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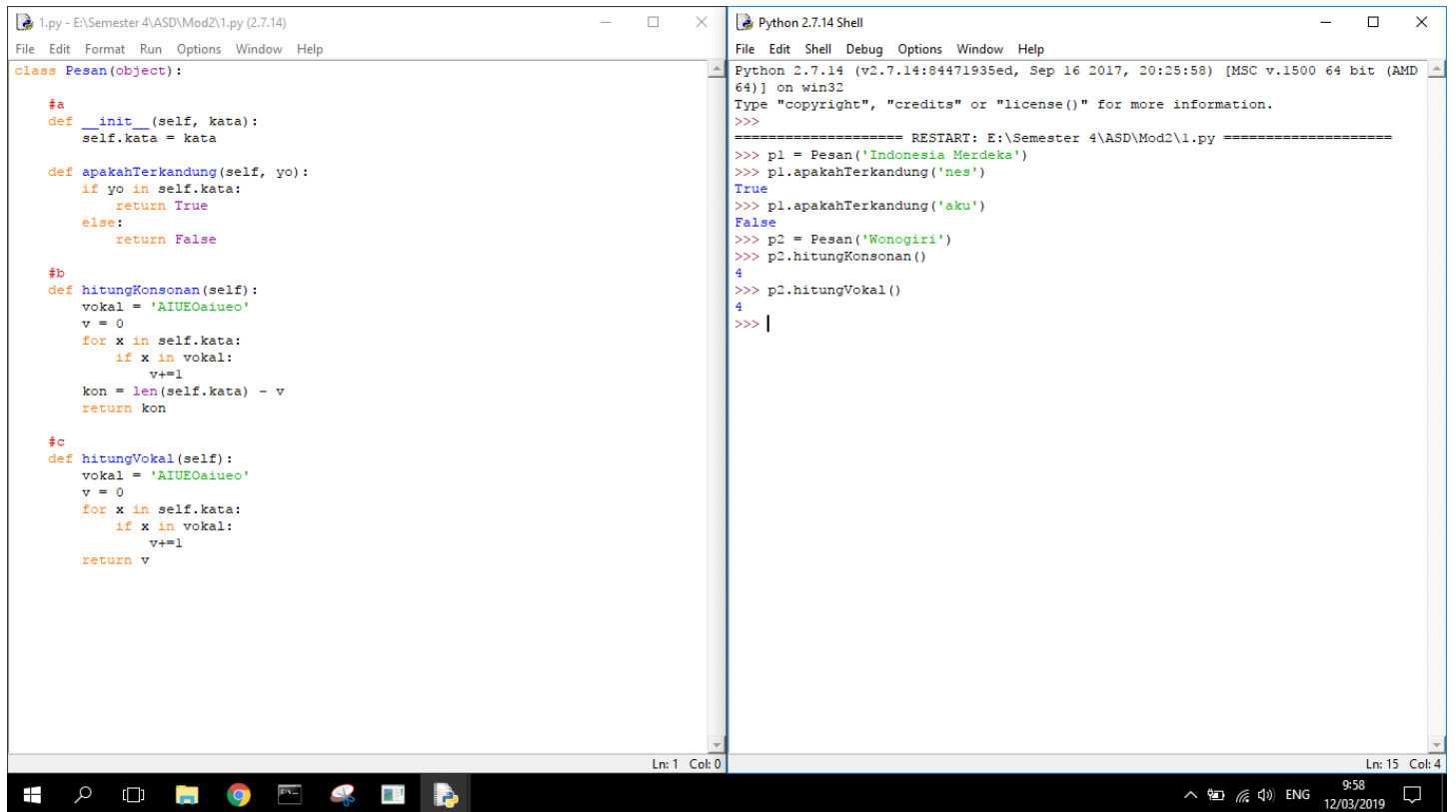
Kelas : D

## Modul 2

### Mengenal OOP pada Python

Soal – soal untuk mahasiswa

1.



