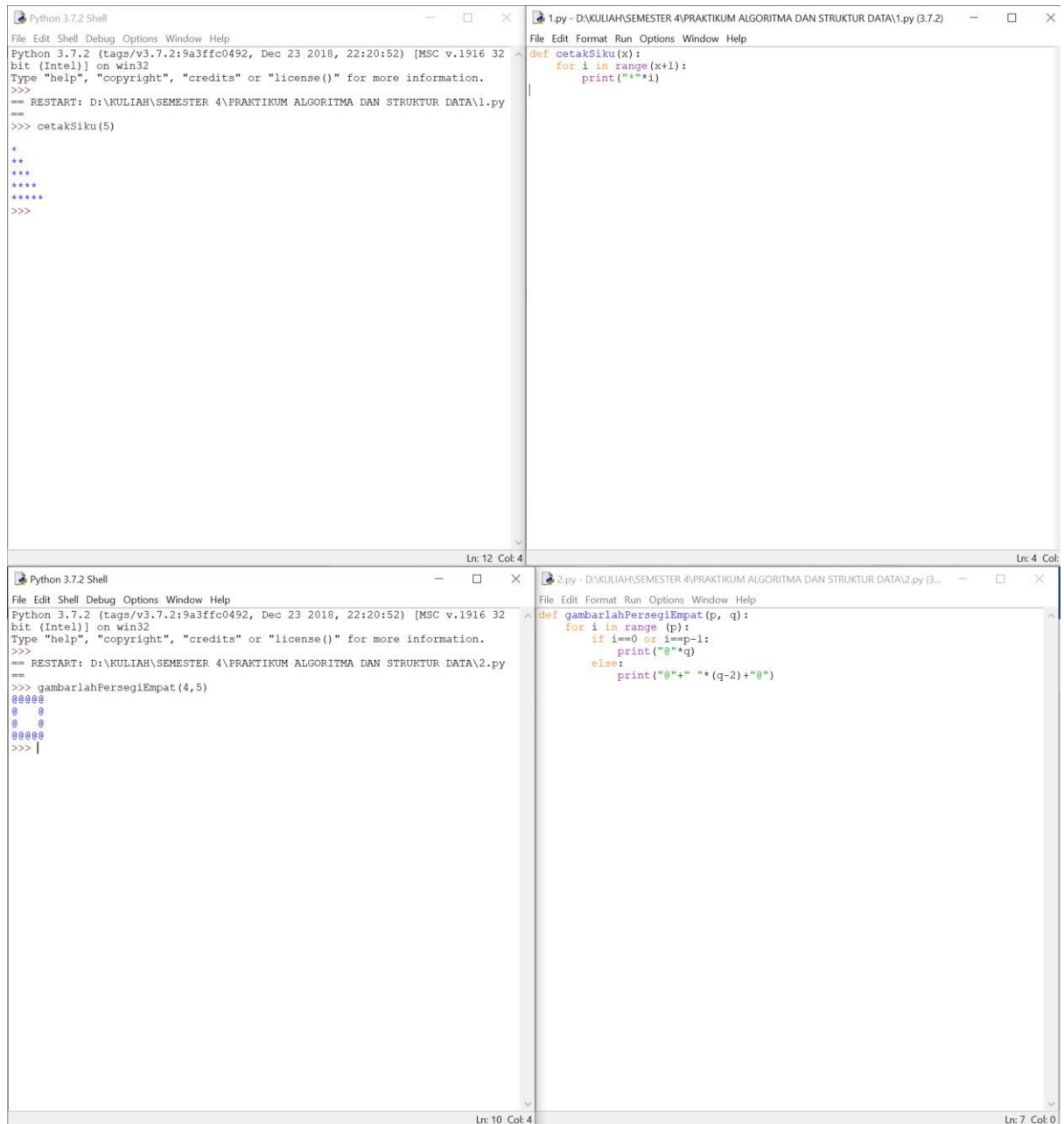


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Kelas : A

MODUL 1



The image shows two side-by-side screenshots of a Python 3.7.2 Shell environment. The top-left window shows the execution of a function named `cetakSiku` with the argument `5`. The output is a 5x5 grid of asterisks. The top-right window shows the definition of the `cetakSiku` function. The bottom-left window shows the execution of a function named `gambarlahPersegiEmpat` with the arguments `4` and `5`. The output is a 4x5 grid of characters, where the first three rows are composed of the character `@` and the last row is composed of the character `|`. The bottom-right window shows the definition of the `gambarlahPersegiEmpat` function.

```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32
bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
== RESTART: D:\KULIAH\SEMESTER 4\PRAKTIKUM ALGORITMA DAN STRUKTUR DATA\1.py
==
>>> cetakSiku(5)

*
**
***
****
*****
>>>
```

```
1.py - D:\KULIAH\SEMESTER 4\PRAKTIKUM ALGORITMA DAN STRUKTUR DATA\1.py (3.7.2)
File Edit Format Run Options Window Help
def cetakSiku(x):
    for i in range(x+1):
        print("*"*i)
|
```

```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32
bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
== RESTART: D:\KULIAH\SEMESTER 4\PRAKTIKUM ALGORITMA DAN STRUKTUR DATA\2.py
==
>>> gambarlahPersegiEmpat(4,5)
@@@@@
@  @
@  @
@@@@@
>>> |
```

```
2.py - D:\KULIAH\SEMESTER 4\PRAKTIKUM ALGORITMA DAN STRUKTUR DATA\2.py (3.7.2)
File Edit Format Run Options Window Help
def gambarlahPersegiEmpat(p, q):
    for i in range(p):
        if i==0 or i==p-1:
            print("@"*q)
        else:
            print("@"+" "*(q-2)+"@")
```

<pre>Python 3.7.2 Shell File Edit Shell Debug Options Window Help Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit (Intel)] on win32 Type "help", "copyright", "credits" or "license()" for more information. >>> == RESTART: D:\KULIAH\SEMESTER 4\PRAKTIKUM ALGORITMA DAN STRUKTUR DATA\3.py == >>> k=jumlahHurufVokal("Surakarta") >>> k (9, 4) >>> k=jumlahHurufKonsonan("Surakarta") >>> k (9, 5) >>> </pre>	<pre>3.py - D:\KULIAH\SEMESTER 4\PRAKTIKUM ALGORITMA DAN STRUKTUR DATA\3.py (3... File Edit Format Run Options Window Help def jumlahHurufVokal(huruf): jumlah = 0 vokal = ["a","i","u","e","o","A","I","E","O","U"] for i in huruf: if i in vokal: jumlah+=1 return len(huruf), jumlah def jumlahHurufKonsonan(huruf): jumlah = 0 konsonan = ["a","i","u","e","o","A","I","E","O","U"] for i in huruf: if i in konsonan: jumlah+=1 return len(huruf), len(huruf)-jumlah Ln: 11 Col: 4</pre>
