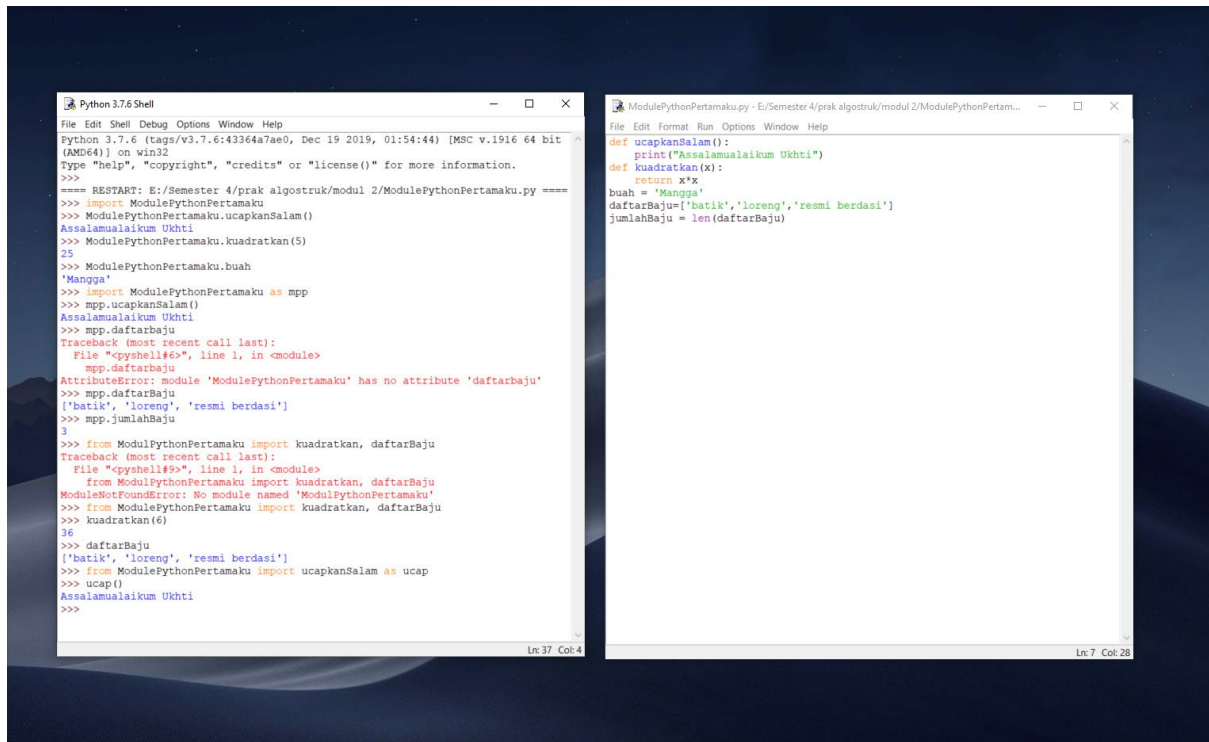


Nama : Rahmat Beny Susanto

NIM : L200180079

MODUL 2

Latihan 2.1



The image shows two side-by-side windows from a Python 3.7.6 environment. The left window is a Python Shell, and the right window is a script editor for a file named 'ModulePythonPertamaku.py'.

