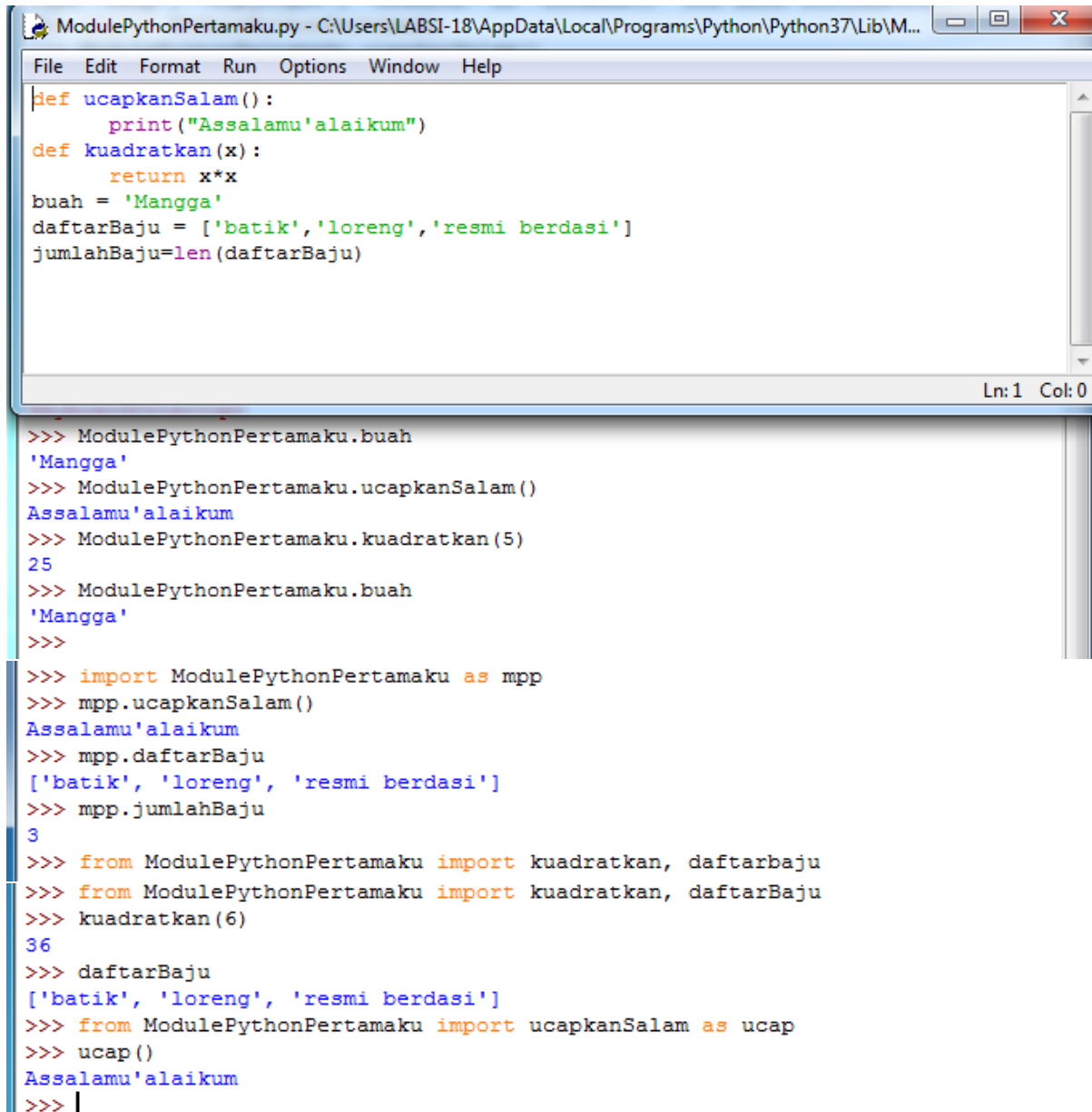


Nama : Sang Aji Indutoro
NIM : L200180003

Latihan 2.1



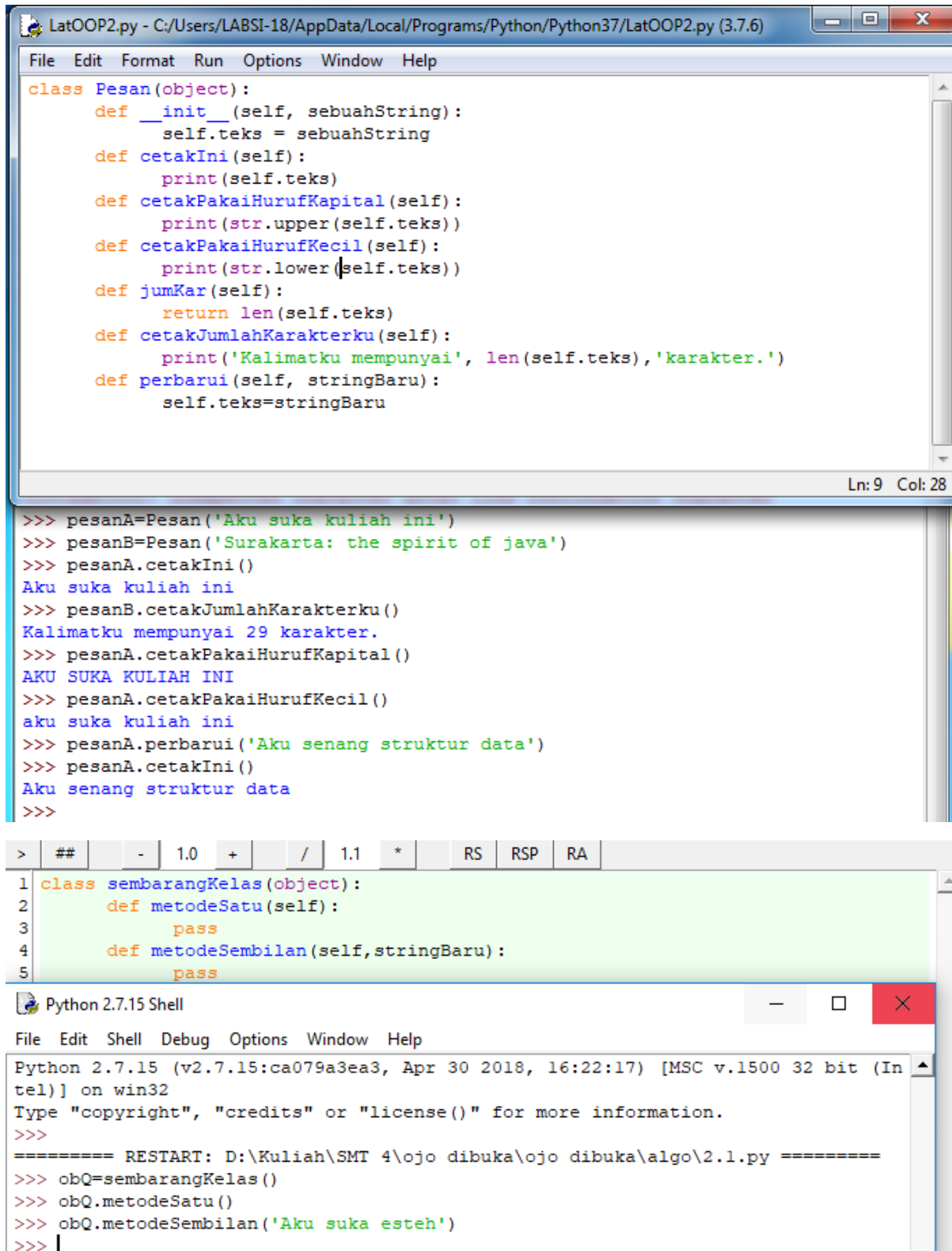
```
ModulePythonPertamaku.py - C:\Users\LABSI-18\AppData\Local\Programs\Python\Python37\Lib\M...
File Edit Format Run Options Window Help
def ucapkanSalam():
    print("Assalamu'alaikum")
def kuadratkan(x):
    return x*x
buah = 'Mangga'
daftarBaju = ['batik', 'loreng', 'resmi berdasi']
jumlahBaju=len(daftarBaju)

Ln: 1 Col: 0

>>> ModulePythonPertamaku.buah
'Mangga'
>>> 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
3
>>> from ModulePythonPertamaku import kuadratkan, daftarbaju
>>> from ModulePythonPertamaku import kuadratkan, daftarBaju
>>> kuadratkan(6)
36
>>> daftarBaju
['batik', 'loreng', 'resmi berdasi']
>>> from ModulePythonPertamaku import ucapkanSalam as ucap
>>> ucap()
Assalamu'alaikum
>>> |
```

Latihan 2.2