The image shows a screenshot of a Python IDE with two windows. The left window, titled '1.py - E:\Semester 4\ASD\Mod2\1.py (2.7.14)', contains the following Python code:

```
class Pesan(object):  
    #a  
    def __init__(self, kata):  
        self.kata = kata  
  
    def apakahTerkandung(self, yo):  
        if yo in self.kata:  
            return True  
        else:  
            return False  
  
    #b  
    def hitungKonsonan(self):  
        vokal = 'AIUEOaiueo'  
        v = 0  
        for x in self.kata:  
            if x in vokal:  
                v+=1  
        kon = len(self.kata) - v  
        return kon  
  
    #c  
    def hitungVokal(self):  
        vokal = 'AIUEOaiueo'  
        v = 0  
        for x in self.kata:  
            if x in vokal:  
                v+=1  
        return v
```

The right window, titled 'Python 2.7.14 Shell', shows the execution of the code:

```
Python 2.7.14 (v2.7.14:84471935ed, Sep 16 2017, 20:25:58) [MSC v.1500 64 bit (AMD  
64)] on win32  
Type "copyright", "credits" or "license()" for more information.  
>>>  
===== RESTART: E:\Semester 4\ASD\Mod2\1.py =====  
>>> p1 = Pesan('Indonesia Merdeka')  
>>> p1.apakahTerkandung('nes')  
True  
>>> p1.apakahTerkandung('aku')  
False  
>>> p2 = Pesan('Wonogiri')  
>>> p2.hitungKonsonan()  
4  
>>> p2.hitungVokal()  
4  
>>> |
```

The taskbar at the bottom shows the Windows Start button, search icon, taskbar icons for File Explorer, Google Chrome, and other applications, along with the system clock showing 9:58 on 12/03/2019.

2.

2.py - E:\Semester 4\ASD\Mod2\2.py (2.7.14)
File Edit Format Run Options Window Help

```

def mengalikanDenganDua(self, n):
    return n*2

class Mahasiswa(Manusia):
    """Class yang dibangun dari class Mahasiswa"""

    def __init__(self, nama, NIM, kota, us):
        """Metode inisiasi ini menutupi metode inisiasi di class Manusia"""
        self.nama = nama
        self.nim = NIM
        self.kota = kota
        self.us = us

    def __str__(self):
        s = self.nama + ', NIM '+str(self.nim)\
            +'. Tinggal di ' + self.kota \
            +'. Uang saku Rp. ' + str(self.us)\
            +' tiap bulannya.'
        return s

    def ambilNama(self):
        return self.nama
    def ambilNim(self):
        return self.nim
    def ambilUangSaku(self):
        return self.us
    def tambahUangSaku(self, tambahUang):
        self.us = self.us + tambahUang
    def ambilKotaTinggal(self):
        return self.kota
    def perbaruiKotaTinggal(self, kotabaru):
        self.kota = kotabaru
    def makan(self, s):
        """Metode ini menutupi metode 'makan'-nya class Manusia.
        Mahasiswa kalau sambil belajar ."""
        print("Saya baru saja makan",s,"sambil belajar")
        self.keadaan = 'kenyang'

m1 = Mahasiswa('Kane', 234, 'London', 2500000)
m2 = Mahasiswa('Son', 365, 'Seoul', 2750000)
m3 = Mahasiswa('Lloris', 676, 'Paris', 2400000)

```

Ln: 30 Col: 41

Python 2.7.14 Shell
File Edit Shell Debug Options Window Help

```

Python 2.7.14 (v2.7.14:84471935ed, Sep 16 2017, 20:25:58) [MSC v.1500 64 bit (AMD
64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: E:\Semester 4\ASD\Mod2\2.py =====
>>> m1.ambilKotaTinggal()
'London'
>>> m1.perbaruiKotaTinggal('Manchester')
>>> m1.ambilKotaTinggal()
'Manchester'
>>> m1.ambilUangSaku()
2500000
>>> m1.tambahUangSaku(500000)
>>> m1.ambilUangSaku()
3000000
>>> |

```

Ln: 15 Col: 4

3.