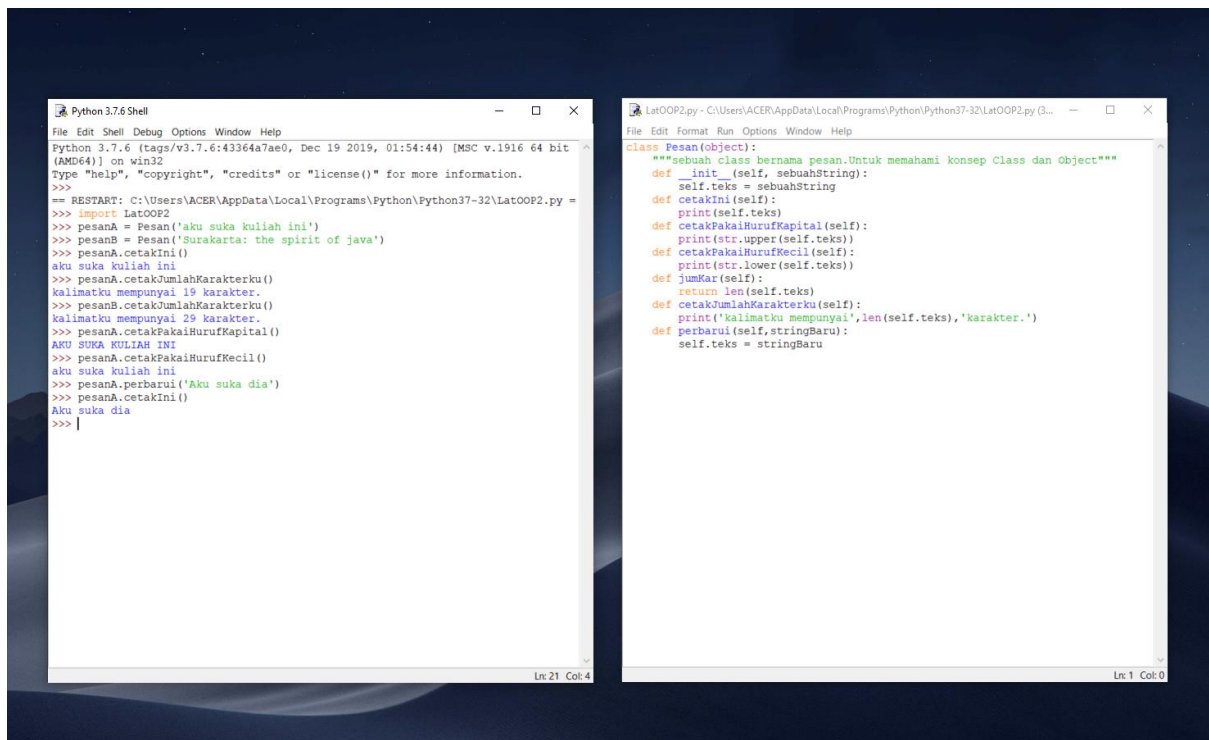
Python Shell (Left Window):

```
Python 3.7.6 Shell
File Edit Shell Debug Options Window Help
Python 3.7.6 [tags/v3.7.6:43364a7ae0, Dec 19 2019, 01:54:44] [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
==== RESTART: E:/Semester 4/prak algostruk/modul 2/ModulePythonPertamaku.py ====
>>> import ModulePythonPertamaku
>>> ModulePythonPertamaku.ucapkanSalam()
Assalamualaikum Ukhthi
>>> ModulePythonPertamaku.kuadratkan(5)
25
>>> ModulePythonPertamaku.buah
'Mangga'
>>> import ModulePythonPertamaku as mpp
>>> mpp.ucapkanSalam()
Assalamualaikum Ukhthi
>>> mpp.daftarBaju
Traceback (most recent call last):
  File "<pyshell#6>", line 1, in <module>
    mpp.daftarBaju
AttributeError: module 'ModulePythonPertamaku' has no attribute 'daftarBaju'
>>> mpp.daftarBaju
['batik', 'loreng', 'resmi berdasi']
>>> mpp.jumlahBaju
3
>>> from ModulPythonPertamaku import kuadratkan, daftarBaju
Traceback (most recent call last):
  File "<pyshell#9>", line 1, in <module>
    from ModulPythonPertamaku import kuadratkan, daftarBaju
ModuleNotFoundError: No module named 'ModulPythonPertamaku'
>>> from ModulePythonPertamaku import kuadratkan, daftarBaju
>>> kuadratkan(6)
36
>>> daftarBaju
['batik', 'loreng', 'resmi berdasi']
>>> from ModulePythonPertamaku import ucapkanSalam as ucap
>>> ucap()
Assalamualaikum Ukhthi
>>>
```

ModulePythonPertamaku.py (Right Window):

```
ModulePythonPertamaku.py - E:/Semester 4/prak algostruk/modul 2/ModulePythonPertam...
File Edit Format Run Options Window Help
def ucapkanSalam():
    print("Assalamualaikum Ukhthi")
def kuadratkan(x):
    return x*x
buah = 'Mangga'
daftarBaju=['batik','loreng','resmi berdasi']
jumlahBaju = len(daftarBaju)
```

Latihan 2.2



The image shows two side-by-side windows from a Python 3.7.6 environment. The left window is a Python Shell, and the right window is a script editor for a file named 'LatOOP2.py'.

