

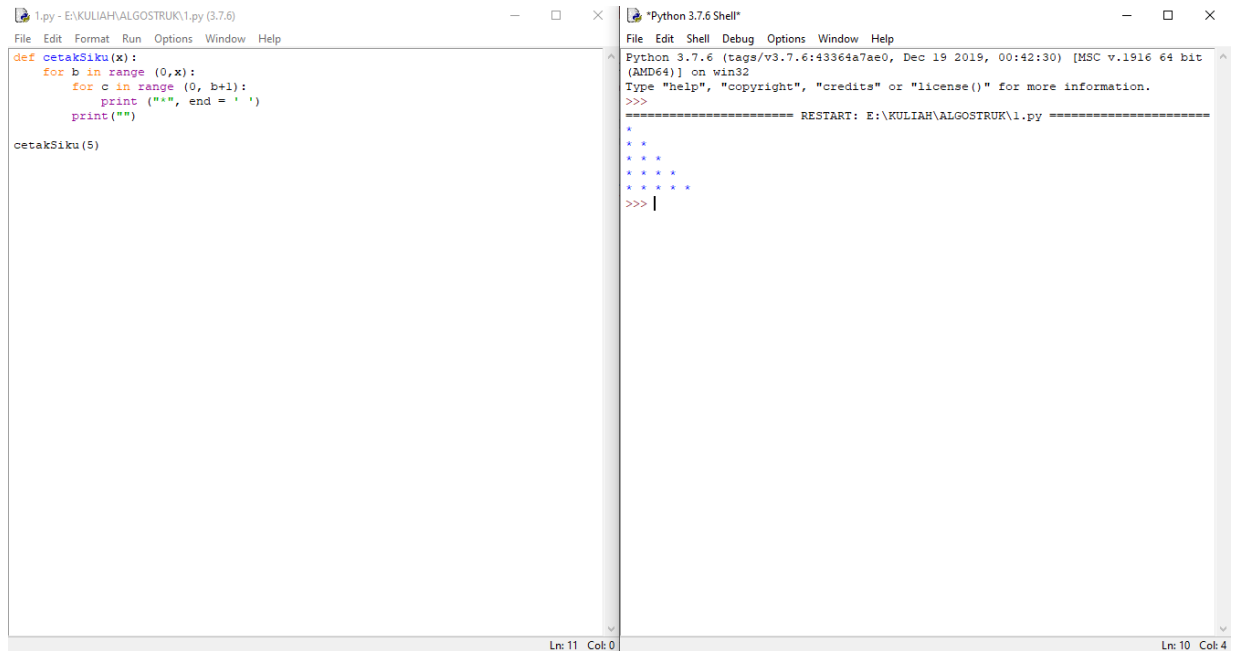
Lembar Kerja Modul 1

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Tanggal Praktikum : 26 Februari 2020

1.



```
1.py - E:\KULIAH\ALGOSTRUK\1.py (3.7.6)
File Edit Format Run Options Window Help

def cetakSiku(x):
    for b in range(0,x):
        for c in range(0,b+1):
            print("x", end=' ')
        print("")
    cetakSiku(5)

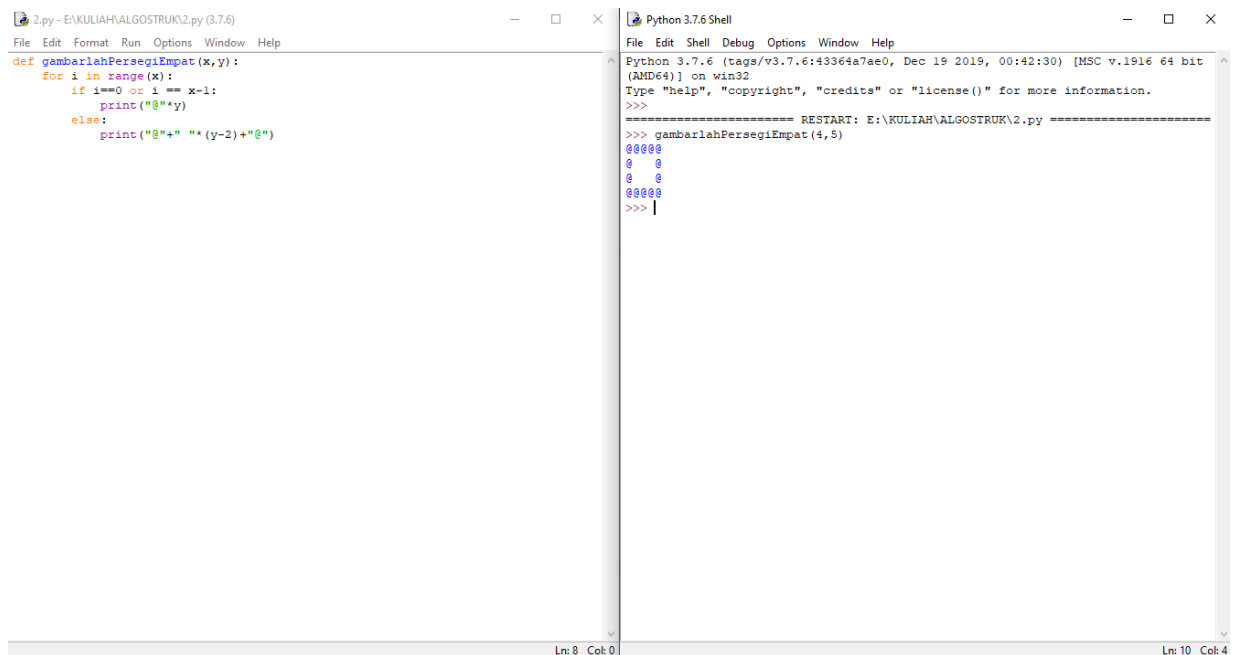
Ln: 11 Col: 0
```

```
Python 3.7.6 Shell
File Edit Shell Debug Options Window Help

Python 3.7.6 (tags/v3.7.6:43364a7ae0, Dec 19 2019, 00:42:30) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: E:\KULIAH\ALGOSTRUK\1.py =====
>>>
x
x x
x x x
x x x x
x x x x x
>>> |

Ln: 10 Col: 4
```