3.py - E:\Semester 4\ASD\Mod2\3.py (2.7.14)
File Edit Format Run Options Window Help

```

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

class Mahasiswa(Manusia):
    """Class yang dibangun dari class Mahasiswa"""

    def __init__(self, nama, NIM, kota, us):
        """Metode inisiasi ini menutupi metode inisiasi di class Manusia"""
        self.nama = nama
        self.nim = NIM
        self.kota = kota
        self.us = us

    def __str__(self):
        s = self.nama + ', NIM '+str(self.nim)\
            +'. Tinggal di ' + self.kota \
            +'. Uang saku Rp. ' + str(self.us)\
            +' tiap bulannya.'
        return s

    def ambilNama(self):
        return self.nama
    def ambilNim(self):
        return self.nim
    def ambilUangSaku(self):
        return self.us
    def tambahUangSaku(self, tambahUang):
        self.us = self.us + tambahUang
    def ambilKotaTinggal(self):
        return self.kota
    def perbaruiKotaTinggal(self, kotabaru):
        self.kota = kotabaru
    def makan(self, s):
        """Metode ini menutupi metode 'makan'-nya class Manusia.
        Mahasiswa kalau sambil belajar ."""
        print("Saya baru saja makan",s,"sambil belajar")

```

Ln: 20 Col: 0

Python 2.7.14 Shell
File Edit Shell Debug Options Window Help

```

Python 2.7.14 (v2.7.14:84471935ed, Sep 16 2017, 20:25:58) [MSC v.1500 64 bit (AMD
64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: E:\Semester 4\ASD\Mod2\3.py =====
Masukkan nama: 'Alvian'
Masukkan nim: 'L200170132'
Masukkan kota tinggal: 'Wonogiri'
Masukkan uang saku: '1000000'
Alvian, NIM L200170132. Tinggal di Wonogiri. Uang saku Rp. 1000000 tiap bulannya.
>>> |

```

Ln: 10 Col: 4

4.

The screenshot shows a Python IDE with two windows. The left window is a Python file named '4.py' containing a class named 'Mahasiswa' that inherits from 'Manusia'. The class has attributes 'nama', 'NIM', 'kota', 'us', and 'lk'. It has methods for initialization, string representation, and various actions like 'ambilNama', 'ambilNim', 'ambilUangSaku', 'tambahUangSaku', 'ambilKotaTinggal', 'perbaruiKotaTinggal', 'makan', and 'ambilKuliah'. The right window is a Python 2.7.14 Shell showing the execution of the code. It creates three instances of the 'Mahasiswa' class and calls the 'ambilKuliah' method on the first instance, which returns a list containing 'Sistem Basis Data' and 'Rekayasa Perangkat Lunak'.

```

class Mahasiswa(Manusia):
    """Class yang dibangun dari class Mahasiswa"""

    def __init__(self, nama, NIM, kota, us, lk = []):
        """Metode inisiasi ini menutupi metode inisiasi di class Manusia"""
        self.nama = nama
        self.nim = NIM
        self.kota = kota
        self.us = us
        self.listkuliah = lk

    def __str__(self):
        s = self.nama + ', NIM ' + str(self.nim) \
            + '. Tinggal di ' + self.kota \
            + '. Uang saku Rp. ' + str(self.us) \
            + ' tiap bulannya.'
        return s

    def ambilNama(self):
        return self.nama
    def ambilNim(self):
        return self.nim
    def ambilUangSaku(self):
        return self.us
    def tambahUangSaku(self, tambahUang):
        self.us = self.us + tambahUang
    def ambilKotaTinggal(self):
        return self.kota
    def perbaruiKotaTinggal(self, kotabaru):
        self.kota = kotabaru
    def makan(self, s):
        """Metode ini menutupi metode 'makan'-nya class Manusia.
        Mahasiswa kalau sambil belajar ."""
        print("Saya baru saja makan", s, "sambil belajar")
        self.keadaan = 'kenyang'
    def ambilKuliah(self, ambil):
        self.listkuliah.append(ambil)

m1 = Mahasiswa('Kane', 234, 'London', 2500000)
m2 = Mahasiswa('Son', 365, 'Seoul', 2750000)
m3 = Mahasiswa('Lloris', 676, 'Paris', 2400000)

```

```

Python 2.7.14 (v2.7.14:84471935ed, Sep 16 2017, 20:25:58) [MSC v.1500 64 bit (AMD
64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: E:\Semester 4\ASD\Mod2\4.py =====
>>> m1.listkuliah
[]
>>> m1.ambilKuliah('Sistem Basis Data')
>>> m1.listkuliah
['Sistem Basis Data']
>>> m1.ambilKuliah('Rekayasa Perangkat Lunak')
>>> m1.listkuliah
['Sistem Basis Data', 'Rekayasa Perangkat Lunak']
>>>

```

5.