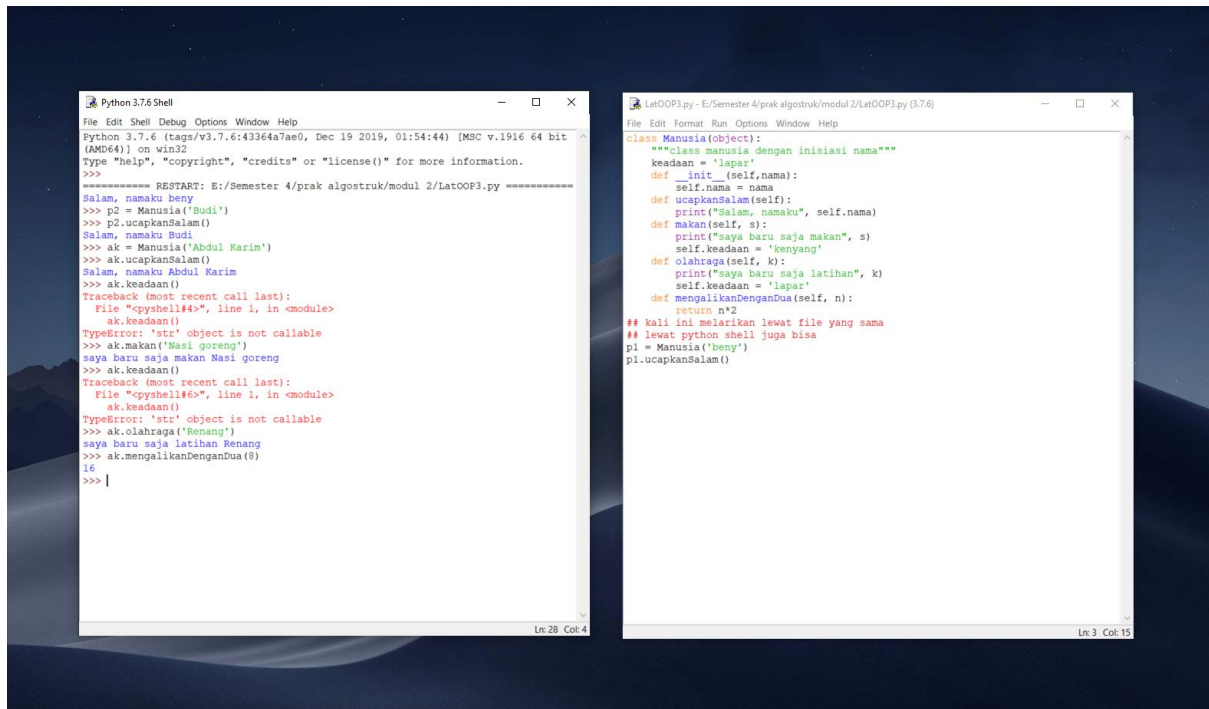
Python Shell (Left Window):

```
Python 3.7.6 Shell
File Edit Shell Debug Options Window Help
Python 3.7.6 [tags/v3.7.6:43364a7ae0, Dec 19 2019, 01:54:44] [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
== RESTART: C:\Users\ACER\AppData\Local\Programs\Python\Python37-32\LatOOP2.py ==
>>> import LatOOP2
>>> 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 suka dia')
>>> pesanA.cetakIni()
Aku suka dia
>>> |
```

LatOOP2.py (Right Window):

```
LatOOP2.py - C:\Users\ACER\AppData\Local\Programs\Python\Python37-32\LatOOP2.py (3...
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
```

