

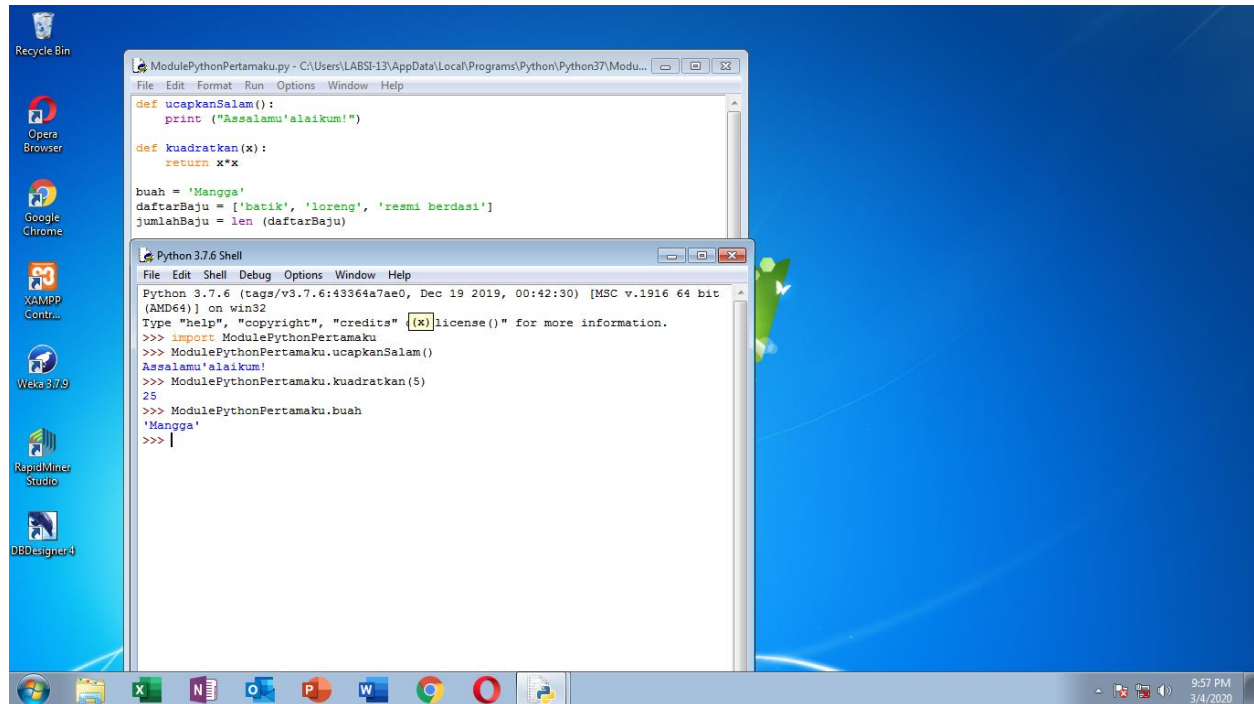
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Matkul : Praktikum Algoritma & Struktur Data

Modul 2

Latihan



The screenshot shows a Windows desktop with a blue background. On the left side, there is a vertical taskbar with icons for Recycle Bin, Opera Browser, Google Chrome, XAMPP Control Panel, Weka 3.7.9, RapidMiner Studio, and DBDesigner4. In the center, there are two windows. The top window is a text editor titled 'ModulePythonPertamaku.py' with the following code:

```
def ucapkanSalam():  
    print ("Assalamu'alaikum!")  
  
def kuadratkan(x):  
    return x*x  
  
buah = 'Mangga'  
daftarBaju = ['batik', 'loreng', 'resmi berdasi']  
jumlahBaju = len (daftarBaju)
```

The bottom window is a 'Python 3.7.6 Shell' with the following 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 (x)license() for more information.  
>>> import ModulePythonPertamaku  
>>> ModulePythonPertamaku.ucapkanSalam()  
Assalamu'alaikum!  
>>> ModulePythonPertamaku.kuadratkan(5)  
25  
>>> ModulePythonPertamaku.buah  
'Mangga'  
>>> |
```

The taskbar at the bottom shows icons for various applications including Excel, PowerPoint, Word, and Google Chrome, along with the system clock showing 9:57 PM on 3/4/2020.

```
ModulePythonPertamaku.py - C:\Users\LABSI-13\AppData\Local\Programs\Python\Python376\Python 3.7.6 Shell
File Edit Format Run Options Window Help

def ucapkanSalam():
    print("Assalamu'alaikum!")

def kuadratkan(x):
    return x*x

buah = 'Mangga'
daftarBaju = ['batik', 'loreng', 'resmi berdasi']
jumlahBaju = len(daftarBaju)