<pre>Python 3.7.2 Shell File Edit Shell Debug Options Window Help Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit (Intel)] on win32 Type "help", "copyright", "credits" or "license()" for more information. >>> == RESTART: D:\KULIAH\SEMESTER 4\PRAKTIKUM ALGORITMA DAN STRUKTUR DATA\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 >>> </pre>	<pre>4.py - D:\KULIAH\SEMESTER 4\PRAKTIKUM ALGORITMA DAN STRUKTUR DATA\4.py (3.7.2) File Edit Format Run Options Window Help def rerata(b): jumlah = 0 for i in b: jumlah += i return (jumlah/len(b)) Ln: 5 Col: 2</pre>

```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32
bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>> == RESTART: D:\KULIAH\SEMESTER 4\PRAKTIKUM ALGORITMA DAN STRUKTUR DATA\5.py
>>> apakahPrima(17)
True
>>> apakahPrima(97)
True
>>> apakahPrima(123)
False
>>> |

5.py - D:\KULIAH\SEMESTER 4\PRAKTIKUM ALGORITMA DAN STRUKTUR DATA\5.py (3...
File Edit Format Run Options Window Help
from math import sqrt as sq
def apakahPrima(n):
    n = int(n)
    assert n>=0 #hanya menerima bilangan non-negatif
    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
            return True

Ln: 11 Col: 4
Ln: 15 Col: 19
```

```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
>>> True
961 True
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
>>>

6.py - D:\KULIAH\SEMESTER 4\PRAKTIKUM ALGORITMA DAN STRUKTUR DATA\6.py (3.7.2)
File Edit Format Run Options Window Help
from math import sqrt as sq
def apakahPrima(n):
    n = int(n)
    assert n>=0 #hanya menerima bilangan non-negatif
    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: 1004 Col: 4
Ln: 17 Col: 0
```

```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32
bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
== RESTART: D:\KULIAH\SEMESTER 4\PRAKTIKUM ALGORITMA DAN STRUKTUR DATA\7.py
==
>>> faktorPrima(10)
[2, 5]
>>> faktorPrima(120)
[2, 2, 2, 3, 5]
>>> faktorPrima(19)
[19]
>>> |

7.py - D:\KULIAH\SEMESTER 4\PRAKTIKUM ALGORITMA DAN STRUKTUR DATA\7.py (3.7.2)
File Edit Format Run Options Window Help
def faktorPrima(x):
    bilangan = []
    loop = 2
    while loop <= x:
        if x % loop == 0:
            x /= loop
            bilangan.append(loop)
        else:
            loop += 1
    return bilangan

Ln: 11 Col: 4Ln: 11 Col: 0
```

```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 3
2 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
== RESTART: D:\KULIAH\SEMESTER 4\PRAKTIKUM ALGORITMA DAN STRUKTUR DATA\8.p
y ==
>>> h = "do"
>>> k = "Indonesia tanah air beta"
>>> apakahTerkandung(h, k)
True
>>> apakahTerkandung("pusaka", k)
False
>>> |

8.py - D:\KULIAH\SEMESTER 4\PRAKTIKUM ALGORITMA DAN STRUKTUR DATA\8.py (3.7.2)
File Edit Format Run Options Window Help
def apakahTerkandung(a,b):
    return a in b

Ln: 11 Col: 4Ln: 3 Col: 0
```