Latihan 2.3



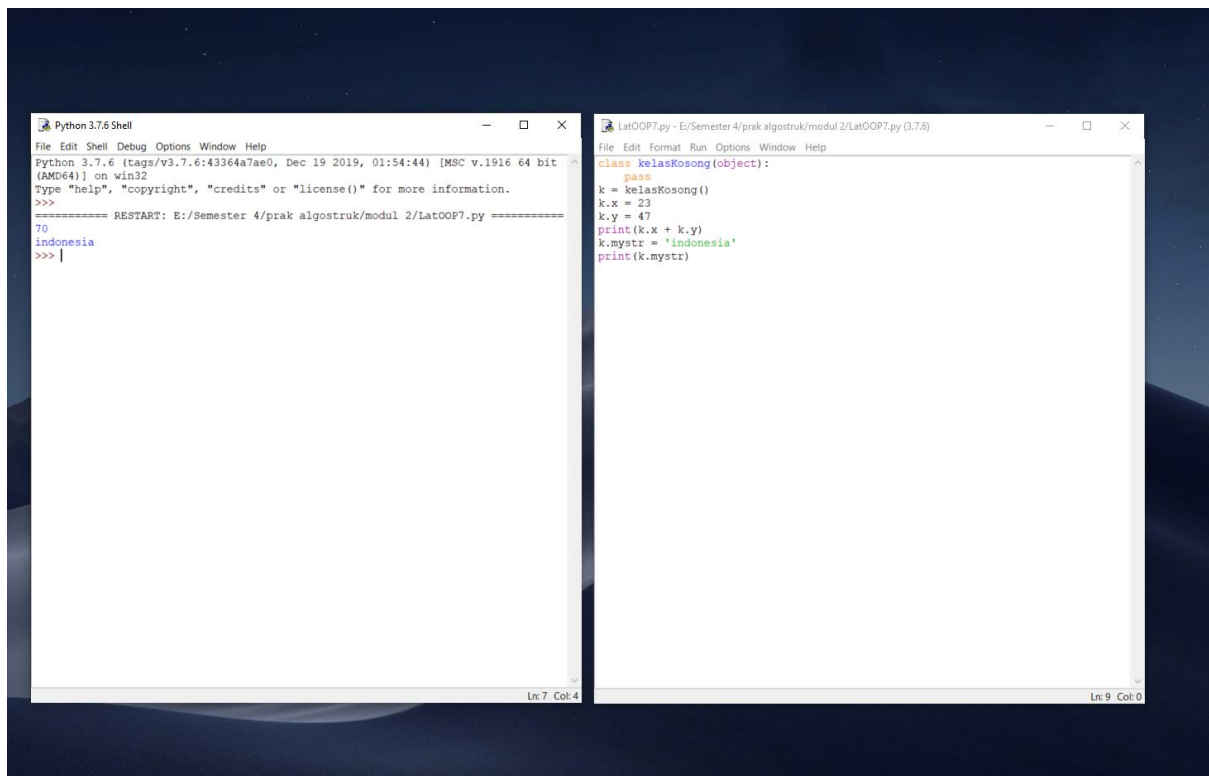
The image shows two side-by-side Python IDE windows. The left window, titled 'Python 3.7.6 Shell', displays a series of commands and their outputs. It starts with a restart command, followed by creating a 'Manusia' object 'p2' with the name 'Budi'. Then, it calls 'p2.ucapkanSalam()' which outputs 'Salam, namaku Budi'. Next, it creates another 'Manusia' object 'ak' with the name 'Abdul Karim' and calls 'ak.ucapkanSalam()' which outputs 'Salam, namaku Abdul Karim'. Finally, it calls 'ak.keadaan()' which outputs 'lapar'. The right window, titled 'LatOOP3.py - E:/Semester 4/prak algostruk/modul 2/LatOOP3.py (3.7.6)', shows the source code for the 'Manusia' class. The class has an attribute 'keadaan' initialized to 'lapar'. It has an '__init__' method that takes a name and assigns it to 'self.nama'. It has a 'ucapkanSalam' method that prints 'Salam, namaku' followed by 'self.nama'. It has a 'makan' method that prints 'saya baru saja makan' followed by 's'. It has an 'olahraga' method that prints 'saya baru saja latihan' followed by 'k'. It has a 'mengalikanDua' method that takes two numbers and returns their product. At the bottom, there is a comment and two lines of code: 'p1 = Manusia('bony')' and 'p1.ucapkanSalam()'.

```
Python 3.7.6 Shell
File Edit Shell Debug Options Window Help
Python 3.7.6 (tags/v3.7.6:43364a7ae0, Dec 19 2019, 01:54:44) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: E:/Semester 4/prak algostruk/modul 2/LatOOP3.py =====
Salam, namaku bony
>>> p2 = Manusia('Budi')
>>> p2.ucapkanSalam()
Salam, namaku Budi
>>> ak = Manusia('Abdul Karim')
>>> ak.ucapkanSalam()
Salam, namaku Abdul Karim
>>> ak.keadaan()
Traceback (most recent call last):
  File "<pyshell#4>", line 1, in <module>
    ak.keadaan()
TypeError: 'str' object is not callable
>>> ak.makan('Nasi goreng')
saya baru saja makan Nasi goreng
>>> ak.keadaan()
Traceback (most recent call last):
  File "<pyshell#6>", line 1, in <module>
    ak.keadaan()
TypeError: 'str' object is not callable
>>> ak.olahraga('Renang')
saya baru saja latihan Renang
>>> ak.mengalikanDua(8)
16
>>> |

LatOOP3.py - E:/Semester 4/prak algostruk/modul 2/LatOOP3.py (3.7.6)
File Edit Format Run Options Window Help
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
    # kali ini melarikan lewat file yang sama
    # lewat python shell juga bisa
    p1 = Manusia('bony')
    p1.ucapkanSalam()

Lat 3 Col 15
```