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.
>>> import ModulePythonPertamaku
>>> ModulePythonPertamaku.ucapkanSalam()
Assalamu'alaikum!
>>> ModulePythonPertamaku.kuadratkan(5)
25
>>> ModulePythonPertamaku.buah
'Mangga'
>>> import ModulePythonPertamaku as mpp
>>> mpp.ucapkanSalam()
Assalamu'alaikum!
>>> mpp.daftarBaju
['batik', 'loreng', 'resmi berdasi']
>>> mpp.jumlahBaju
5
>>> from ModulePythonPertamaku import kuadratkan, daftarBaju
>>> kuadratkan(6)
36
>>> daftarBaju
['batik', 'loreng', 'resmi berdasi']
>>> from ModulePythonPertamaku import ucapkanSalam as ucap
>>> ucap()
Assalamu'alaikum!
>>> dir()
['ModulePythonPertamaku', '__annotations__', '__builtins__', '__doc__', '__loader__', '__name__', '__package__', '__spec__', 'daftarBaju', 'kuadratkan', 'mpp', 'ucapkan']
>>> import math as m
>>> dir(m)
['__doc__', '__loader__', '__name__', '__package__', '__spec__', 'acos', 'acosh', 'asin', 'asinh', 'atan', 'atan2', 'atanh', 'ceil', 'copysign', 'cos', 'cosh', 'degrees', 'e', 'erf', 'erfc', 'exp', 'expm1', 'fabs', 'factorial', 'floor', 'fmod', 'frexp', 'fsum', 'gamma', 'gcd', 'hypot', 'inf', 'isclose', 'isfinite', 'isinf', 'isnan', 'ldexp', 'lgamma', 'log', 'log10', 'log1p', 'log2', 'modf', 'nan', 'pi', 'pow', 'radians', 'remainder', 'sin', 'sinh', 'sqrt', 'tan', 'tanh', 'tau', 'trunc']
>>> from sys import *
>>> dir()
```

```
ModulePythonPertamaku.py - C:\Users\LABSI-13\AppData\Local\Programs\Python\Python376\Python 3.7.6 Shell
File Edit Format Run Options Window Help

def ucapkanSalam():
    print("Assalamu'alaikum!")

def kuadratkan(x):
    return x*x

buah = 'Mangga'
daftarBaju = ['batik', 'loreng', 'resmi berdasi']
jumlahBaju = len(daftarBaju)

Python 3.7.6 Shell
File Edit Shell Debug Options Window Help
>>> from ModulePythonPertamaku import kuadratkan, daftarBaju
>>> kuadratkan(6)
36
>>> daftarBaju
['batik', 'loreng', 'resmi berdasi']
>>> from ModulePythonPertamaku import ucapkanSalam as ucap
>>> ucap()
Assalamu'alaikum!
>>> dir()
['ModulePythonPertamaku', '__annotations__', '__builtins__', '__doc__', '__loader__', '__name__', '__package__', '__spec__', 'daftarBaju', 'kuadratkan', 'mpp', 'ucapkan']
>>> import math as m
>>> dir(m)
['__doc__', '__loader__', '__name__', '__package__', '__spec__', 'acos', 'acosh', 'asin', 'asinh', 'atan', 'atan2', 'atanh', 'ceil', 'copysign', 'cos', 'cosh', 'degrees', 'e', 'erf', 'erfc', 'exp', 'expm1', 'fabs', 'factorial', 'floor', 'fmod', 'frexp', 'fsum', 'gamma', 'gcd', 'hypot', 'inf', 'isclose', 'isfinite', 'isinf', 'isnan', 'ldexp', 'lgamma', 'log', 'log10', 'log1p', 'log2', 'modf', 'nan', 'pi', 'pow', 'radians', 'remainder', 'sin', 'sinh', 'sqrt', 'tan', 'tanh', 'tau', 'trunc']
>>> from sys import *
>>> dir()
['ModulePythonPertamaku', '__annotations__', '__builtins__', '__doc__', '__loader__', '__name__', '__package__', '__spec__', 'api_version', 'argv', 'base_exec_prefix', 'base_prefix', 'breakpointhook', 'builtin_module_names', 'byteorder', 'call_tracing', 'callstats', 'copyright', 'daftarBaju', 'displayhook', 'dllhandle', 'dont_write_bytecode', 'exec_info', 'excepthook', 'exec_prefix', 'executable', 'exit', 'flags', 'float_info', 'float_repr_style', 'get_asyncgen_hooks', 'get_coroutine_origin_tracking_depth', 'get_coroutine_wrapper', 'getallocatedblocks', 'getcheckinterval', 'getdefaultencoding', 'getfilesystemencodings', 'getfilesystemerrors', 'getfileencoding', 'getprofile', 'getrecursionlimit', 'getreccount', 'getsizeof', 'getswitchinterval', 'gettrace', 'getwindowsversion', 'hash_info', 'hexversion', 'implementation', 'int_info', 'intern', 'is_finalizing', 'kuadratkan', 'm', 'maxsize', 'maxunicode', 'meta_path', 'modules', 'mpp', 'path', 'path_hooks', 'path_importer_cache', 'platform', 'prefix', 'set_asyncgen_hooks', 'set_coroutine_origin_tracking_depth', 'set_coroutine_wrapper', 'setcheckinterval', 'setprofile', 'setrecursionlimit', 'setswitchinterval', 'settrace', 'stderr', 'stdin', 'stdout', 'thread_info', 'ucap', 'version', 'version_info', 'warnoptions', 'winver']
>>>
```

The image shows a Windows desktop with two open Python IDE windows. The left window, titled 'ModulePythonPertamaku.py - C:\Users\LABSI-13\AppData\Local\Programs\Python\Python37\...', contains a Python script for a class named 'Pesan'. The right window, titled 'Python37 Shell', shows the execution of the script, displaying a list of module attributes and the output of the 'Pesan' class methods.

Left Window (ModulePythonPertamaku.py):

```
File Edit Format Run Options Window Help

def ucapkanSalam():
    print ("Assalamu'alaikum!")