2.



```
2.py - E:\KULIAH\ALGOSTRUK\2.py (3.7.6)
File Edit Format Run Options Window Help

def gambarlahPersegiEmpat(x,y):
    for i in range(x):
        if i==0 or i==x-1:
            print("0"*y)
        else:
            print("0"+" "*(y-2)+"0")

Ln: 8 Col: 0
```

```
Python 3.7.6 Shell
File Edit Shell Debug Options Window Help

Python 3.7.6 (tags/v3.7.6:43364a7ae0, Dec 19 2019, 00:42:30) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: E:\KULIAH\ALGOSTRUK\2.py =====
>>> gambarlahPersegiEmpat(4,5)
00000
0 0
0 0
00000
>>> |

Ln: 10 Col: 4
```

3. (a)

The screenshot shows a Python 3.7.6 IDE with two windows. The left window, titled '3b.py - E:\KULIAH\ALGOSTRUK\3b.py (3.7.6)', contains the following code:

```
def jumlahHurufVokal(b):  
    a="aiueoAIUEO"  
    x=0  
    for i in b:  
        if i in a : #if i not in a:  
            x+=1  
    print(len(b),x)
```

The right window, titled 'Python 3.7.6 Shell', shows the execution of the script. It displays the Python version and architecture information, followed by a restart message and the execution of the function:

```
>>> k = jumlahHurufVokal("Surakarta")  
9 4  
>>> |
```

The status bar at the bottom indicates 'Ln: 47 Col: 0' for the editor and 'Ln: 7 Col: 4' for the shell.

(b)

The screenshot shows a Python 3.7.6 IDE with two windows. The left window, titled '3b.py - E:\KULIAH\ALGOSTRUK\3b.py (3.7.6)', contains the following code:

```
def jumlahHurufKonsonan(c):  
    a="bcdfghjklmnpqrstvwxyzBCDFGHJKLMNPQRSTVWXYZ"  
    x=0  
    for i in c:  
        if i in a :  
            x+=1  
    print(len(c),x)  
  
#jumlahHurufKonsonan("Surakarta")
```

The right window, titled 'Python 3.7.6 Shell', shows the execution of the script. It displays the Python version and architecture information, followed by a restart message and the execution of the function:

```
>>> k = jumlahHurufKonsonan('Surakarta')  
9 5  
>>> |
```

The status bar at the bottom indicates 'Ln: 27 Col: 0' for the editor and 'Ln: 7 Col: 4' for the shell.

4.