The screenshot shows a Python IDE with two windows. The left window is a Python file named '5.py' containing a class named 'Mahasiswa' that inherits from 'Manusia'. The class has attributes 'nama', 'NIM', 'kota', 'us', and 'lk'. It has methods for initialization, string representation, and various actions like 'ambilNama', 'ambilNim', 'ambilUangSaku', 'tambahUangSaku', 'ambilKotaTinggal', 'perbaruiKotaTinggal', 'makan', 'ambilKuliah', and 'hapusListKuliah'. The right window is a Python 2.7.14 Shell showing the execution of the code. It creates three instances of the 'Mahasiswa' class and calls the 'ambilKuliah' method on the first instance, which returns a list containing 'Sistem Basis Data' and 'Rekayasa Perangkat Lunak'. Then, it calls the 'hapusListKuliah' method on the first instance, which removes 'Sistem Basis Data' from the list, leaving only 'Rekayasa Perangkat Lunak'.

```

self.kota = kota
self.us = us
self.listkuliah = lk

def __str__(self):
    s = self.nama + ', NIM ' + str(self.nim) \
        + '. Tinggal di ' + self.kota \
        + '. Uang saku Rp. ' + str(self.us) \
        + ' tiap bulannya.'
    return s

def ambilNama(self):
    return self.nama
def ambilNim(self):
    return self.nim
def ambilUangSaku(self):
    return self.us
def tambahUangSaku(self, tambahUang):
    self.us = self.us + tambahUang
def ambilKotaTinggal(self):
    return self.kota
def perbaruiKotaTinggal(self, kotabaru):
    self.kota = kotabaru
def makan(self, s):
    """Metode ini menutupi metode 'makan'-nya class Manusia.
    Mahasiswa kalau sambil belajar ."""
    print("Saya baru saja makan", s, "sambil belajar")
    self.keadaan = 'kenyang'
def ambilKuliah(self, ambil):
    self.listkuliah.append(ambil)
def hapusListKuliah(self, hapus):
    for x in self.listkuliah:
        if hapus in self.listkuliah:
            self.listkuliah.remove(hapus)
        else:
            print("Maaf mata kuliah tidak ada dalam list mata kuliah yang diajarkan")

m1 = Mahasiswa('Kane', 234, 'London', 2500000)
m2 = Mahasiswa('Son', 365, 'Seoul', 2750000)
m3 = Mahasiswa('Lloris', 676, 'Paris', 2400000)

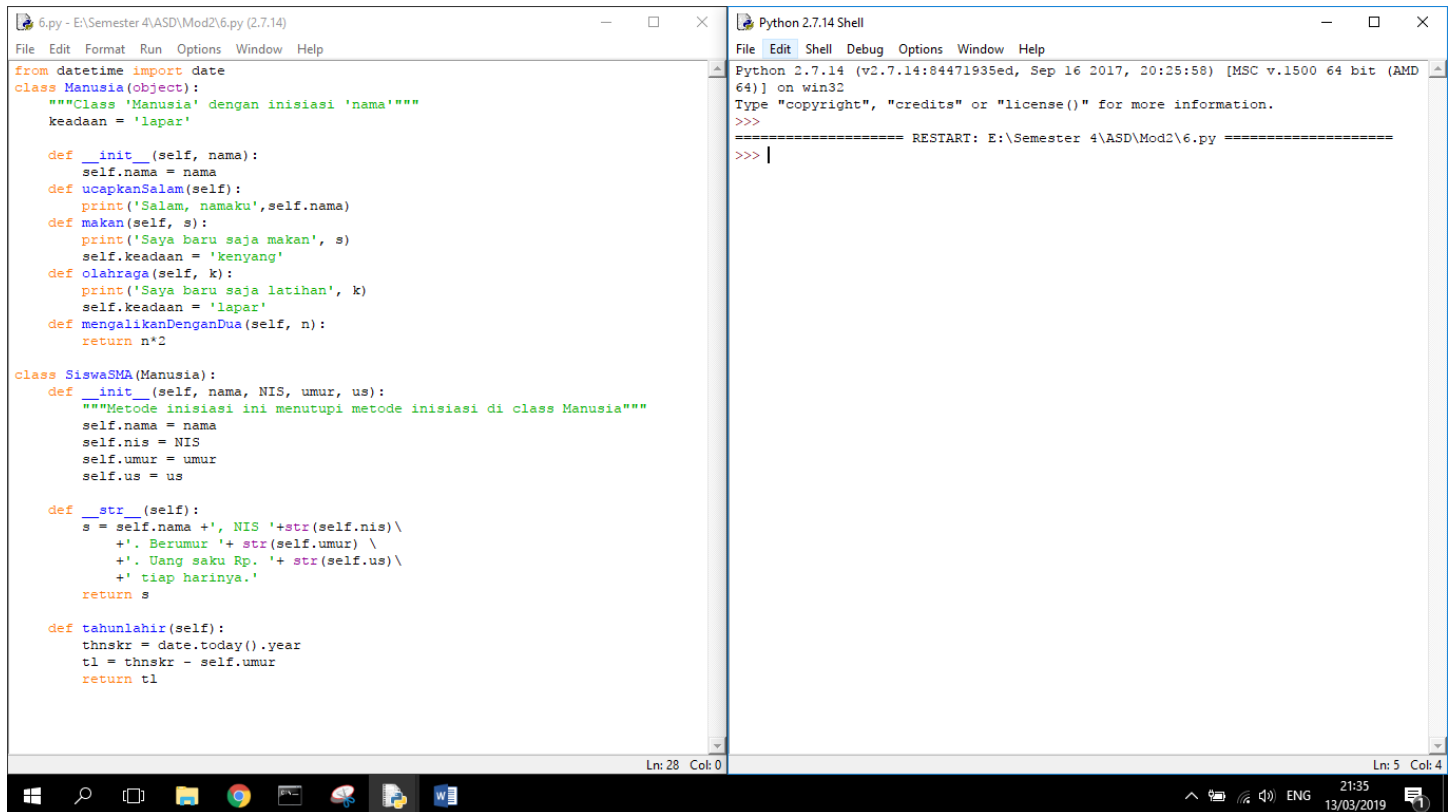
```

```

Python 2.7.14 (v2.7.14:84471935ed, Sep 16 2017, 20:25:58) [MSC v.1500 64 bit (AMD
64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: E:\Semester 4\ASD\Mod2\5.py =====
>>> m1.listkuliah
[]
>>> m1.ambilKuliah('Sistem Basis Data')
>>> m1.listkuliah
['Sistem Basis Data']
>>> m1.ambilKuliah('Rekayasa Perangkat Lunak')
>>> m1.listkuliah
['Sistem Basis Data', 'Rekayasa Perangkat Lunak']
>>> m1.hapusListKuliah('Sistem Basis Data')
>>> m1.listkuliah
['Rekayasa Perangkat Lunak']
>>>