def kuadratkan(x):
    return x*x

buah = 'Mangga'
daftarBaju = ['batik', 'loreng', 'resmi berdasai']
jumlahBaju = len (daftarBaju)

class Pesan (object):
    """
        Sebuah class bernama Pesan.
        Untuk memahami konsep Class dan Object.
    """
    def __init__(self, sebuahString):
        self.teks = sebuahString
    def cetakIni(self):
        print (self.teks)
    def cetakPakaiHurufKapital(self):
        print(str.upper(self.teks))
    def cetakPakaiHurufKecil(self):
        print(str.lower(self.teks))
    def jumKar(self):
        return len(self.teks)
    def cetakJumlahKarakterku(self):
        print('Kalimatku mempunyai', len(self.teks),
    def perbarui(self, stringBaru):
        self.teks = stringBaru
```

Right Window (Python37 Shell):

```
File Edit Shell Debug Options Window Help

r', '_name_', '_package_', '_spec_', 'api_version', 'argv', 'base_exec_p
refix', 'base_prefix', 'breakpointhook', 'builtin_module_names', 'byteorder', 'c
all tracing', 'callstats', 'copyright', 'daftarBaju', 'displayhook', 'dlhandle'
, 'dont_write_bytecode', 'exc_info', 'excepthook', 'exec_prefix', 'executable',
'exit', 'flags', 'float_info', 'float_repr_style', 'get_asynogen_hooks', 'get_co
routine_origin_tracking_depth', 'get_coroutine_wrapper', 'getallocatedblocks',
'getcheckinterval', 'getdefaultencoding', 'getfilesystemencodingerrors', 'getfile
stemencoding', 'getprofile', 'getrecursionlimit', 'getrefcount', 'getsizeof', 'g
etswitchinterval', 'gettrace', 'getwindowsversion', 'hash_info', 'hexversion', '
implementation', 'int_info', 'intern', 'is_finalizing', 'kuadratkan', 'm', 'maxs
ize', 'maxunicode', 'meta_path', 'modules', 'mpg', 'patch', 'path_hooks', 'path_i
mporter_cache', 'platform', 'prefix', 'set_asynogen_hooks', 'set_coroutine_origi
n_tracking_depth', 'set_coroutine_wrapper', 'setcheckinterval', 'setprofile', 's
etrecursionlimit', 'setswitchinterval', 'settrace', 'stderr', 'stdin', 'stdout',
'thread_info', 'ucap', 'version', 'version_info', 'warnoptions', 'winver']
>>>
= RESTART: C:\Users\LABSI-13\AppData\Local\Programs\Python\Python37\ModulePython
Pertamaku.py
>>> pesanA.cetakIni()
Traceback (most recent call last):
  File "<pyshell#18>", line 1, in <module>
    pesanA.cetakIni()
NameError: name 'pesanA' is not defined
>>> pesanA = Pesan ('Aku suka kuliah ini')
>>> pesanB = Pesan ('Surakarta: the Spirit of Java')
>>> pesanA.cetakIni()
Aku suka kuliah ini
>>> pesanA.cetakJumlahKarakterku()
Kalimatku mempunyai 19 karakter.
>>> pesanB.cetakJumlahKarakterku()
Kalimatku mempunyai 29 karakter.
>>> pesanA.cetakPakaiHurufKapital()
AKU SUKA KULIAH INI
>>> pesanA.cetakPakaiHurufKecil()
aku suka kuliah ini
>>> pesanA.perbarui('Aku senang struktur data')
Traceback (most recent call last):
  File "<pyshell#26>", line 1, in <module>
    pesanA.perbarui('Aku senang struktur data')
File "C:\Users\LABSI-13\AppData\Local\Programs\Python\Python37\ModulePythonPer
Ln: 73 Col: 4
```

The image shows a screenshot of a Python 3.7.6 IDE. The left pane displays the source code for a class named `Pesan`. The class has a docstring, an `__init__` method, and several methods for printing message details and character counts. The right pane shows the execution output, demonstrating the use of the class with two objects, `pesanA` and `pesanB`.

```
latihanpesan.py - C:/Users/LABSI-13/AppData/Local/Programs/Python/Python37/latihanpesan.py (3.7.6)
File Edit Format Run Options Window Help

class Pesan(object):
    """
    Sebuah class bernama Pesan.
    Untuk memahami konsep Class dan Object.
    """
    def __init__(self, sebuahString):
        self.teks = sebuahString
    def cetakIni(self):
        print(self.teks)
    def cetakPakaiHurufKapital(self):
        print(str.upper(self.teks))
    def cetakPakaiHurufKecil(self):
        print(str.lower(self.teks))
    def jumKar(self):
        return len(self.teks)
    def cetakJumlahKarakterku(self):
        print('Kalimatku mempunyai', len(self.teks), 'karakter.')
    def perbarui(self, stringBaru):
        self.teks = stringBaru

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: C:/Users/LABSI-13/AppData/Local/Programs/Python/Python37/latihanpesan.py
>>> pesanA = Pesan('Aku suka kuliah ini')
>>> pesanB = Pesan('Surakarta: the Spirit of Java')
>>> pesanA.cetakIni()
Aku suka kuliah ini
>>> pesanA.cetakJumlahKarakterku()
Kalimatku mempunyai 19 karakter.
>>> pesanB.cetakJumlahKarakterku()
Kalimatku mempunyai 29 karakter.
>>> pesanA.cetakPakaiHurufKapital()
AKU SUKA KULIAH INI
>>> pesanA.cetakPakaiHurufKecil()
aku suka kuliah ini
>>> pesanA.perbarui('Aku senang struktur data')
>>> pesanA.cetakIni()
Aku senang struktur data
>>> |
```

Ln: 20 Col: 4 Ln: 21 Col: 0 10:24 PM 3/4/2020

