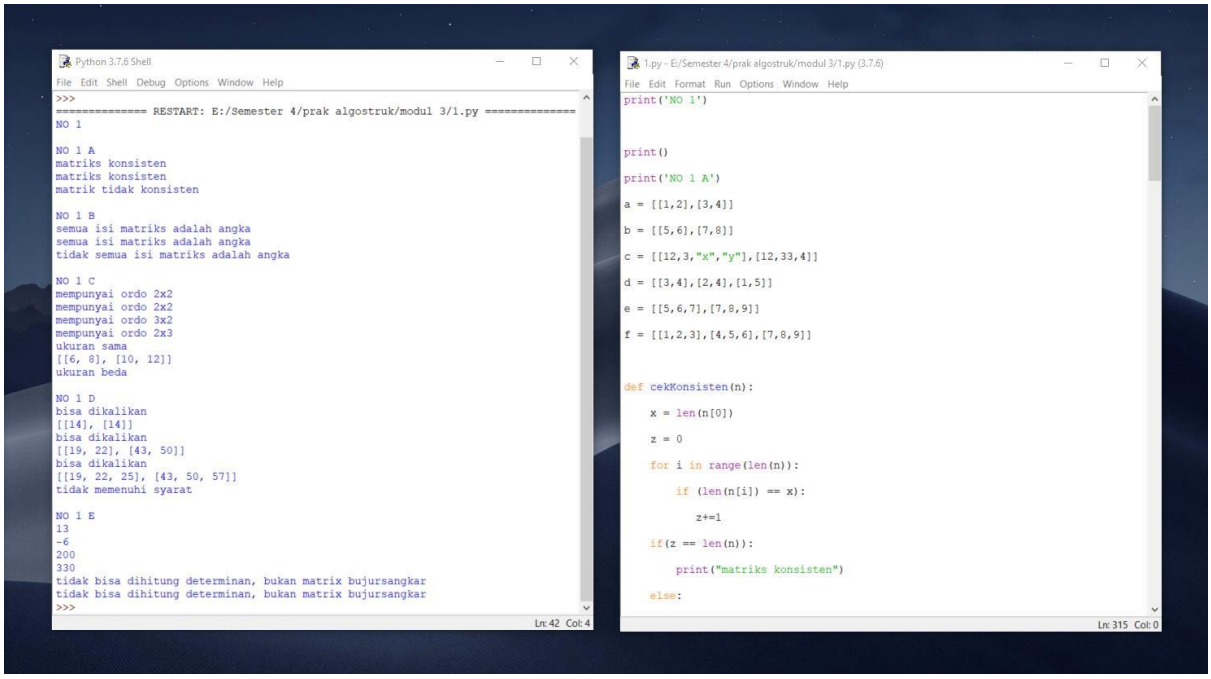
Nama : Karina Muslimah

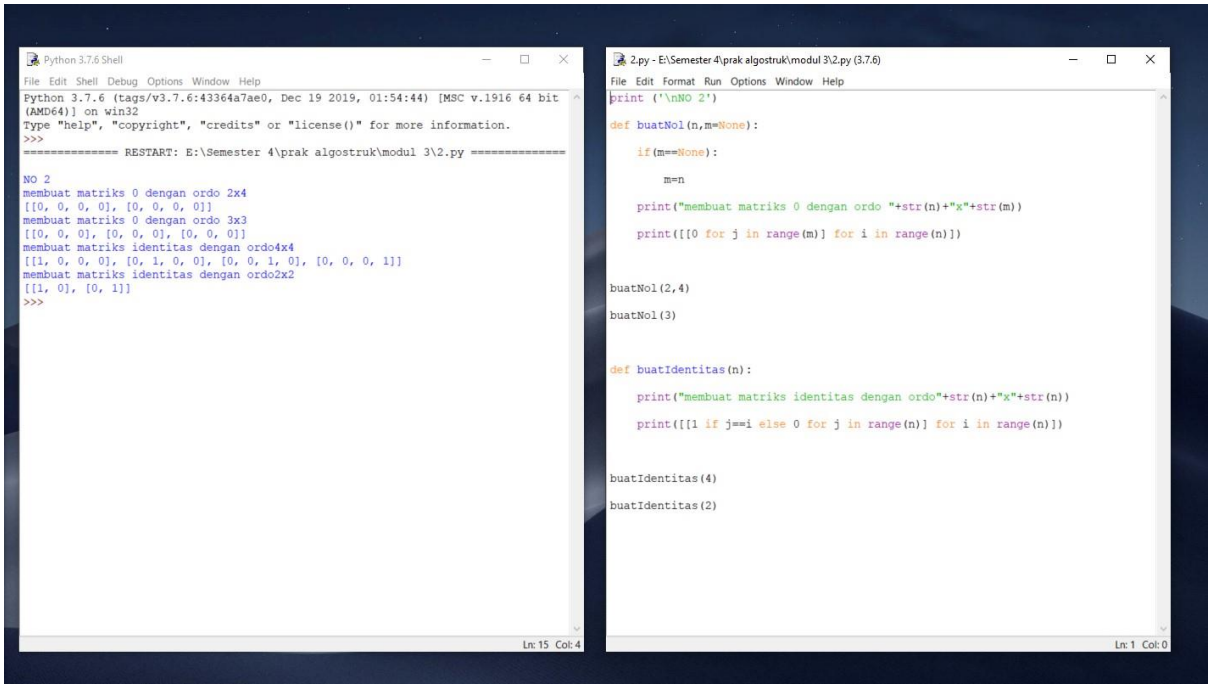
NIM : L200180138

MODUL 3