The image shows a Python IDE window titled "LatOOP2.py" with a menu bar (File, Edit, Format, Run, Options, Window, Help) and a status bar (Ln: 9 Col: 28). The code defines a class `Pesan` with methods `__init__`, `cetakIni`, `cetakPakaiHurufKapital`, `cetakPakaiHurufKecil`, `jumKar`, `cetakJumlahKarakterku`, and `perbarui`. Below the code, the execution results are shown, demonstrating the creation of objects `pesanA` and `pesanB`, and the use of their methods.

```
class Pesan(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

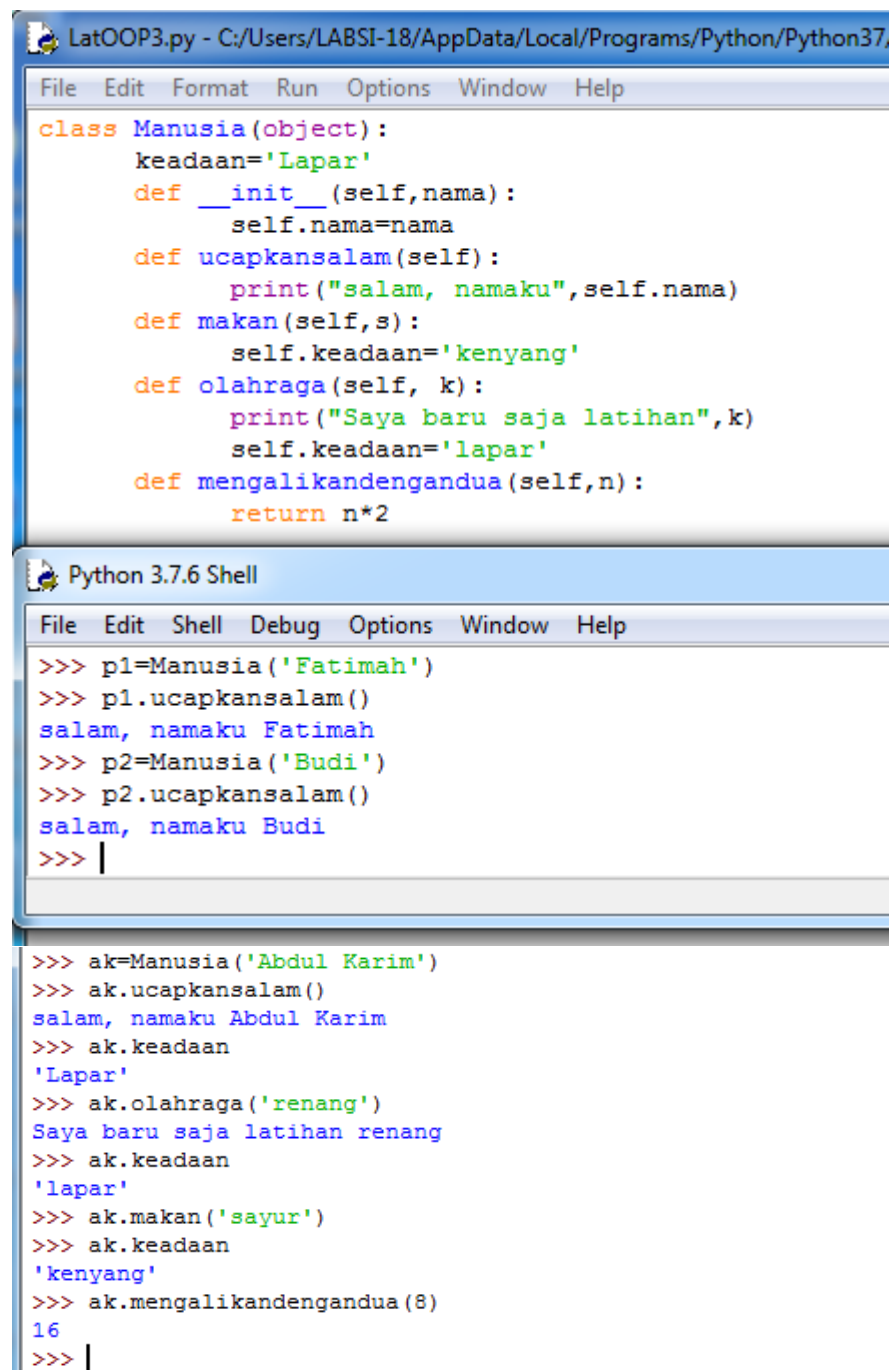
>>> pesanA=Pesan('Aku suka kuliah ini')
>>> pesanB=Pesan('Surakarta: the spirit of java')
>>> pesanA.cetakIni()
Aku suka kuliah ini
>>> pesanB.cetakJumlahKarakterku()
Kalimatku mempunyai 29 karakter.
>>> pesanA.cetakPakaiHurufKapital()
AKU SUKA KULIAH INI
>>> pesanA.cetakPakaiHurufKecil()
aku suka kuliah ini
>>> pesanA.perbarui('Aku senang struktur data')
>>> pesanA.cetakIni()
Aku senang struktur data
>>>
```