```
latihanpesan.py - C:/Users/LABSI-13/AppData/Local/Programs/Python/Python37/latihanpesan.py (3.7.6)
File Edit Format Run Options Window Help

class Pesan(object):
    """
    Sebuah class
    Untuk memo
    """
    def __init__(self, teks):
        self.teks = teks
    def cetakIni(self, s):
        print(s)
    def cetakPakai(self, s):
        print(str(s))
    def cetakPakai(self, s):
        print(str(s))
    def cetakJumlah(self, s):
        return len(s)
    def cetakJumlah(self, s):
        print('Kal')
    def perbarui(self, s):
        self.teks = s

class Manusia(object):
    """Class 'Manusia' dengan inisiasi 'nama'"""
    keadaan = 'lapar'
    def __init__(self, nama):
        self.nama = nama
    def ucapkanSalam(self):
        print("Salam, namaku", self.nama)
    def makan(self, s):
        print("Saya baru saja makan", s)
        self.keadaan = 'kenyang'
    def olahraga(self, k):
        print("Saya baru saja latihan", k)
        self.keadaan = 'lapar'
    def mengalikanDua(self, n):
        return n*2

p1 = Manusia('Fatimah')
p1.ucapkanSalam()

Python 3.7.6 Shell
File Edit Shell Debug Options Window Help
>>> pesanA.cetakIni()
>>> pesanA.strukturData()
>>>
= RESTART: C:/Users/LABSI-13/AppData/Local/Programs/Python/Python37/latihanSemb
rangKelas.py
>>> obQ = sembarangKelas()
>>> obQ.metodeSatu()
>>> obQ.metodeSembilan('Aku suka mie ayam')
>>>
= RESTART: C:/Users/LABSI-13/AppData/Local/Programs/Python/Python37/latihan2.3.p
y
>>> Salam, namaku Fatimah
>>> p2 = Manusia('Budi')
>>> p2.ucapkanSalam()
>>> Salam, namaku Budi
>>> ak = Manusia('Abdul Karim')
>>> ak.ucapkanSalam()
>>> Salam, namaku Abdul Karim
>>> ak.keadaan
>>> 'lapar'
>>> ak.makan('nasi goreng')
>>> Saya baru saja makan nasi goreng
>>> ak.keadaan
>>> 'kenyang'
Traceback (most recent call last):
  File "C:\Python37\Shell", line 1, in <module>
    ak.keadaan
NameError: name 'aka' is not defined
>>> ak.keadaan
>>> 'kenyang'
>>> ak.olahraga('renang')
>>> Saya baru saja latihan renang
>>> ak.keadaan
>>> 'lapar'
>>> ak.makan('bakso')
>>> Saya baru saja makan bakso
>>> ak.keadaan
>>> 'kenyang'
>>> ak.mengalikanDua(8)
>>> 16
>>>
```

```
latOOP.py - C:/Users/LABSI-13/AppData/Local/Programs/Python/Python37/latOOP.py (3.7.6)
File Edit Format Run Options Window Help

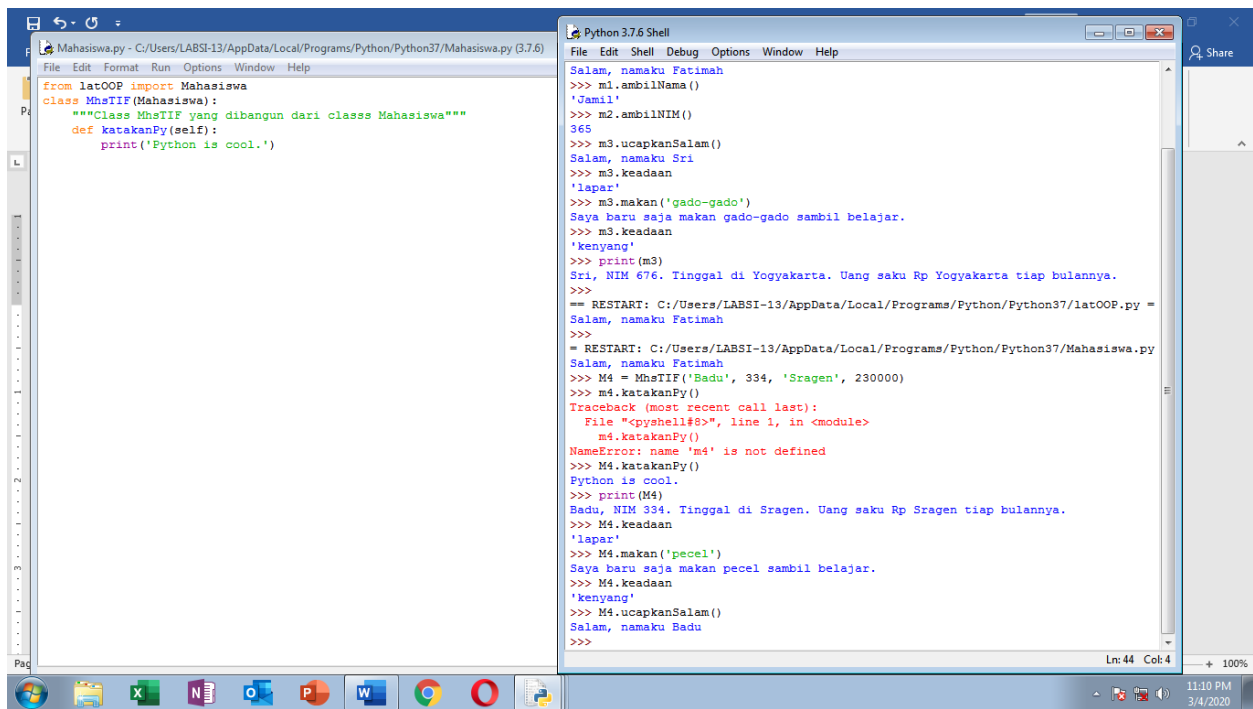
def makan(self, s):
    print("Saya baru saja makan", s)
    self.keadaan = 'kenyang'
def olahraga(self, k):
    print("Saya baru saja latihan", k)
    self.keadaan = 'lapar'
def mengalikanDua(self, n):
    return n*2