```

6.



The image shows a screenshot of a Python IDE with two windows. The left window, titled '6.py - E:\Semester 4\ASD\Mod2\6.py (2.7.14)', contains the following Python code:

```
from datetime import date
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(n):
        return n*2

class SiswaSMA(Manusia):
    def __init__(self, nama, NIS, umur, us):
        """Metode inisiasi ini menutupi metode inisiasi di class Manusia"""
        self.nama = nama
        self.nis = NIS
        self.umur = umur
        self.us = us

    def __str__(self):
        s = self.nama + ', NIS ' + str(self.nis) \
            + '. Berumur ' + str(self.umur) \
            + '. Uang saku Rp. ' + str(self.us) \
            + ' tiap harinya.'
        return s

    def tahunlahir(self):
        thnskr = date.today().year
        t1 = thnskr - self.umur
        return t1
```

The right window, titled 'Python 2.7.14 Shell', shows the Python interpreter's startup screen with the following text:

```
Python 2.7.14 (v2.7.14:84471935ed, Sep 16 2017, 20:25:58) [MSC v.1500 64 bit (AMD
64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: E:\Semester 4\ASD\Mod2\6.py =====
>>> |
```

The taskbar at the bottom shows the Windows Start button, search icon, and several open applications including File Explorer, Google Chrome, and Microsoft Word. The system clock in the bottom right corner displays the time as 21:35 on 13/03/2019.