Below the IDE window, a "Python 2.7.15 Shell" window is open, showing the same code and execution results. The shell window has a menu bar (File, Edit, Shell, Debug, Options, Window, Help) and a status bar (Python 2.7.15 (v2.7.15:ca079a3ea3, Apr 30 2018, 16:22:17) [MSC v.1500 32 bit (Intel)] on win32). The execution results are identical to the ones shown in the IDE window.

```
1 class sembarangKelas(object):
2     def metodeSatu(self):
3         pass
4     def metodeSembilan(self, stringBaru):
5         pass

>>>
===== RESTART: D:\Kuliah\SMT 4\ojo dibuka\ojo dibuka\algo\2.1.py =====
>>> obQ=sembarangKelas()
>>> obQ.metodeSatu()
>>> obQ.metodeSembilan('Aku suka esteh')
>>>
```

Latihan 2.3



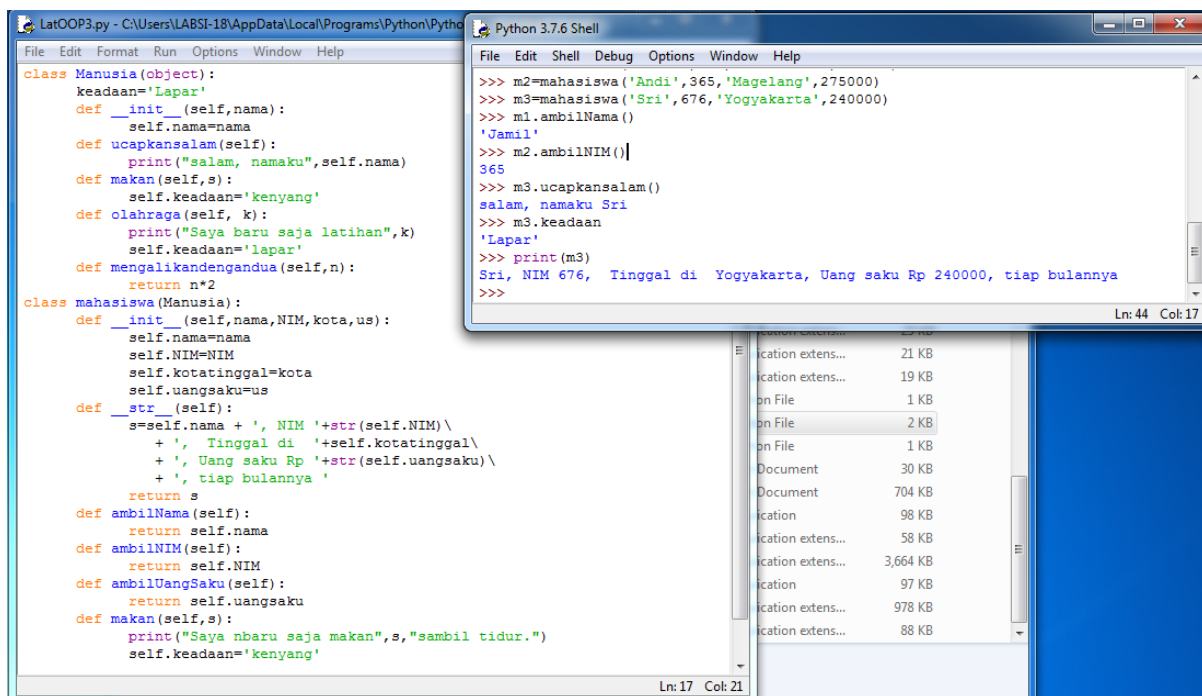
The image shows a screenshot of a Python IDE with two windows. The top window, titled 'LatOOP3.py - C:/Users/LABSI-18/AppData/Local/Programs/Python/Python37...', contains a Python class definition for 'Manusia'. The class has an attribute 'keadaan' set to 'Lapar', an initialization method '__init__' that sets the 'nama' attribute, and several methods: 'ucapkansalam' (prints a greeting), 'makan' (changes 'keadaan' to 'kenyang'), 'olahraga' (prints a message and changes 'keadaan' to 'lapar'), and 'mengalikandengandua' (returns 'n*2'). The bottom window, titled 'Python 3.7.6 Shell', shows the execution of the code. It creates two objects, 'p1' (Fatimah) and 'p2' (Budi), and calls their 'ucapkansalam' methods. Then, it creates an object 'ak' (Abdul Karim) and calls several methods: 'ucapkansalam', 'keadaan' (returns 'Lapar'), 'olahraga' with 'renang' (prints 'Saya baru saja latihan renang' and changes 'keadaan' to 'lapar'), 'makan' with 'sayur' (changes 'keadaan' to 'kenyang'), and 'mengalikandengandua' with '8' (returns '16').

```
class Manusia(object):
    keadaan='Lapar'
    def __init__(self,nama):
        self.nama=nama
    def ucapkansalam(self):
        print("salam, namaku",self.nama)
    def makan(self, s):
        self.keadaan='kenyang'
    def olahraga(self, k):
        print("Saya baru saja latihan",k)
        self.keadaan='lapar'
    def mengalikandengandua(self,n):
        return n*2
```

```
>>> p1=Manusia('Fatimah')
>>> p1.ucapkansalam()
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.olahraga('renang')
Saya baru saja latihan renang
>>> ak.keadaan
'lapar'
>>> ak.makan('sayur')
>>> ak.keadaan
'kenyang'
>>> ak.mengalikandengandua(8)
16
>>> |
```