<pre>Python 3.7.2 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 >>> </pre>	<pre>9.py - D:\KULIAH\SEMESTER 4\PRAKTIKUM ALGORITMA DAN STRUKTUR DATA\9.py (3... File Edit Format Run Options Window Help 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)</pre>
<pre>Type "help", "copyright", "credits" or "license()" for more information. >>> = RESTART: D:\KULIAH\SEMESTER 4\PRAKTIKUM ALGORITMA DAN STRUKTUR DATA\10.py = >>> selesaikanABC(1,2,3) Determinannya negatif. Persamaan tidak mempunyai akar real. >>> </pre>	<pre>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 + akar(D))/(2*a) x2 = (-b - akar(D))/(2*a) hasil = (x1,x2) return hasil</pre>
<pre>Ln: 104 Col: 4</pre>	<pre>Ln: 1 Col: 0</pre>
<pre>Ln: 7 Col: 4</pre>	<pre>Ln: 14 Col: 0</pre>

<pre>Python 3.7.2 Shell File Edit Shell Debug Options Window Help Python 3.7.2 (tags/v3.7.2:9a3ffe0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit (Intel)] on win32 Type "help", "copyright", "credits" or "license()" for more information. >>> = RESTART: D:\KULIAH\SEMESTER 4\PRAKTIKUM ALGORITMA DAN STRUKTUR DATA\11.py >>> apakahKabisat(1896) True >>> apakahKabisat(1897) False >>> apakahKabisat(1900) False >>> apakahKabisat(2000) True >>> apakahKabisat(2004) True >>> apakahKabisat(2100) False >>> apakahKabisat(2400) True >>> </pre>	<pre>11.py - D:\KULIAH\SEMESTER 4\PRAKTIKUM ALGORITMA DAN STRUKTUR DATA\11.py File Edit Format Run Options Window Help 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</pre>
<pre>>>> = RESTART: D:\KULIAH\SEMESTER 4\PRAKTIKUM ALGORITMA DAN STRUKTUR DATA\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:> 25 Itu terlalu besar. Coba lagi. Masukkan tebakan ke-4:> -3 Itu terlalu kecil. Coba lagi. Masukkan tebakan ke-5:> 50 Itu terlalu besar. Coba lagi. Masukkan tebakan ke-6:> 7 Itu terlalu besar. Coba lagi. Masukkan tebakan ke-7:> 8 Itu terlalu besar. Coba lagi. Masukkan tebakan ke-8:> 2 Ya. Anda benar >>> </pre>	<pre>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</pre>
Ln: 19 Col: 4	Ln: 9 Col: 0
Ln: 23 Col: 4	Ln: 26 Col: 0

```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32
bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: D:\KULIAH\SEMESTER 4\PRAKTIKUM ALGORITMA DAN STRUKTUR DATA\13.py
=
>>> katakan(3125750)
'Tiga Juta Seratus Dua Puluh Lima Ribu Tujuh Ratus Lima Puluh '
>>> |

Ln: 7 Col: 4

Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: D:\KULIAH\SEMESTER 4\PRAKTIKUM ALGORITMA DAN STRUKTUR DATA\14.py
=
>>> formatRupiah(1500)
'Rp 1.500'
>>> formatRupiah(2560000)
'Rp 2.560.000'
>>> |

Ln: 9 Col: 4

13.py - D:\KULIAH\SEMESTER 4\PRAKTIKUM ALGORITMA DAN STRUKTUR DATA\13.py (3.7.2)
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

if len(x) <= 3 :
    return 'Rp ' + x
else:
    p = x[-3:]
    q = x[:-3]
    return (formatRupiah(q) + '.' + p)
print ('Rp' + (formatRupiah(q) + '.' + p))

Ln: 27 Col: 0
```