p1 = Manusia('Fatimah')
p1.ucapkanSalam()

class Mahasiswa(Manusia):
    """Class Mahasiswa yang dibangun dari class Manusia."""
    def __init__(self, nama, NIM, kota, us):
        """Metode inisiasi ini menutupi metode inisiasi di class Manusia."""
        self.nama = nama
        self.NIM = NIM
        self.kotaTinggal = kota
        self.uangSaku = us
    def __str__(self):
        s = self.nama + ', NIM ' + str(self.NIM) \
            + '. Tinggal di ' + self.kotaTinggal \
            + '. Uang saku Rp ' + self.kotaTinggal \
            + ' tiap bulannya.'
        return s
    def ambilNama(self):
        return self.nama
    def ambilNIM(self):
        return self.NIM
    def ambilUangSaku(self):
        return self.uangSaku
    def makan(self, s):
        """Metode ini menutupi metode 'makan'-nya class Manusia.
        Mahasiswa kalau makan sambil belajar."""
        print("Saya baru saja makan", s, "sambil belajar.")
        self.keadaan = 'kenyang'

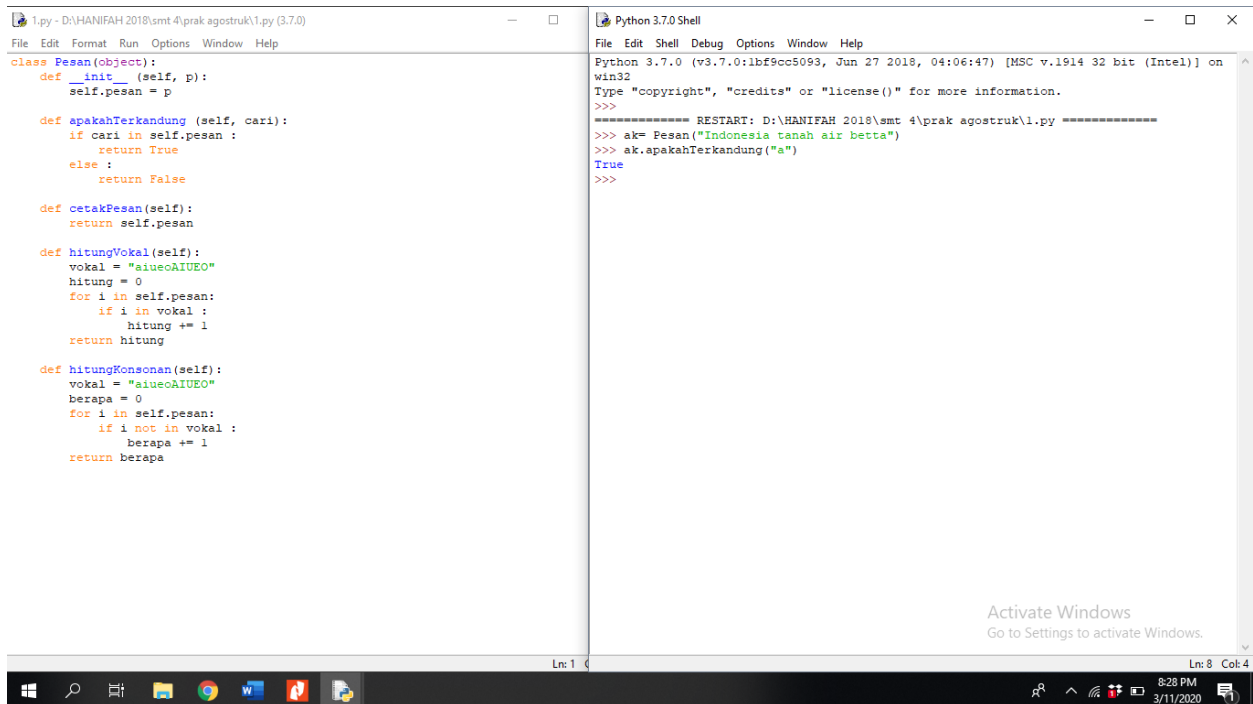
m1 = Mahasiswa('Jamil', 234, 'Sureakarta', 250000)
m2 = Mahasiswa('Andi', 365, 'Magelang', 275000)
m3 = Mahasiswa('Sri', 676, 'Yogyakarta', 240000)