Latihan 2.7



The image shows two side-by-side Python IDE windows. The left window, titled 'Python 3.7.6 Shell', displays a series of commands and their outputs. It starts with a restart command, followed by creating a 'kelasKosong' object 'k'. Then, it assigns values to 'k.x' (23) and 'k.y' (47). It prints 'k.x + k.y' which outputs '70'. Finally, it assigns 'indonesia' to 'k.mystr' and prints 'k.mystr' which outputs 'indonesia'. The right window, titled 'LatOOP7.py - E:/Semester 4/prak algostruk/modul 2/LatOOP7.py (3.7.6)', shows the source code for the 'kelasKosong' class. The class has an attribute 'pass'. It has an '__init__' method that takes no arguments. It has a 'k.x' attribute initialized to 23. It has a 'k.y' attribute initialized to 47. It has a 'k.mystr' attribute initialized to 'indonesia'. At the bottom, there is a line of code: 'print(k.mystr)'.

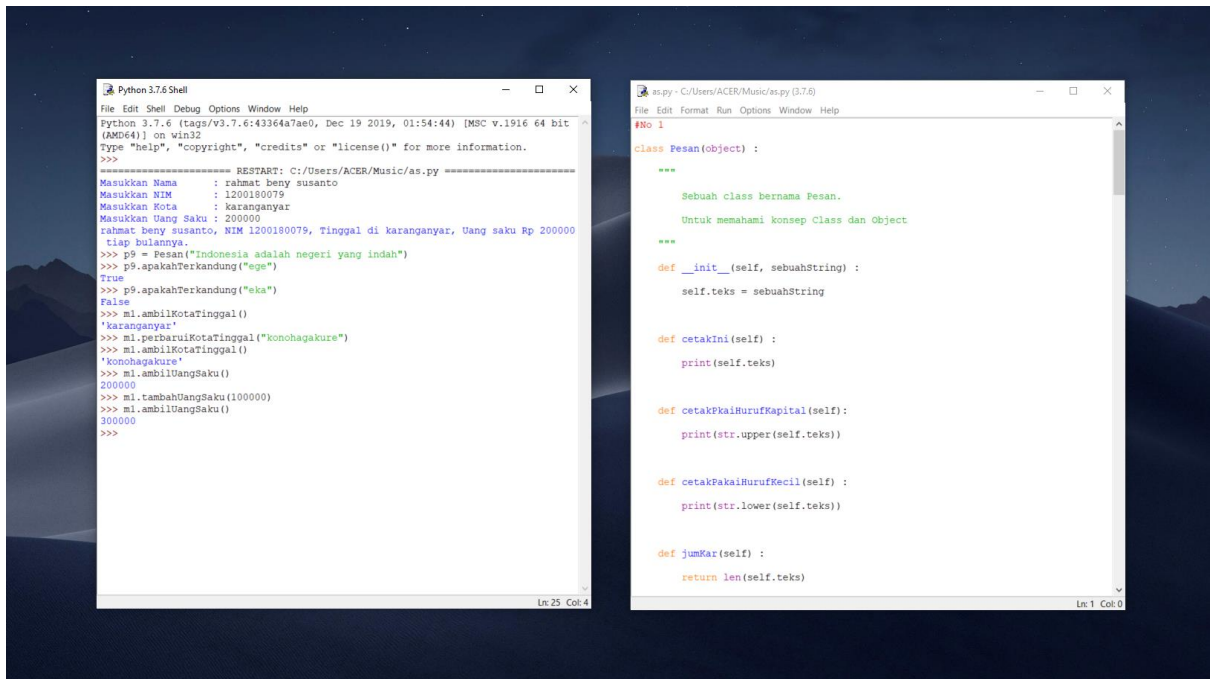
```
Python 3.7.6 Shell
File Edit Shell Debug Options Window Help
Python 3.7.6 (tags/v3.7.6:43364a7ae0, Dec 19 2019, 01:54:44) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: E:/Semester 4/prak algostruk/modul 2/LatOOP7.py =====
70
indonesia
>>> |

LatOOP7.py - E:/Semester 4/prak algostruk/modul 2/LatOOP7.py (3.7.6)
File Edit Format Run Options Window Help
class kelasKosong(object):
    pass
k = kelasKosong()
k.x = 23
k.y = 47
print(k.x + k.y)
k.mystr = 'indonesia'
print(k.mystr)

Lat 9 Col 0
```

Tugas

1.