Latihan 2.4



The screenshot shows a Python IDE with two windows. The left window, titled 'LatOOP3.py', contains the following code:

```
class Manusia(object):
    keadaan='Lapar'
    def __init__(self,nama):
        self.nama=nama
    def ucapkansalam(self):
        print("salam, namaku",self.nama)
    def makan(self,s):
        self.keadaan='kenyang'
    def olahraga(self, k):
        print("Saya baru saja latihan",k)
        self.keadaan='lapar'
    def mengalikandandua(self,n):
        return n*2
class mahasiswa(Manusia):
    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 Rp '+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 nbaru saja makan",s,"sambil tidur.")
        self.keadaan='kenyang'
```

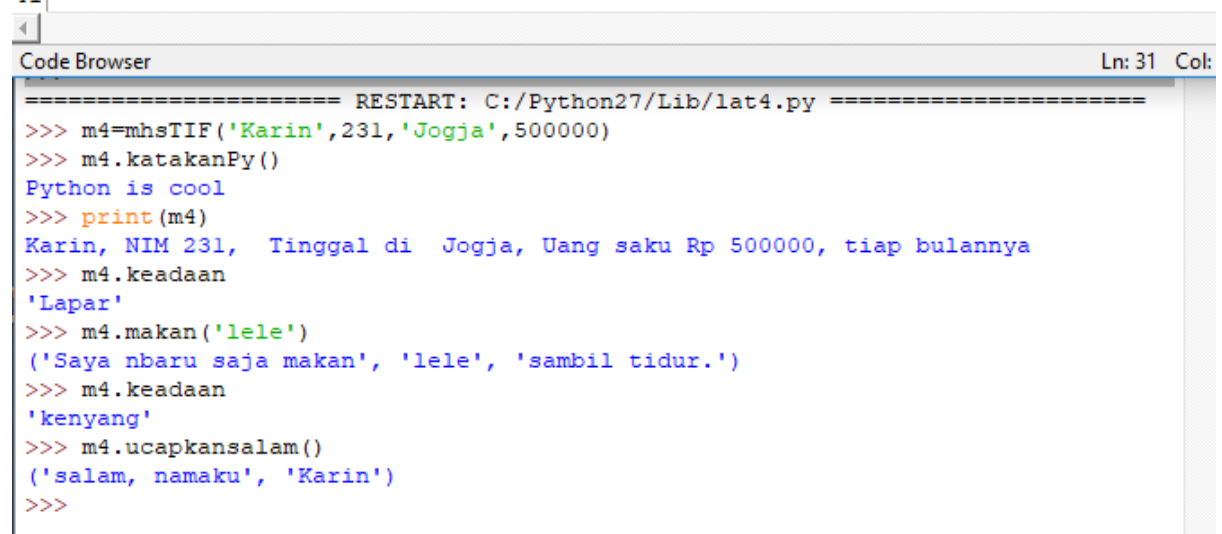
The right window, titled 'Python 3.7.6 Shell', shows the following interactive session:

```
>>> m2=mahasiswa('Andi',365,'Magelang',275000)
>>> m3=mahasiswa('Sri',676,'Yogyakarta',240000)
>>> m1.ambilNama()
'Jamil'
>>> m2.ambilNIM()
365
>>> m3.ucapkanksalam()
salam, namaku Sri
>>> m3.keadaan
'Lapar'
>>> print(m3)
Sri, NIM 676, Tinggal di Yogyakarta, Uang saku Rp 240000, tiap bulannya
>>>
```

At the bottom right, a file explorer shows a list of files and folders with their sizes.

Latihan 2.5

```
38 class mhsTIF(mahasiswa):
39     def katakanPy(self):
40         print('Python is cool')
41
```



The screenshot shows a 'Code Browser' window with the following content:

```
===== RESTART: C:/Python27/Lib/lat4.py =====
>>> m4=mhsTIF('Karin',231,'Jogja',500000)
>>> m4.katakanPy()
Python is cool
>>> print(m4)
Karin, NIM 231, Tinggal di Jogja, Uang saku Rp 500000, tiap bulannya
>>> m4.keadaan
'Lapar'
>>> m4.makan('lele')
('Saya nbaru saja makan', 'lele', 'sambil tidur.')
>>> m4.keadaan
'kenyang'
>>> m4.ucapkanksalam()
('salam, namaku', 'Karin')
>>>
```

Latihan 2.6

```
===== RESTART: C:/Python27/Lib/lat4.py =====
>>> m1=mahasiswa('Jamil',234,'Surakarta',250000)
>>> m2=mahasiswa('Andi',365,'Magelang',275000)
>>> m3=mahasiswa('Sri',676,'Yogyakarta',240000)
>>> daftar = [m1,m2,m3]
>>> for i in daftar: print(i)

Jamil, NIM 234, Tinggal di Surakarta, Uang saku Rp 250000, tiap bulannya
Andi, NIM 365, Tinggal di Magelang, Uang saku Rp 275000, tiap bulannya
Sri, NIM 676, Tinggal di Yogyakarta, Uang saku Rp 240000, tiap bulannya
>>> daftar[2].ambilNama()
'Sri'
>>> |
```