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: C:/Users/LABSI-13/AppData/Local/Programs/Python/Python37/latihan2.3.p
y
>>> Salam, namaku Fatimah
>>> m1.ambilNama()
>>> 'Jamil'
>>> m2.ambilNIM()
>>> 365
>>> m3.ucapkanSalam()
>>> Salam, namaku Sri
>>> m3.keadaan
>>> 'lapar'
>>> m3.makan('gado-gado')
>>> Saya baru saja makan gado-gado sambil belajar.
>>> m3.keadaan
>>> 'kenyang'
>>> print(m3)
>>> Sri, NIM 676. Tinggal di Yogyakarta. Uang saku Rp Yogyakarta tiap bulannya.
>>>
= RESTART: C:/Users/LABSI-13/AppData/Local/Programs/Python/Python37/latOOP.py =
>>> Salam, namaku Fatimah
>>>
= RESTART: C:/Users/LABSI-13/AppData/Local/Programs/Python/Python37/Mahasiswa.py
>>> Salam, namaku Fatimah
>>>
```



Tugas

1.



The image shows a Windows desktop with two open Python IDE windows. The left window is titled '2.py - D:\HANIFAH 2018\smt 4\prak agostruk\2.py (3.7.0)' and contains the following Python code:

```
class Mahasiswa(object):
    def __init__(self, nama, NIM, kota, us):
        self.nama = nama
        self.NIM = NIM
        self.kotaTinggal = kota
        self.uangSaku = us

    def __str__(self):
        s = self.nama + ", NIM " + str(self.NIM) \
            + ", tinggal di " + self.kotaTinggal \
            + ", uang saku " + str(self.uangSaku) \
            + " tiap bulannya"
        return s

    def ambilNama(self):
        return self.nama

    def ambilNIM(self):
        return self.NIM

    def ambilUangSaku(self):
        return self.uangSaku

    def makan(self, s):
        print("saya baru saja makan", s, "sambil belajar")
        self.keadaan = "kenyang"

    def ambilKotaTinggal(self):
        return self.kotaTinggal

    def perbaruiKotaTinggal(self, p):
        self.kotaTinggal = p

    def tambahUangSaku(self, k):
        self.uangSaku += k
```

The right window is titled 'Python 3.7.0 Shell' and shows the execution of a script named '2.py'. The output is as follows:

```
Python 3.7.0 (tags/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: D:\HANIFAH 2018\smt 4\prak agostruk\2.py =====
>>> mi = Mahasiswa("hanifah", 124, "Solo", 250000)
>>> mi.ambilKotaTinggal()
'Solo'
>>> mi.perbaruiKotaTinggal("Jogja")
>>> mi.ambilKotaTinggal()
'Jogja'
>>> mi.ambilUangSaku()
250000
>>> mi.tambahUangSaku(250000)
>>> mi.ambilUangSaku()
500000
>>>
```

At the bottom of the right window, there is a watermark that says 'Activate Windows Go to Settings to activate Windows.'

The screenshot displays a Windows desktop environment. In the foreground, a code editor window titled "3.py - D:\HANIFAH 2018\smt 4\prak agostruk3.py (3.7.0)" is open. It contains a Python class definition for a student and some input/output code. The background shows a Microsoft Word document titled "algostruk124.docx" with a ribbon showing the "Home" tab. The Word document content is partially visible, showing a table with columns for heading, title, subtitle, and subtitle. The taskbar at the bottom shows the Start button, search icon, and several application icons. The system tray in the bottom right corner shows the time as 8:37 PM on 3/11/2020.

```

File Edit Format Run Options Window Help
class Mahasiswa(object):
    def __init__(self, nama, NIM, kota, us):
        self.nama = nama
        self.NIM = NIM
        self.kotaTinggal = kota
        self.uangSaku = us

x = input("Masukkan nama -> ")
z = input("Masukkan NIM -> ")
w = input("Masukkan kotaTinggal -> ")
v = input("Masukkan uangSaku -> ")
y = Mahasiswa(x, z, w, v)
return y