The screenshot shows a Python 3.7.6 IDE with two windows. The left window, titled "3b.py - E:\KULIAH\ALGOSTRUK\3b.py (3.7.6)", contains the following code:

```
def rerata(b):
    k = 0
    for i in (b):
        k+=1
    hasil = k / len(b)
    return hasil
```

The right window, titled "Python 3.7.6 Shell", shows the execution output:

```
Python 3.7.6 (tags/v3.7.6:43364a7ae0, Dec 19 2019, 00:42:30) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: E:\KULIAH\ALGOSTRUK\3b.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.

The screenshot shows a Python 3.7.6 IDE with two windows. The left window, titled "3b.py - E:\KULIAH\ALGOSTRUK\3b.py (3.7.6)", contains the following code:

```
from math import sqrt as sq
def apakahPrima(n):
    n = int(n)
    assert n>=0
    primaKecil = [2,3,5,7,11]
    bukanPrKecil = [0,1,4,6,7,8,10]
    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")
#apakahPrima(71)
```

The right window, titled "Python 3.7.6 Shell", shows the execution output:

```
Python 3.7.6 (tags/v3.7.6:43364a7ae0, Dec 19 2019, 00:42:30) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: E:\KULIAH\ALGOSTRUK\3b.py =====
>>> apakahPrima(17)
17 adalah bilangan prima
>>> apakahPrima(97)
97 adalah bilangan prima
>>> apakahPrima(123)
123 bukan bilangan prima
>>> apakahPrima(82)
82 bukan bilangan prima
>>>
```

6.

The screenshot shows a Python 3.7.6 IDE with two windows. The left window, titled "3b.py - E:\KULIAH\ALGOSTRUK\3b.py (3.7.6)", contains the following code:

```
for i in range(2,1000):
    if i > 1:
        for k in range(2,i):
            if (i % k) == 0:
                break
        else:
            print(i)
```

The right window, titled "Python 3.7.6 Shell", shows the execution output, listing prime numbers from 2 to 173:

```
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
```

7.

The screenshot shows a Python 3.7.6 IDE with a script named `7kebawah.py`. The script defines a function `faktorPrima(m)` that returns the prime factors of `m`. The function uses a while loop to divide `m` by its smallest prime factor until it becomes 1, appending each factor to a list. The IDE's Python Shell shows the execution of the function for `m=10`, `m=120`, and `m=19`, resulting in the outputs `[2, 5]`, `[2, 2, 2, 3, 5]`, and `[19]` respectively.

```
def faktorPrima(m):
    faktor=[]
    loop=2
    while loop<=m:
        if m%loop==0:
            m/=loop
            faktor.append(loop)
        else:
            loop+=1
    return faktor

>>> faktorPrima(10)
[2, 5]
>>> faktorPrima(120)
[2, 2, 2, 3, 5]
>>> faktorPrima(19)
[19]
>>>
```

8.

The screenshot shows a Python 3.7.6 IDE with a script named `7kebawah.py`. The script defines a function `apakahTerkandung(a,b)` that checks if string `a` is a substring of string `b`. The function uses a for loop to iterate over each character in `a` and checks if it is present in `b`. The IDE's Python Shell shows the execution of the function for `a='do'` and `b='Indonesia tanah air beta'`, resulting in the output `True`, and for `a='pusaka'` and `b='Indonesia tanah air beta'`, resulting in the output `False`.

```
def apakahTerkandung(a,b):
    for h in a:
        if h in b:
            return True
        else:
            return False

>>> h = 'do'
>>> k = 'Indonesia tanah air beta'
>>> apakahTerkandung(h,k)
True
>>> apakahTerkandung('pusaka',k)
False
>>>
```

9.

```

File Edit Format Run Options Window Help
def rubah35():
    x = 1
    y = 100
    for i in range(x, y+1):
        if (i % 3) == 0:
            print("Python")
        elif (i % 5) == 0:
            print("UMS")
        elif (i % 3) == 0 and (i % 5) == 0:
            print("Python UMS")
        else:
            print(i)

```

```

Python 3.7.6 Shell
File Edit Shell Debug Options Window Help
>>> rubah35()
1
2
Python
4
UMS
Python
7
8
Python
UMS
11
Python
13
14
Python
16
17
Python
19
UMS
Python
22
23
Python
UMS
26
Python
28
29
Python
31
32
Python
34
UMS
Python
37
38

```

10.

```

File Edit Format Run Options Window Help
from math import sqrt as sq
def selesaikanABC(a,b,c):
    a = float(a)
    b = float(b)
    c = float(c)
    D = (b**2) - (4*a*c)

    if D < 0:
        print("Determinannya negatif. Persamaan tidak mempunyai akar real")
    else:
        x1 = (-b + sq(D))/2*a
        x2 = (-b - sq(D))/2*a
        hasil = (x1, x2)
        return hasil

```

```

Python 3.7.6 Shell
File Edit Shell Debug Options Window Help
Python 3.7.6 (tags/v3.7.6:43364a7ae0, Dec 19 2019, 00:42:30) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: E:\KULIAH\ALGOSTRUK\7kebawah.py =====
>>> selesaikanABC(1,2,3)
Determinannya negatif. Persamaan tidak mempunyai akar real
>>> selesaikanABC(10,21,3)
(-15.417635664155416, -194.5823643358446)
>>>

```

11.