The image shows two side-by-side windows from a Python IDE. The left window, titled 'Python 3.7.6 Shell', displays the execution of a script. It starts with a restart command and then shows the execution of a class named 'Pesan'. The class is instantiated with the name 'rahmat beny susanto', NIM '1200180079', and address 'karanganyar'. The script then calls several methods: 'ambilKotaTinggal()' returns 'karanganyar', 'perbaruiKotaTinggal()' updates the address to 'konohagakure', 'ambilUangSaku()' returns '200000', and 'tambahUangSaku()' updates the balance to '300000'. The right window, titled 'as.py - C:/Users/ACER/Music/as.py (3.7.6)', shows the source code for the 'Pesan' class. It includes a docstring, an '.__init__' method that sets 'self.teks' to the provided name, and four methods: 'cetakIni' (prints the name), 'cetakPkaiHurufKapital' (prints the name in uppercase), 'cetakPkaiHurufKecil' (prints the name in lowercase), and 'jumKar' (returns the length of the name).

```
Python 3.7.6 Shell
File Edit Shell Debug Options Window Help
Python 3.7.6 (tags/v3.7.6:43364a7ae0, Dec 19 2019, 01:54:44) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/ACER/Music/as.py =====
Masukkan Nama      : rahmat beny susanto
Masukkan NIM       : 1200180079
Masukkan Kota      : karanganyar
Masukkan Uang Saku : 200000
rahmat beny susanto, NIM 1200180079, Tinggal di karanganyar, Uang saku Rp 200000
tiap bulannya.
>>> p9 = Pesan("Indonesia adalah negeri yang indah")
>>> p9.apakahTerkadang("eka")
True
>>> p9.apakahTerkadang("eka")
False
>>> m1.ambilKotaTinggal()
'karanganyar'
>>> m1.perbaruiKotaTinggal("konohagakure")
>>> m1.ambilKotaTinggal()
'konohagakure'
>>> m1.ambilUangSaku()
200000
>>> m1.tambahUangSaku(100000)
>>> m1.ambilUangSaku()
300000
>>>
```

```
as.py - C:/Users/ACER/Music/as.py (3.7.6)
File Edit Format Run Options Window Help
#No 1

class Pesan(object):
    """
    Sebuah class bernama Pesan.
    Untuk memahami konsep Class dan Object
    """
    def __init__(self, sebuahString):
        self.teks = sebuahString

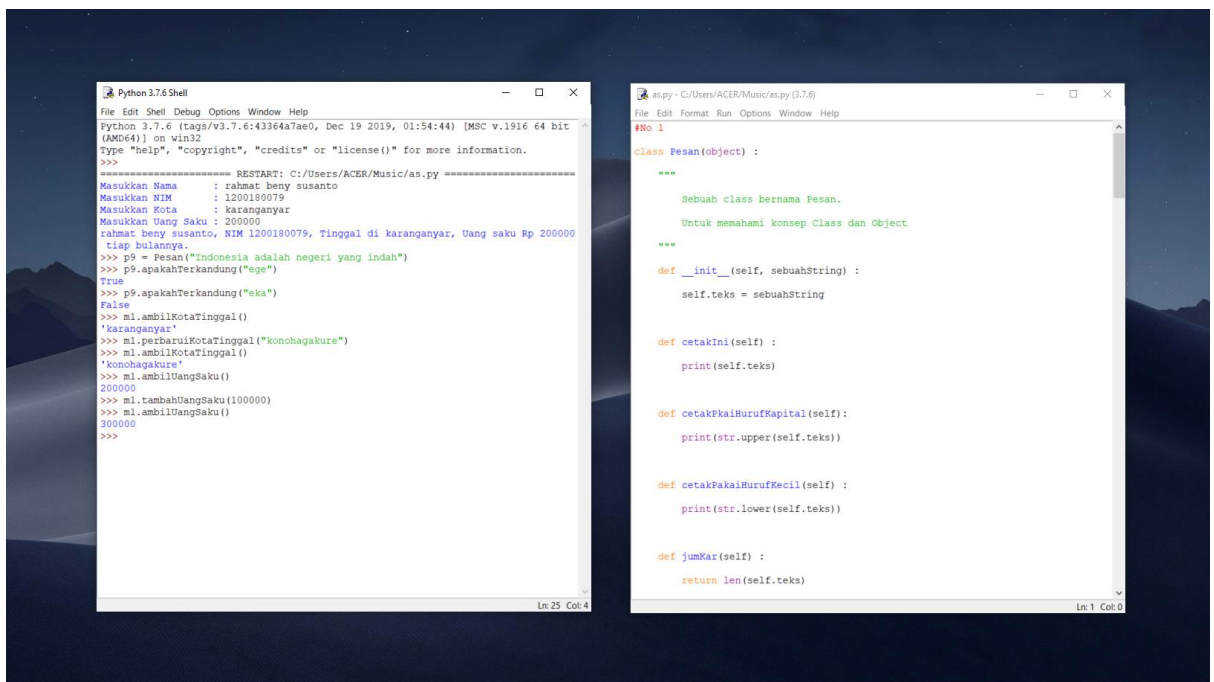
    def cetakIni(self):
        print(self.teks)

    def cetakPakaiHurufKapital(self):
        print(str.upper(self.teks))

    def cetakPakaiHurufKecil(self):
        print(str.lower(self.teks))

    def jumKar(self):
        return len(self.teks)
```

2.