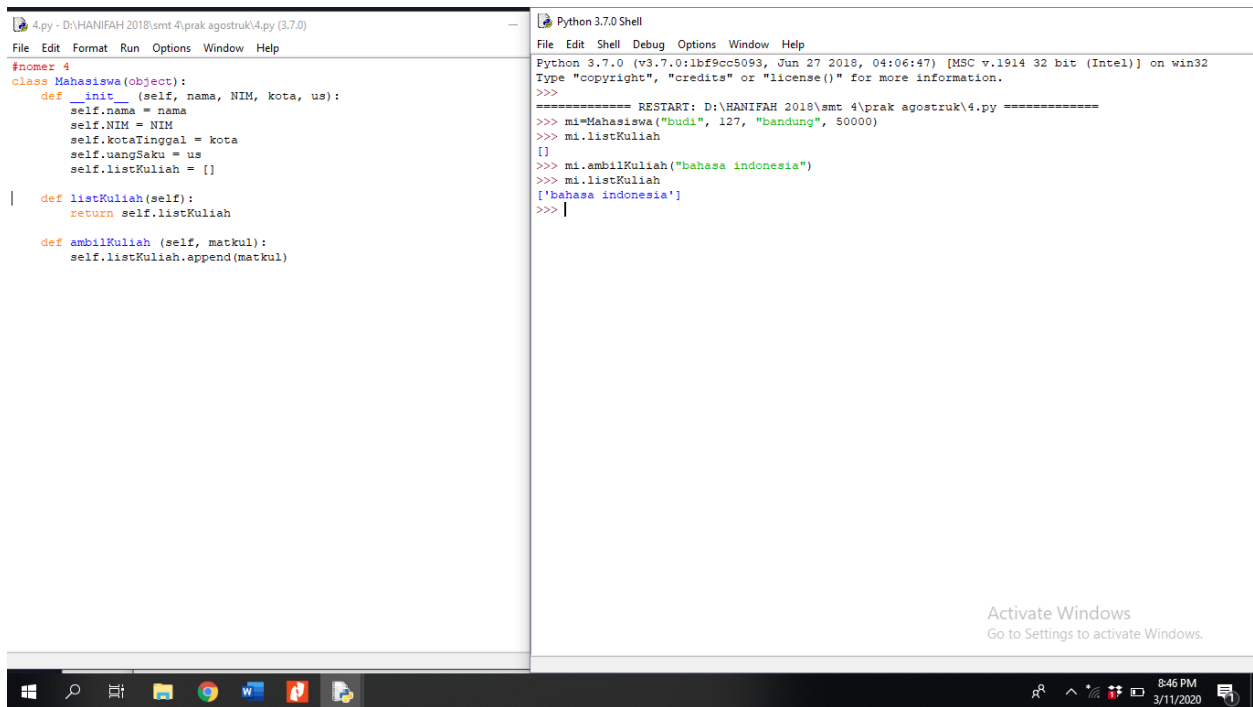
```

Page 5 of 5 At: 4.7" 1 word

Activate Windows
Go to Settings to activate Windows.

8:37 PM
3/11/2020

4.



```
4.py - D:\HANIFAH 2018\smt 4\prak agostruk\4.py (3.7.0)
File Edit Format Run Options Window Help

#nomer 4
class Mahasiswa(object):
    def __init__(self, nama, NIM, kota, us):
        self.nama = nama
        self.NIM = NIM
        self.kotaTinggal = kota
        self.uangSaku = us
        self.listKuliah = []

    def listKuliah(self):
        return self.listKuliah

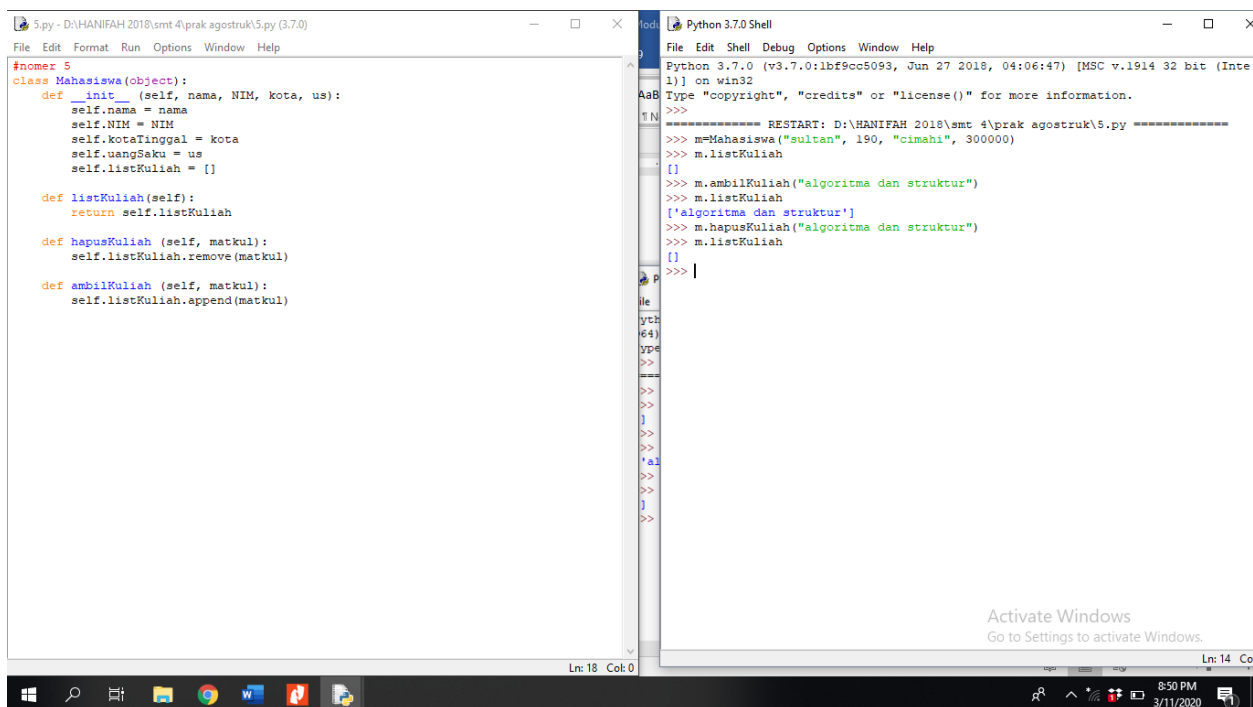
    def ambilKuliah(self, matkul):
        self.listKuliah.append(matkul)

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: D:\HANIFAH 2018\smt 4\prak agostruk\4.py =====
>>> mi=Mahasiswa("Budi", 127, "bandung", 50000)
>>> mi.listKuliah
[]
>>> mi.ambilKuliah("bahasa indonesia")
>>> mi.listKuliah
['bahasa indonesia']
>>>
```

Activate Windows
Go to Settings to activate Windows.

5.