Latihan 2.7

```
1 class kelasKosongan(object):
2     pass
3 k=kelasKosongan()
4 k.x=23
5 k.y=47
6 print(k.x + k.y)
7 k.mystr="Indonesia"
8 print(k.mystr)
9 |
```

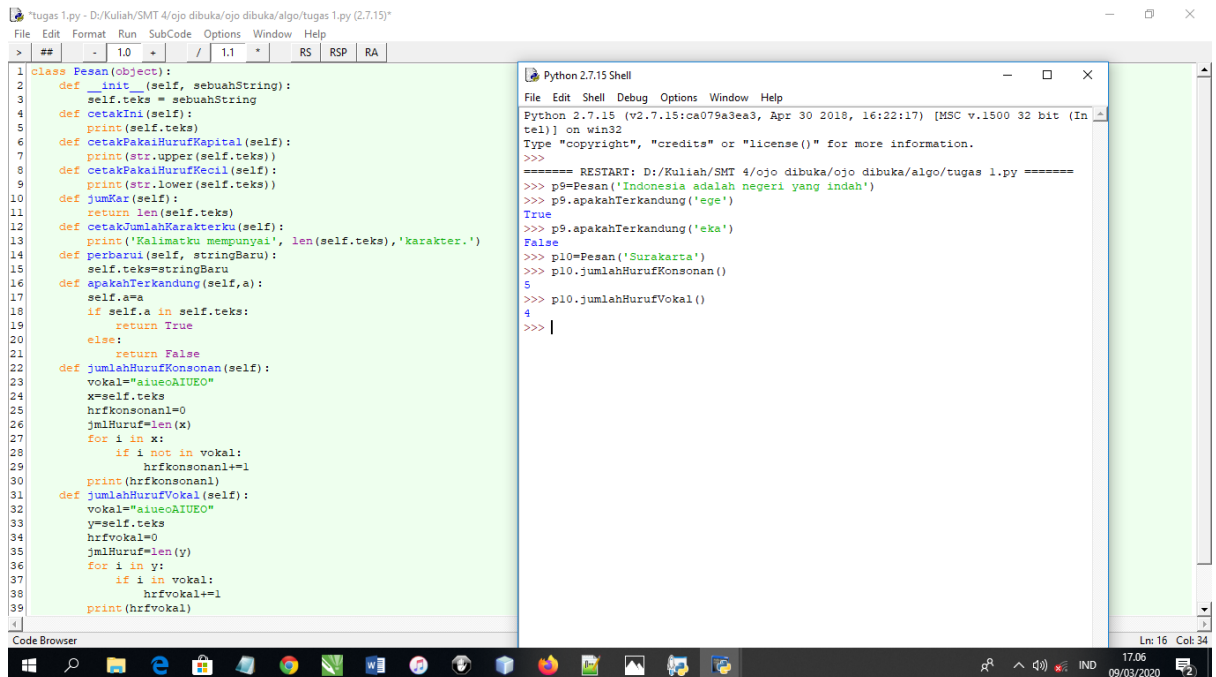
Code Browser Ln: 9 Co

```
===== RESTART: C:/Users/ASUS/Downloads/idlex-1.18/idlex-1.18/lat7.py =====
70
Indonesia
>>>
```

GUI: OFF (TK) Ln: 35 Col: 4

Soal-soal untuk mahasiswa

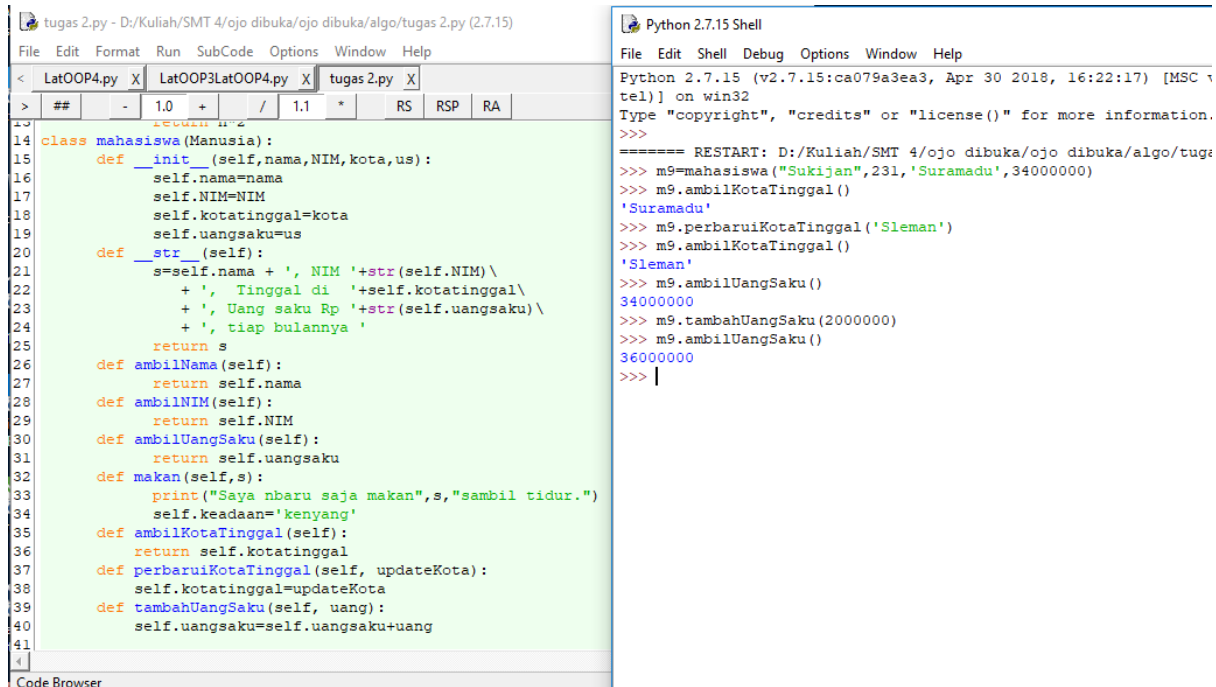
1. Modifikasi latihan 2.2



The screenshot shows a Python IDE with a file named 'tugas 1.py'. The code defines a class 'Pesan' with methods for initializing a message, printing it, and performing various string operations. The execution window shows the following output:

```
Python 2.7.15 Shell
File Edit Shell Debug Options Window Help
Python 2.7.15 (v2.7.15:ca079a3ea3, Apr 30 2018, 16:22:17) [MSC v.1500 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: D:/Kuliah/SMI 4/ojo dibuka/ojo dibuka/algo/tugas 1.py =====
>>> p9=Pesan('Indonesia adalah negeri yang indah')
>>> p9.apakahTerkandung('ege')
True
>>> p9.apakahTerkandung('eka')
False
>>> p10=Pesan('Surakarta')
>>> p10.jumlahHurufKonsonan()
5
>>> p10.jumlahHurufVokal()
4
>>>
```