```

File Edit Format Run Options Window Help
def apakahKabisat(k):
    if (k % 4) == 0 and (k % 100) == 0 and (k % 400) != 0:
        print("Bukan tahun kabisat")
    elif (k % 4) == 0:
        print("Tahun kabisat")
    else:
        print("Bukan tahun kabisat")

```

```

Python 3.7.6 Shell
File Edit Shell Debug Options Window Help
Python 3.7.6 (tags/v3.7.6:43364a7ae0, Dec 19 2019, 00:42:30) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: E:\KULIAH\ALGOSTRUK\7kebawah.py =====
>>> apakahKabisat(1896)
Tahun Kabisat
>>> apakahKabisat(1897)
Bukan tahun kabisat
>>> apakahKabisat(1900)
Bukan tahun kabisat
>>> apakahKabisat(2000)
Tahun Kabisat
>>> apakahKabisat(2004)
Tahun Kabisat
>>> apakahKabisat(2008)
Tahun Kabisat
>>> apakahKabisat(2100)
Bukan tahun kabisat
>>> apakahKabisat(2200)
Bukan tahun kabisat
>>>

```

12.

```

7kebawah.py - E:\KULIAH\ALGOSTRUK\7kebawah.py (3.7.6)
File Edit Format Run Options Window Help

from random import randint
print("""Permainan tebak angka.
Saya menyimpan sebuah angka bulat antara 1 sampai 100. Coba Tebak!""")
a = randint(1, 100)
for i in range(3):
    b = int(input("Masukkan tebakan ke-{}:".format(i+1)))
    if b == a:
        print("Ya. Anda benar.")
    elif b > a:
        if i >= 2:
            print("Itu terlalu besar. Kesempatan habis. Nilainya adalah",a)
        else:
            print("Itu terlalu besar. Coba lagi")
    else:
        if i >= 2:
            print("Itu terlalu kecil. Kesempatan habis. Nilainya adalah",a)
        else:
            print("Itu terlalu kecil. Coba lagi")

Python 3.7.6 Shell
File Edit Shell Debug Options Window Help

Python 3.7.6 (tags/v3.7.6:43364a7ae0, Dec 19 2019, 00:42:30) [MSC v.1916 64 bit
(AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: E:\KULIAH\ALGOSTRUK\7kebawah.py =====
Permainan tebak angka.
Saya menyimpan sebuah angka bulat antara 1 sampai 100. Coba Tebak!
Masukkan tebakan ke-1:23
Itu terlalu besar. Coba lagi
Masukkan tebakan ke-2:12
Itu terlalu kecil. Coba lagi
Masukkan tebakan ke-3:18
Ya. Anda benar.
>>>
Ln: 61 Col: 43
Ln: 13 Col: 4

```

13.

```

7kebawah.py - E:\KULIAH\ALGOSTRUK\7kebawah.py (3.7.6)
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])

Python 3.7.6 Shell
File Edit Shell Debug Options Window Help

Python 3.7.6 (tags/v3.7.6:43364a7ae0, Dec 19 2019, 00:42:30) [MSC v.1916 64 bit
(AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: E:\KULIAH\ALGOSTRUK\7kebawah.py =====
>>> katakan(3125750)
'Tiga juta seratus Dua puluh Lima ribu Tujuh ratus Lima puluh'
>>> katakan(5129876)
'Lima juta seratus Dua puluh Sembilan ribu Delapan ratus Tujuh puluh Enam'
>>>
Ln: 81 Col: 16
Ln: 9 Col: 4

```

14.

```

7kebawah.py - E:\KULIAH\ALGOSTRUK\7kebawah.py (3.7.6)
File Edit Format Run Options Window Help

def formatRupiah(n):
    x = '{:,}'.format(n).replace(',', '.')
    return "Rp " + x

Python 3.7.6 Shell
File Edit Shell Debug Options Window Help

Python 3.7.6 (tags/v3.7.6:43364a7ae0, Dec 19 2019, 00:42:30) [MSC v.1916 64 bit
(AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: E:\KULIAH\ALGOSTRUK\7kebawah.py =====
>>> formatRupiah(1500)
'Rp 1.500'
>>> formatRupiah(2560000)
'Rp 2.560.000'
>>> formatRupiah(20)
'Rp 20'
>>>
(n)
Ln: 9 Col: 4

```