```
5.py - D:\HANIFAH 2018\smt 4\prak agostruk\5.py (3.7.0)
File Edit Format Run Options Window Help

#nomer 5
class Mahasiswa(object):
    def __init__(self, nama, NIM, kota, us):
        self.nama = nama
        self.NIM = NIM
        self.kotaTinggal = kota
        self.uangSaku = us
        self.listKuliah = []

    def listKuliah(self):
        return self.listKuliah

    def hapusKuliah(self, matkul):
        self.listKuliah.remove(matkul)

    def ambilKuliah(self, matkul):
        self.listKuliah.append(matkul)

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: D:\HANIFAH 2018\smt 4\prak agostruk\5.py =====
>>> m=Mahasiswa("sultan", 190, "cimahi", 300000)
>>> m.listKuliah
[]
>>> m.ambilKuliah("algoritma dan struktur")
>>> m.listKuliah
['algoritma dan struktur']
>>> m.hapusKuliah("algoritma dan struktur")
>>> m.listKuliah
[]
>>>
```

Activate Windows
Go to Settings to activate Windows.

6.

The screenshot shows a Python IDE with two windows. The left window is a script named 6.py, and the right window is the Python 3.7.0 Shell.

```
#nomer 6
def Manusia (object):
    def __init__(self, nama, umur, alamat):
        self.nama = nama
        self.umur = umur
        self.alamat = alamat

    def ambilNama(self, nama):
        return self.nama

    def ambilUmur(self, umur):
        return self.umur

    def ambilAlamat(self, nama):
        return self.alamat

def siswaSMA(Manusia):
    def __init__(self, nama, noAbsen, kelas, jurusan):
        self.nama = nama
        self.noAbsen = absen
        self.kelas = kelas
        self.jurusan = jurusan

    def ambilNama(self, nama):
        return self.nama

    def ambilNoAbsen(self, noAbsen):
        return self.noAbsen

    def ambilKelas(self, kelas):
        return self.kelas

    def ambilJurusan(self, jurusan):
        return self.jurusan
```

The Python 3.7.0 Shell window shows the following output:

```
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: D:\HANIFAH 2018\smt 4\prak agostruk\6.py =====
>>>
```

At the bottom of the shell window, there is a watermark that says "Activate Windows Go to Settings to activate Windows."

7.

The screenshot shows a Python IDE with two windows. The left window is a script named 7.py, and the right window is the Python 3.7.0 Shell.

```
#nomer 7
def Manusia (object):
    def __init__(self, nama, umur, alamat):
        self.nama = nama
        self.umur = umur
        self.alamat = alamat

    def ambilNama(self, nama):
        return self.nama

    def ambilUmur(self, umur):
        return self.umur

    def ambilAlamat(self, nama):
        return self.alamat

class Mahasiswa(object):
    def __init__(self, nama, NIM, kota, us):
        self.nama = nama
        self.NIM = NIM
        self.kotaTinggal = kota
        self.uangSaku = us

    def __str__(self):
        s = self.nama + ", NIM " + str(self.NIM)\
            + ", tinggal di " + str(self.kotaTinggal)\
            + ", uang saku " + str(self.uangSaku)\
            + " tiap bulannya"
        return s

    def ambilNama(self):
        return self.nama

    def ambilNIM(self):
        return self.NIM

    def ambilUangSaku(self):
        return self.uangSaku

    def makan(self, s):
        print("saya baru saja makan", s, "sambil belajar")
        self.nama = "Mahasiswa"
```

The Python 3.7.0 Shell window shows the following output:

```
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: D:\HANIFAH 2018\smt 4\prak agostruk\7.py =====
saya baru saja makan roti sambil belajar
Python is cool
>>>
```

At the bottom of the shell window, there is a watermark that says "Activate Windows Go to Settings to activate Windows."

7.py - D:\HANIFAH 2018\smt 4\prak agostruk\7.py (3.7.0)

File Edit Format Run Options Window Help

```
def __str__(self):
    s = self.nama + ", NIM " + str(self.NIM)\
        + ", tinggal di " + self.kotaTinggal\
        + ", uang saku " + str(self.uangSaku)\
        + " tiap bulannya"
    return s

def ambilNama(self):
    return self.nama

def ambilNIM(self):
    return self.NIM

def ambilUangSaku(self):
    return self.uangSaku

def makan(self, s):
    print("saya baru saja makan", s, "sambil belajar")
    self.keadaan = "kenyang"

def ambilKotaTinggal(self):
    return self.kotaTinggal

def perbaruiKotaTinggal(self, p):
    self.kotaTinggal = p

def tambahUangSaku(self, k):
    self.uangSaku += k

class MhsTIF(Mahasiswa):
    def katakanPy(self):
        print("Python is cool")

a = MhsTIF("Hafshah", 4092, "Solo", 200000)
a.ambilNama() # from class Manusia
a.makan("roti") # from class Mahasiswa
a.ambilNIM() # from class Mahasiswa
a.ambilUangSaku() # from class Mahasiswa
a.katakanPy() # from class MhsTIF
```

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: D:\HANIFAH 2018\smt 4\prak agostruk\7.py =====
saya baru saja makan roti sambil belajar
Python is cool
>>>
```

Activate Windows
Go to Settings to activate Windows.

Ln: 7 Col: 4