This screenshot is identical to the one above, showing the same Python IDE windows. The left window shows the execution of the 'Pesan' class with the same inputs and outputs. The right window shows the source code for the 'Pesan' class, which is also identical to the one above.

3.

```

Python 3.7.6 Shell
File Edit Shell Debug Options Window Help
Python 3.7.6 (tags/v3.7.6:433647ae0, Dec 19 2019, 01:54:44) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/ACER/Music/as.py =====
Masukkan Nama : rahmat beny susanto
Masukkan NIM : 1200180079
Masukkan Kota : karanganyar
Masukkan Uang Saku : 200000
rahmat beny susanto, NIM 1200180079, Tinggal di karanganyar, Uang saku Rp 200000
tiap bulannya.
>>> p9 = Pesan("Indonesia adalah negeri yang indah")
>>> p9.apakahTerandung("ege")
True
>>> p9.apakahTerandung("eka")
False
>>> m1.ambilKotaTinggal()
'karanganyar'
>>> m1.perbaruiKotaTinggal("konohagakure")
>>> m1.ambilKotaTinggal()
'konohagakure'
>>> m1.ambilUangSaku()
200000
>>> m1.tambahUangSaku(100000)
>>> m1.ambilUangSaku()
300000
>>>

as.py - C:/Users/ACER/Music/as.py (3.7.6)
File Edit Format Run Options Window Help
#No 1
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)
  
```

4.

```

Python 3.7.6 Shell
File Edit Shell Debug Options Window Help
Masukkan Uang Saku : 200000
rahmat beny susanto, NIM 1200180079, Tinggal di karanganyar, Uang saku Rp 200000
tiap bulannya.
>>> p9 = Pesan("Indonesia adalah negeri yang indah")
>>> p9.apakahTerandung("ege")
True
>>> p9.apakahTerandung("eka")
False
>>> m1.ambilKotaTinggal()
'karanganyar'
>>> m1.perbaruiKotaTinggal("konohagakure")
>>> m1.ambilKotaTinggal()
'konohagakure'
>>> m1.ambilUangSaku()
200000
>>> m1.tambahUangSaku(100000)
>>> m1.ambilUangSaku()
300000
>>> l1.listKuliah()
Traceback (most recent call last):
  File "c:\python37\python.exe", line 1, in <module>
    l1.listKuliah()
NameError: name 'l1' is not defined
>>> m1.listKuliah()
Traceback (most recent call last):
  File "c:\python37\python.exe", line 1, in <module>
    m1.listKuliah()
TypeError: 'list' object is not callable
>>> m1.ambilKuliah("Web Dinamis")
>>> m1.listKuliah()
Traceback (most recent call last):
  File "c:\python37\python.exe", line 1, in <module>
    m1.listKuliah()
TypeError: 'list' object is not callable
>>> m1.listKuliah()
['Web Dinamis']
>>> m1.ambilKuliah("Java")
>>> m1.listKuliah()
['Web Dinamis', 'Java']
>>>

as.py - C:/Users/ACER/Music/as.py (3.7.6)
File Edit Format Run Options Window Help
def makan(self,s):
    print("Saya baru saja makan",s,"sambil belajar.")
    self.keadaan = "Kenyang"

#No 4
listKuliah=[]
def ambilKuliah(self, makul):
    self.listKuliah.append(makul)

#No 5
def hapusKuliah(self, makul):
    self.listKuliah.remove(makul)

#No 6
class SiswaSMA(Manusia):
    def __init__(self, nama, NISN, uangSaku, alamat):
        self.nama = nama
        self.nisn = NISN
        self.uangSaku = uangSaku
        self.alamat = alamat
  
```


5.

