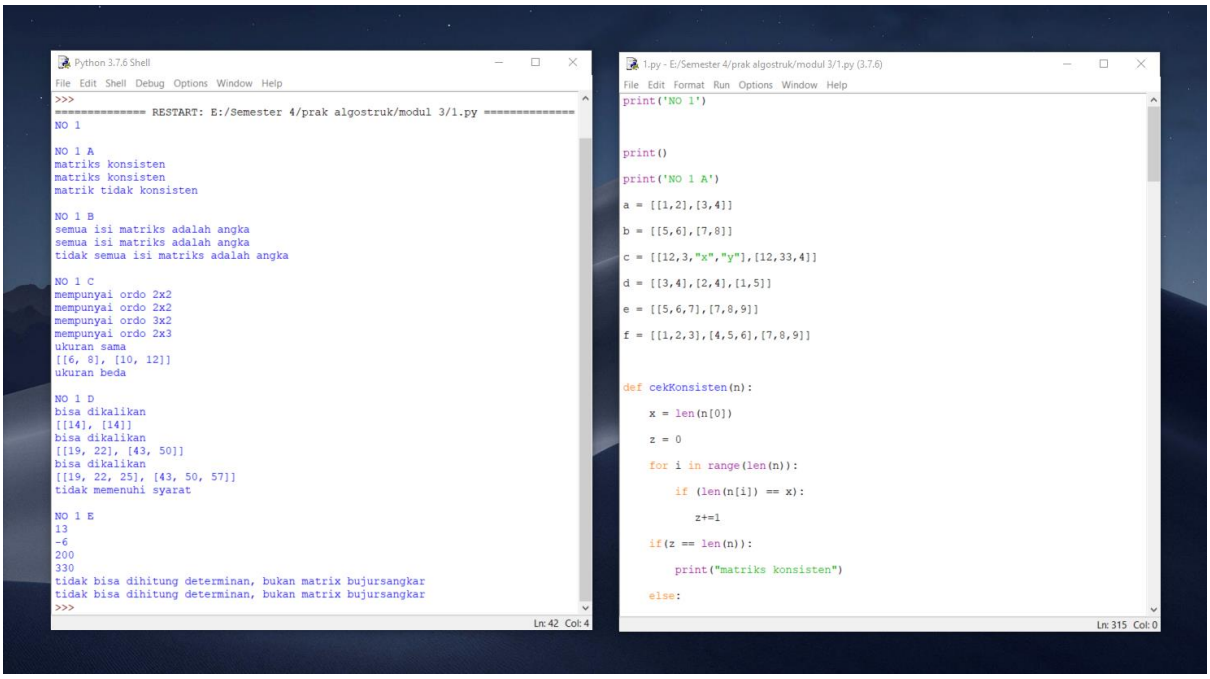
Nama : Rahmat beny susanto

NIM : L200180079

MODUL 3

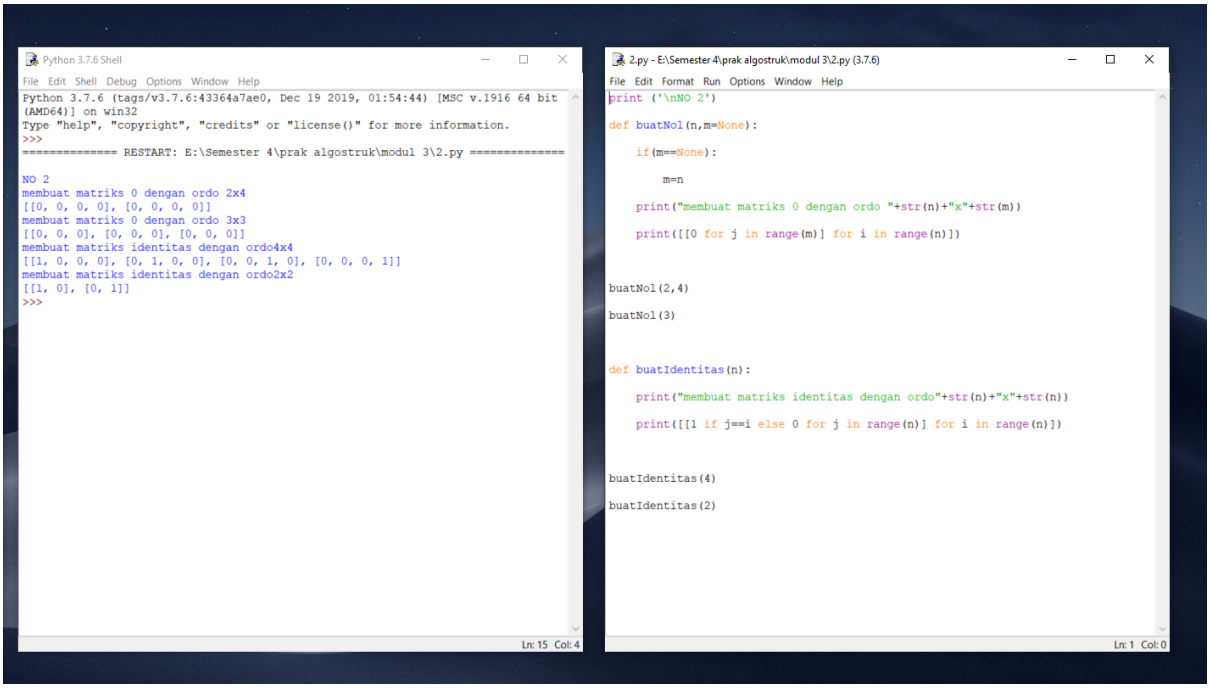
1.



```
Python 3.7.6 Shell
File Edit Shell Debug Options Window Help
>>>
========== RESTART: E:/Semester 4/prak algostruk/modul 3/1.py ==========
NO 1

NO 1 A
matriks konsisten
matriks konsisten
matrik tidak konsisten

NO 1 B
semua isi matriks adalah angka
semua isi matriks adalah angka
tidak semua isi matriks adalah angka

NO 1 C
mempunyai ordo 2x2
mempunyai ordo 2x2
mempunyai ordo 3x2
mempunyai ordo 2x3
ukuran sama
[[6, 8], [10, 12]]
ukuran beda

NO 1 D
bisa dikalikan
[[14], [14]]
bisa dikalikan
[[19, 22], [43, 50]]
bisa dikalikan
[[19, 22, 25], [43, 50, 57]]
tidak memenuhi syarat

NO 1 E
13
-6
200
330
tidak bisa dihitung determinan, bukan matrix bujursangkar
tidak bisa dihitung determinan, bukan matrix bujursangkar
>>>
Ln: 42 Col: 4
```

```
1.py - E:/Semester 4/prak algostruk/modul 3/1.py (3.7.6)
File Edit Format Run Options Window Help
print('NO 1')


print()
print('NO 1 A')
a = [[1,2],[3,4]]
b = [[5,6],[7,8]]