2. Modifikasi latihan 2.4



The screenshot shows a Python IDE with a file named 'tugas 2.py'. The code defines a class 'mahasiswa' with methods for initializing a student, printing their details, and performing various operations. The execution window shows the following output:

```
Python 2.7.15 Shell
File Edit Shell Debug Options Window Help
Python 2.7.15 (v2.7.15:ca079a3ea3, Apr 30 2018, 16:22:17) [MSC v.1500 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: D:/Kuliah/SMI 4/ojo dibuka/ojo dibuka/algo/tugas 2.py =====
>>> m9=mahasiswa("Sukijan", 231, "Suramadu", 34000000)
>>> m9.ambilKotaTinggal()
'Suramadu'
>>> m9.perbaruiKotaTinggal('Sleman')
>>> m9.ambilKotaTinggal()
'Sleman'
>>> m9.ambilUangSaku()
34000000
>>> m9.tambahUangSaku(2000000)
>>> m9.ambilUangSaku()
36000000
>>>
```

3. Modifikasi latihan 2.4 dengan menambahkan input()

tugas 2.py - D:/Kuliah/SMT 4/ojo dibuka/ojo dibuka/algo/tugas 2.py (2.7.15)

File Edit Format Run SubCode Options Window Help

< LatOOP4.py X LatOOP3LatOOP4.py X tugas 2.py X

> ## - 1.0 + / 1.1 * RS RSP RA

```
42
43 a=input("Masukkan nama : ")
44 b=input("Masukkan NIM : ")
45 c=input("Masukkan alamat : ")
46 d=input("Masukkan uang saku : ")
47 m=mahasiswa(a,b,c,d)
48
```

Python 2.7.15 Shell

File Edit Shell Debug Options Window Help

```
===== RESTART: D:/Kuliah/SMT 4/ojo dibuka/ojo dibuka/algo/tugas 2.py =====
Masukkan nama : "aku"
Masukkan NIM : 123
Masukkan alamat : "solo"
Masukkan uang saku : 39000
>>> m.ambilNama()
'aku'
>>> m.ambilUangSaku()
39000
>>> m.ambilNIM()
123
>>> m.ambilKotaTinggal()
'solo'
>>> |
```

GUI: OFF (TK) Ln: 30 Col: 4

4. Menambah listKuliah di latihan 2.4

tugas 2.py - D:/Kuliah/SMT 4/ojo dibuka/ojo dibuka/algo/tugas 2.py (2.7.15)

File Edit Format Run SubCode Options Window Help

< LatOOP4.py X LatOOP3LatOOP4.py X tugas 2.py X

> ## - 1.0 + / 1.1 * RS RSP RA

```
50 listKuliah=[]
51 def ambilKuliah(self, kuliah):
52     self.listKuliah.append(kuliah)
53
```

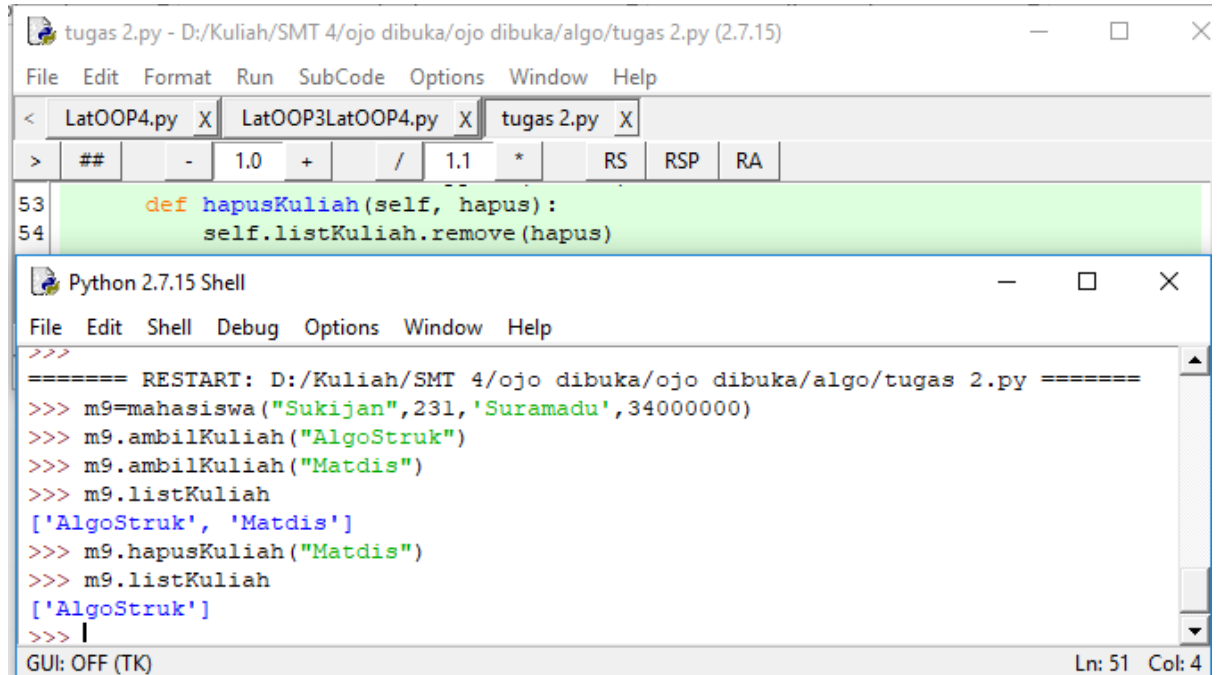
Python 2.7.15 Shell

File Edit Shell Debug Options Window Help

```
>>> m.ambilKotaTinggal()
'solo'
>>>
===== RESTART: D:/Kuliah/SMT 4/ojo dibuka/ojo dibuka/algo/tugas 2.py =====
>>> m9=mahasiswa("Sukijan",231,'Suramadu',34000000)
>>> m9.listKuliah
[]
>>> m9.ambilKuliah("Matdis")
>>> m9.listKuliah
['Matdis']
>>> m9.ambilKuliah("AlgoStruk")
>>> m9.listKuliah
['Matdis', 'AlgoStruk']
>>> |
```

