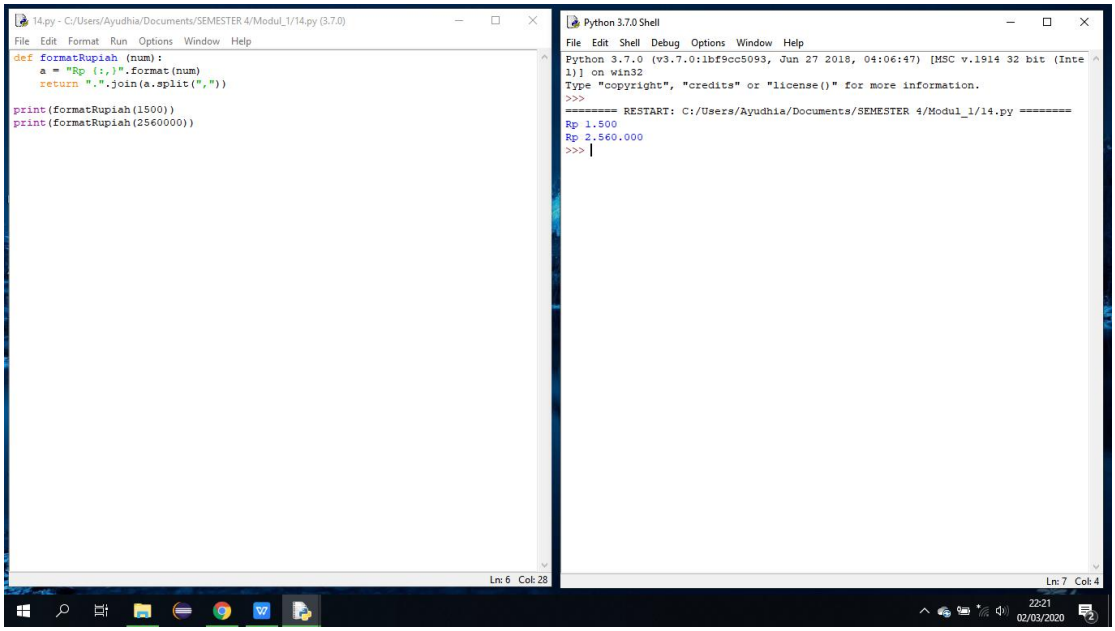


```
13.py - C:/Users/Ayudhia/Documents/SEMESTER 4/Modul_1/13.py (3.7.0)
File  Edit  Format  Run  Options  Window  Help
def katakan(angka):
    satuan = ["satu","dua","tiga","empat","lima","enam","tujuh","delapan",
              "sembilan","sepuluh","sebelas","dua belas","tiga belas",
              "empat belas","lima belas","enam belas","tujuh belas",
              "delapan belas","sembilan belas"]
    angka = '{:0,.0f}'.format(int(angka))
    angka = angka.split(",")
    katakan = []
    idx = 1
    for x in angka[::-1]:
        seribu = False
        if idx == 2 and x[-1]!="0":
            if int (x)<2 :
                katakan.append("seribu")
                seribu = True
            else:
                katakan.append("ribu")
        if idx==3 and x[-1]!="0":
            katakan.append("juta")
        if seribu == False:
            if int(x[-2:])<20 and int(x[-2:])>0:
                katakan.append(satuan[int(x[-2:])-1])
            elif int (x[-2:])>0:
                if int(x[-1])!=0:
                    katakan.append(satuan[int(x[-1])-1])
                if int(x[-2])!=0:
                    katakan.append(satuan[int(x[-2])-1]+" puluh")
        if int(x[0])>2 and len(x)==3:
            katakan.append(satuan[int(x[0])-1]+" ratus")
        elif len(x)==3 and int (x[0])!=0:
            katakan.append("seratus")
        idx+=1
    return " ".join(katakan[::-1])

print(katakan(3125750))
Ln: 36  Col: 0
```

```
Python 3.7.0 Shell
File  Edit  Shell  Debug  Options  Window  Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:06:47) [MSC v.1914 32 bit (Inte
l)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
======== RESTART: C:/Users/Ayudhia/Documents/SEMESTER 4/Modul_1/13.py ========
tiga juta seratus dua puluh lima ribu tujuh ratus lima puluh
>>>
Ln: 6  Col: 4
```

14.



```
14.py - C:/Users/Ayudhia/Documents/SEMESTER 4/Modul_1/14.py (3.7.0)
File  Edit  Format  Run  Options  Window  Help
def formatRupiah (num):
    a = "Rp {:,}".format(num)
    return ".".join(a.split(","))

print(formatRupiah(1500))
print(formatRupiah(2560000))
Ln: 6  Col: 28
```

```
Python 3.7.0 Shell
File  Edit  Shell  Debug  Options  Window  Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:06:47) [MSC v.1914 32 bit (Inte
l)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
======== RESTART: C:/Users/Ayudhia/Documents/SEMESTER 4/Modul_1/14.py ========
Rp 1.500
Rp 2.560.000
>>>
Ln: 7  Col: 4
```