c = [[12,3,"x","y"],[12,33,4]]
d = [[3,4],[2,4],[1,5]]
e = [[5,6,7],[7,8,9]]
f = [[1,2,3],[4,5,6],[7,8,9]]


def cekKonsisten(n):
    x = len(n[0])
    z = 0
    for i in range(len(n)):
        if (len(n[i]) == x):
            z+=1
    if(z == len(n)):
        print("matriks konsisten")
    else:
Ln: 315 Col: 0
```

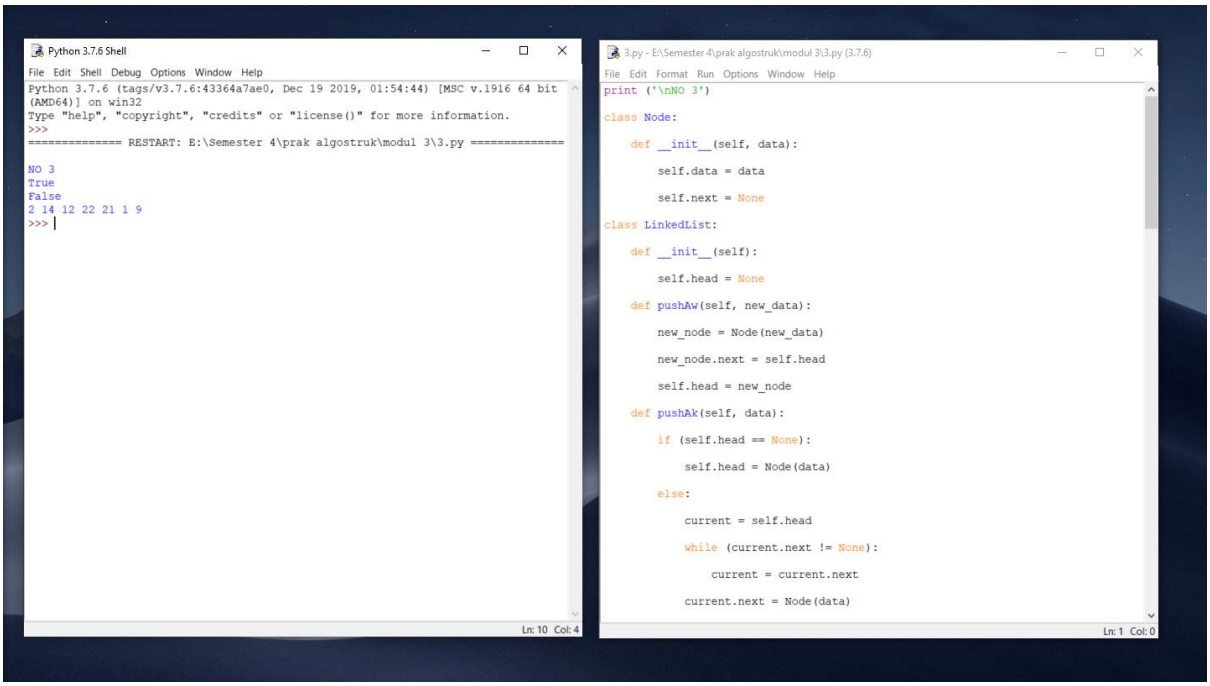
2.



```
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 3\2.py ==========

NO 2
membuat matriks 0 dengan ordo 2x4
[[0, 0, 0, 0], [0, 0, 0, 0]]
membuat matriks 0 dengan ordo 3x3
[[0, 0, 0], [0, 0, 0], [0, 0, 0]]
membuat matriks identitas dengan ordo4x4
[[1, 0, 0, 0], [0, 1, 0, 0], [0, 0, 1, 0], [0, 0, 0, 1]]
membuat matriks identitas dengan ordo2x2
[[1, 0], [0, 1]]
>>>
Ln: 15 Col: 4
```

```
2.py - E:\Semester 4\prak algostruk\modul 3\2.py (3.7.6)
File Edit Format Run Options Window Help
print ('\nNO 2')

def buatNol(n,m=None):

    if(m==None):
        m=n

    print("membuat matriks 0 dengan ordo "+str(n)+"x"+str(m))

    print([[0 for j in range(m)] for i in range(n)])


buatNol(2,4)