GUI: OFF (TK) Ln: 41 Col: 4

5. Membuat method hapus sebuah mata kuliah di listKuliah



The screenshot shows a Python IDE window titled 'tugas 2.py - D:/Kuliah/SMT 4/ojo dibuka/ojo dibuka/algo/tugas 2.py (2.7.15)'. The code editor contains the following Python code:

```

53     def hapusKuliah(self, hapus):
54         self.listKuliah.remove(hapus)

```

Below the code editor is a 'Python 2.7.15 Shell' window. It shows the execution of the code:

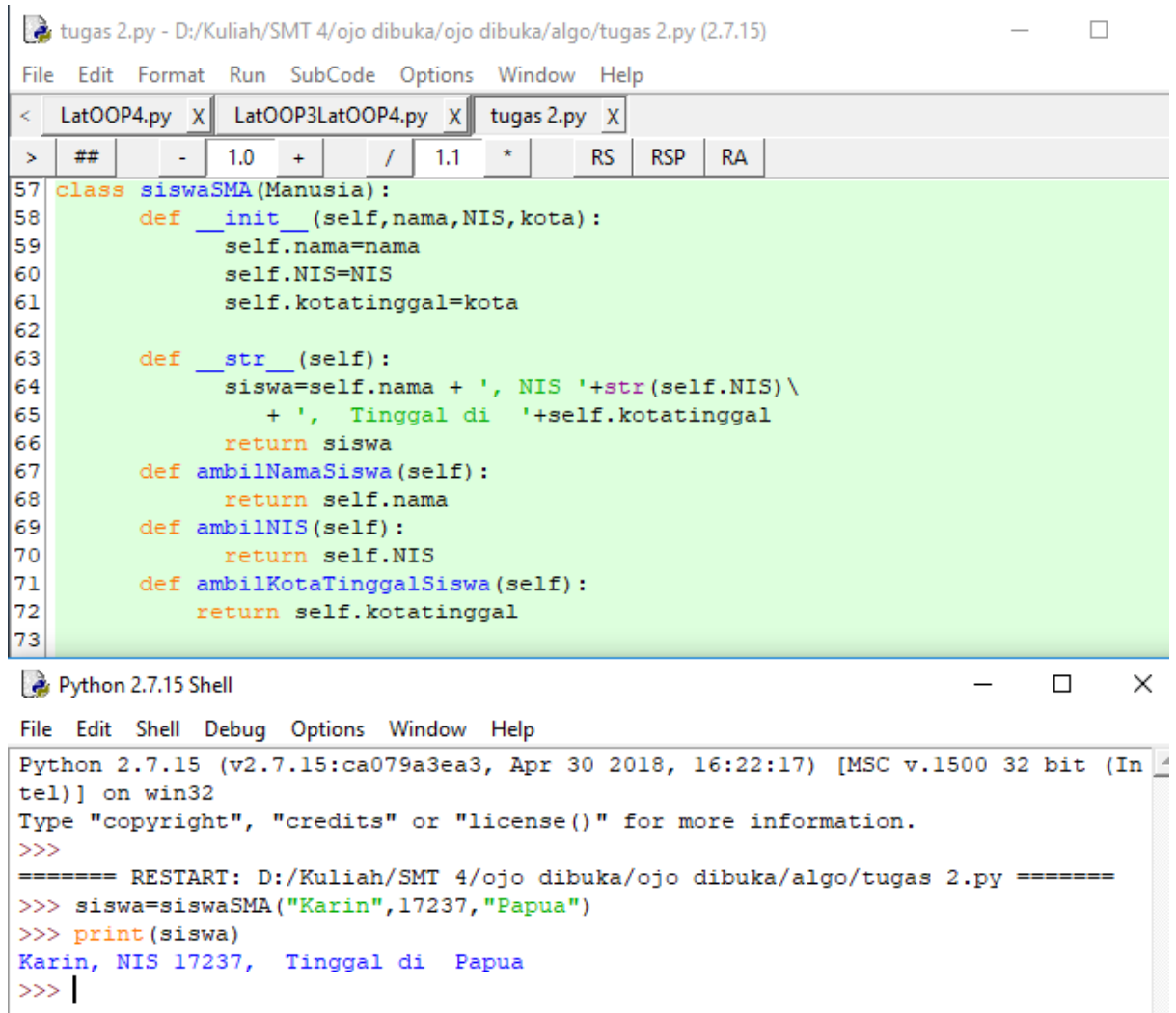
```

===== RESTART: D:/Kuliah/SMT 4/ojo dibuka/ojo dibuka/algo/tugas 2.py =====
>>> m9=mahasiswa("Sukijan",231,'Suramadu',34000000)
>>> m9.ambilKuliah("AlgoStruk")
>>> m9.ambilKuliah("Matdis")
>>> m9.listKuliah
['AlgoStruk', 'Matdis']
>>> m9.hapusKuliah("Matdis")
>>> m9.listKuliah
['AlgoStruk']
>>> |

```

The shell window status bar shows 'Ln: 51 Col: 4'.