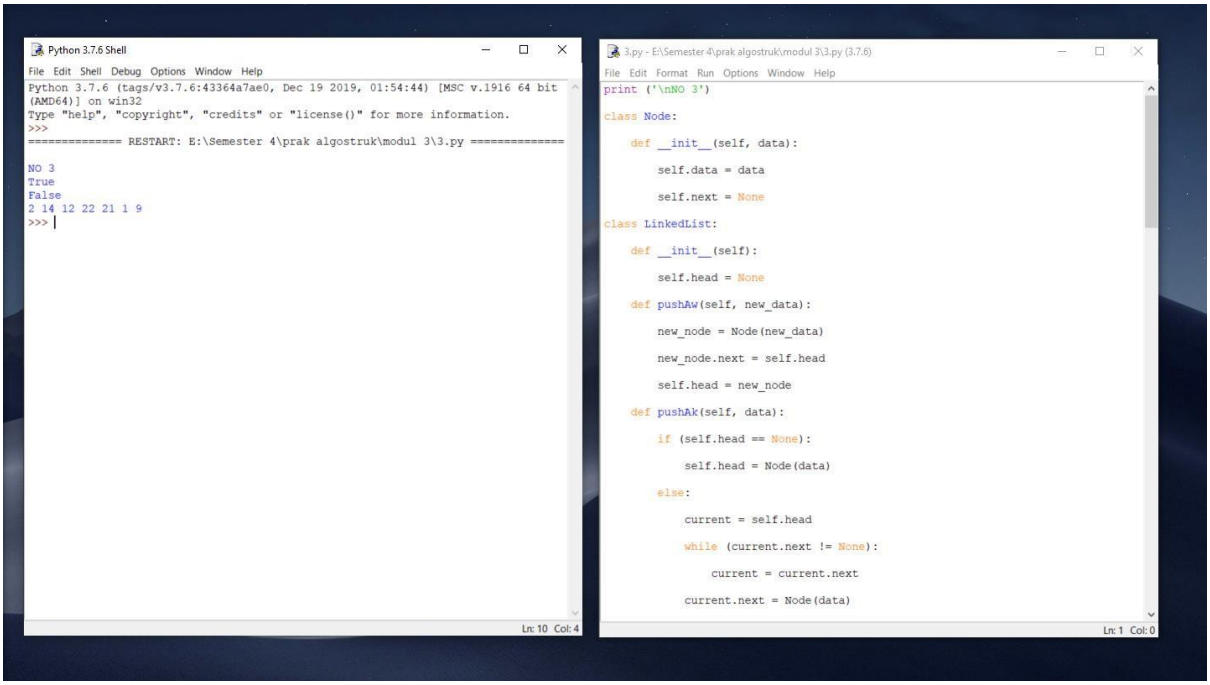
1.



2.



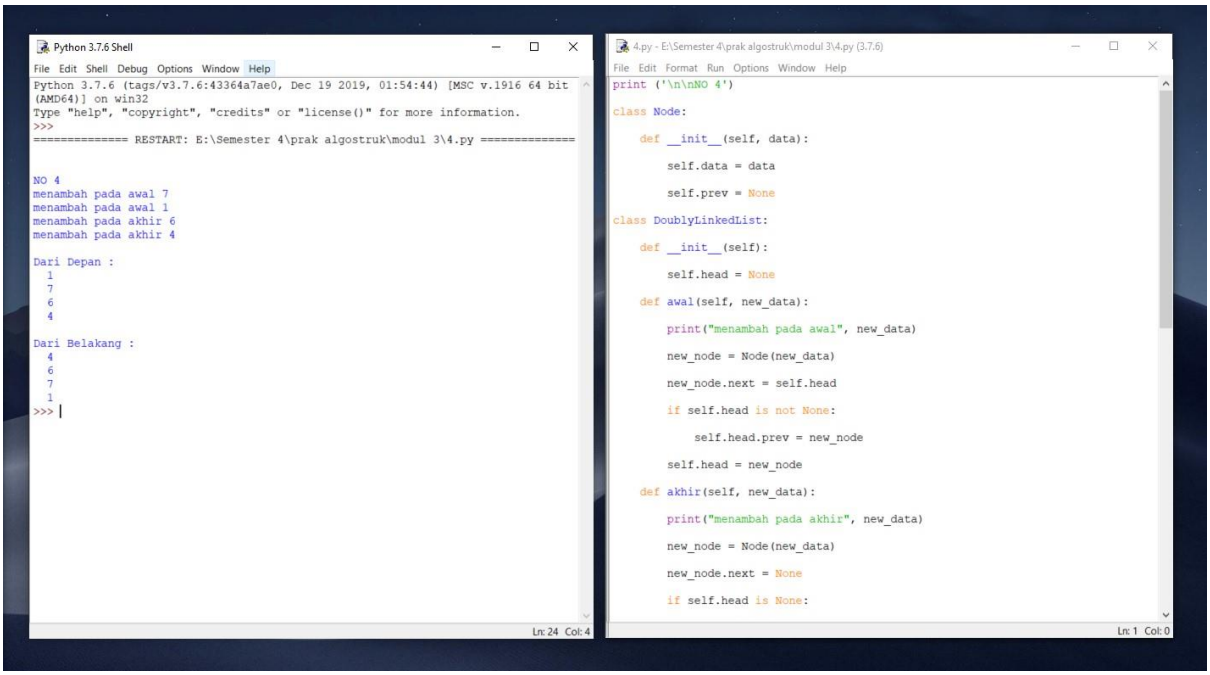
3.



```
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
```