buatNol(3)


def buatIdentitas(n):

    print("membuat matriks identitas dengan ordo"+str(n)+"x"+str(n))

    print([[1 if j==i else 0 for j in range(n)] for i in range(n)])


buatIdentitas(4)

buatIdentitas(2)
Ln: 1 Col: 0
```

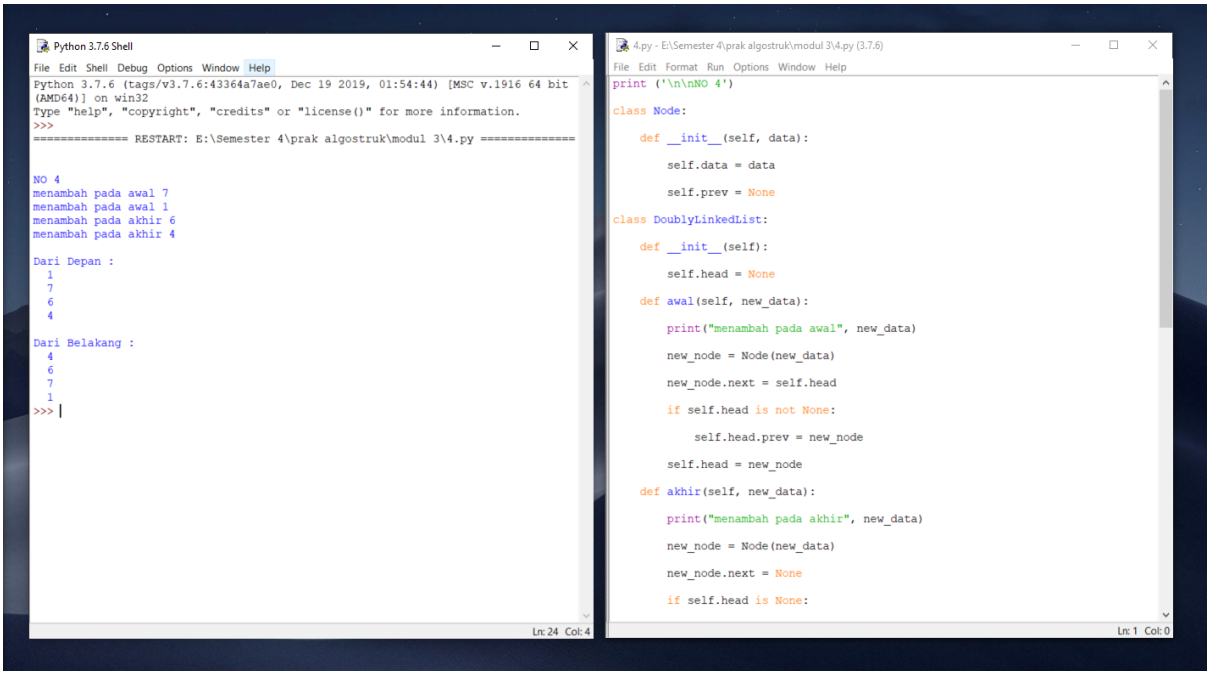
3.



```
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 3\3.py ==============

NO 3
True
False
2 14 12 22 21 1 9
>>>
Ln: 10  Col: 4
```

```
3.py - E:\Semester 4\prak algostruk\modul 3\3.py (3.7.6)
File Edit Format Run Options Window Help
print ('\nNO 3')

class Node:

    def __init__(self, data):

        self.data = data

        self.next = None

class LinkedList:

    def __init__(self):

        self.head = None

    def pushAw(self, new_data):

        new_node = Node(new_data)

        new_node.next = self.head

        self.head = new_node

    def pushAk(self, data):

        if (self.head == None):

            self.head = Node(data)

        else:

            current = self.head

            while (current.next != None):

                current = current.next

            current.next = Node(data)
Ln: 1  Col: 0
```

4.



```
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 3\4.py ==============


NO 4
menambah pada awal 7
menambah pada awal 1
menambah pada akhir 6
menambah pada akhir 4

Dari Depan :
  1
  7
  6
  4

Dari Belakang :
  4
  6
  7
  1
>>>
Ln: 24  Col: 4
```

```
4.py - E:\Semester 4\prak algostruk\modul 3\4.py (3.7.6)
File Edit Format Run Options Window Help
print ('\n\nNO 4')

class Node:

    def __init__(self, data):

        self.data = data

        self.prev = None

class DoublyLinkedList:

    def __init__(self):

        self.head = None

    def awal(self, new_data):

        print("menambah pada awal", new_data)

        new_node = Node(new_data)

        new_node.next = self.head

        if self.head is not None:

            self.head.prev = new_node

        self.head = new_node

    def akhir(self, new_data):

        print("menambah pada akhir", new_data)

        new_node = Node(new_data)

        new_node.next = None

        if self.head is None:
Ln: 1  Col: 0
```