6. Buat class siswaSMA



The screenshot shows a Python IDE window titled 'tugas 2.py - D:/Kuliah/SMT 4/ojo dibuka/ojo dibuka/algo/tugas 2.py (2.7.15)'. The code editor contains the following Python code:

```

57 class siswaSMA(Manusia):
58     def __init__(self,nama,NIS,kota):
59         self.nama=nama
60         self.NIS=NIS
61         self.kotatinggal=kota
62
63     def __str__(self):
64         siswa=self.nama + ', NIS '+str(self.NIS)\
65             + ', Tinggal di '+self.kotatinggal
66         return siswa
67     def ambilNamaSiswa(self):
68         return self.nama
69     def ambilNIS(self):
70         return self.NIS
71     def ambilKotaTinggalSiswa(self):
72         return self.kotatinggal
73

```

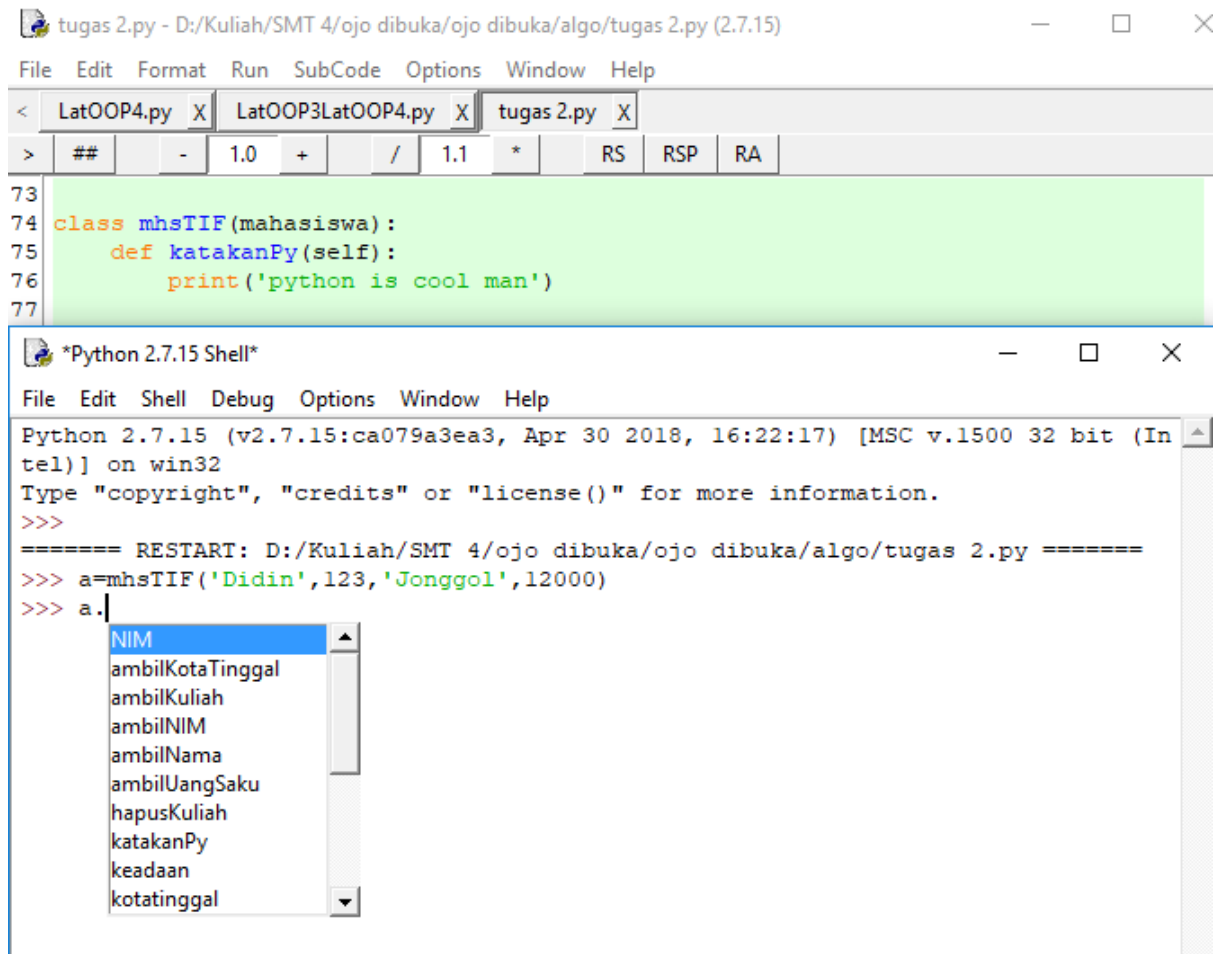
Below the code editor is a 'Python 2.7.15 Shell' window. It shows the execution of the code:

```

Python 2.7.15 (v2.7.15:ca079a3ea3, Apr 30 2018, 16:22:17) [MSC v.1500 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: D:/Kuliah/SMT 4/ojo dibuka/ojo dibuka/algo/tugas 2.py =====
>>> siswa=siswaSMA("Karin",17237,"Papua")
>>> print(siswa)
Karin, NIS 17237, Tinggal di Papua
>>> |

```


7. Membuat instance dari class mhsTIF



The image shows a Python IDE window titled 'tugas 2.py - D:/Kuliah/SMT 4/ojo dibuka/ojo dibuka/algo/tugas 2.py (2.7.15)'. The code editor displays the following Python code:

```
73  
74 class mhsTIF(mahasiswa):  
75     def katakanPy(self):  
76         print('python is cool man')  
77
```

Below the code editor is a Python 2.7.15 Shell window titled '*Python 2.7.15 Shell*'. The shell output shows the execution of the code:

```
Python 2.7.15 (v2.7.15:ca079a3ea3, Apr 30 2018, 16:22:17) [MSC v.1500 32 bit (Intel)] on win32  
Type "copyright", "credits" or "license()" for more information.  
>>>  
===== RESTART: D:/Kuliah/SMT 4/ojo dibuka/ojo dibuka/algo/tugas 2.py =====  
>>> a=mhsTIF('Didin',123,'Jonggol',12000)  
>>> a.  
NIM  
ambilKotaTinggal  
ambilKuliah  
ambilNIM  
ambilNama  
ambilUangSaku  
hapusKuliah  
katakanPy  
keadaan  
kotatinggal
```

Method dan *state* pada gambar diatas berasal dari class manusia, mahasiswa, dan mhsTIF