The left screenshot shows a Python 3.7.6 Shell with the following code and output:

```
>>> p9 = Pesan("Indonesia adalah negeri yang indah")
>>> p9.apakahTerandung("ege")
True
>>> p9.apakahTerandung("eka")
False
>>> m1.ambilKotaTinggal()
'Karanganyar'
>>> m1.perbaruiKotaTinggal("konohagakure")
>>> m1.ambilKotaTinggal()
'konohagakure'
>>> m1.ambilUangSaku()
300000
>>> m1.tambahUangSaku(100000)
>>> m1.ambilUangSaku()
300000
>>> l1.listKuliah()
Traceback (most recent call last):
  File "<pyshell#9>", line 1, in <module>
    l1.listKuliah()
  File "<pyshell#10>", line 1, in <module>
    m1.listKuliah()
NameError: name 'l1' is not defined
>>> m1.listKuliah()
Traceback (most recent call last):
  File "<pyshell#10>", line 1, in <module>
    m1.listKuliah()
TypeError: 'list' object is not callable
>>> m1.ambilKuliah("Web Dinamis")
>>> m1.listKuliah()
Traceback (most recent call last):
  File "<pyshell#12>", line 1, in <module>
    m1.listKuliah()
TypeError: 'list' object is not callable
>>> m1.listKuliah()
['Web Dinamis']
>>> m1.ambilKuliah("Java")
>>> m1.listKuliah()
['Web Dinamis', 'Java']
>>> m1.hapusKuliah("Web Dinamis")
>>> m1.listKuliah()
['Java']
>>> |
```

The right screenshot shows the source code for the class and its usage:

```
def makan(self,s):
    print("Saya baru saja makan",s,"sambil belajar.")
    self.keadaan = "Kenyang"

#No 4
listKuliah=[]
def ambilKuliah(self, makul) :
    self.listKuliah.append(makul)

#No 5
def hapusKuliah(self, makul) :
    self.listKuliah.remove(makul)

#No 6
class SiswaSMA(Manusia):
    def __init__(self, nama, NISN, uangSaku, alamat):
        self.nama = nama
        self.nisn = NISN
        self.uangSaku = uangSaku
        self.alamat = alamat
```

6.

The left screenshot shows a Python 3.7.6 Shell with the following code and output:

```
>>> m1.tambahUangSaku(100000)
>>> m1.ambilUangSaku()
300000
>>> l1.listKuliah()
Traceback (most recent call last):
  File "<pyshell#9>", line 1, in <module>
    l1.listKuliah()
  File "<pyshell#10>", line 1, in <module>
    m1.listKuliah()
NameError: name 'l1' is not defined
>>> m1.listKuliah()
Traceback (most recent call last):
  File "<pyshell#10>", line 1, in <module>
    m1.listKuliah()
TypeError: 'list' object is not callable
>>> m1.ambilKuliah("Web Dinamis")
>>> m1.listKuliah()
Traceback (most recent call last):
  File "<pyshell#12>", line 1, in <module>
    m1.listKuliah()
TypeError: 'list' object is not callable
>>> m1.listKuliah()
['Web Dinamis']
>>> m1.ambilKuliah("Java")
>>> m1.listKuliah()
['Web Dinamis', 'Java']
>>> m1.hapusKuliah("Web Dinamis")
>>> m1.listKuliah()
['Java']
>>> s1 = siswaSMA("Beny",999199,100000,"Karanganyar")
Traceback (most recent call last):
  File "<pyshell#18>", line 1, in <module>
    s1 = siswaSMA("Beny",999199,100000,"Karanganyar")
NameError: name 'siswaSMA' is not defined
>>> s1 = siswaSMA("Beny",999199,100000,"Karanganyar")
>>> print(s1)
Nama      : Beny
NISN      : 999199
Alamat    : Karanganyar
Uang Saku : 100000
>>> |
```

The right screenshot shows the source code for the class and its usage:

```
#No 6
class SiswaSMA(Manusia):
    def __init__(self, nama, NISN, uangSaku, alamat):
        self.nama = nama
        self.nisn = NISN
        self.uangSaku = uangSaku
        self.alamat = alamat

    def __str__(self):
        return 'Nama      : ' + str(self.nama) + "\n" + 'NISN      : ' + str(sel

    def ambilNama(self):
        return self.nama

    def ambilNisn(self):
        return self.nisn

    def ambilUangSaku(self):
        return self.uangSaku
```

7. Metode dan state yang tampak di object itu berasal dari semua class, dari Manusia, Mahasiswa, atau MhsTIF. Ini adalah konsep pewarisan. MhsTIF mewarisi sifat Manusia dan Mahasiswa Karena Mhs TIF adalah anak kelas dari Mahasiswa dan Mahasiswa adalah anak kelas Manusia

