Nama : kevin hansa wardhana

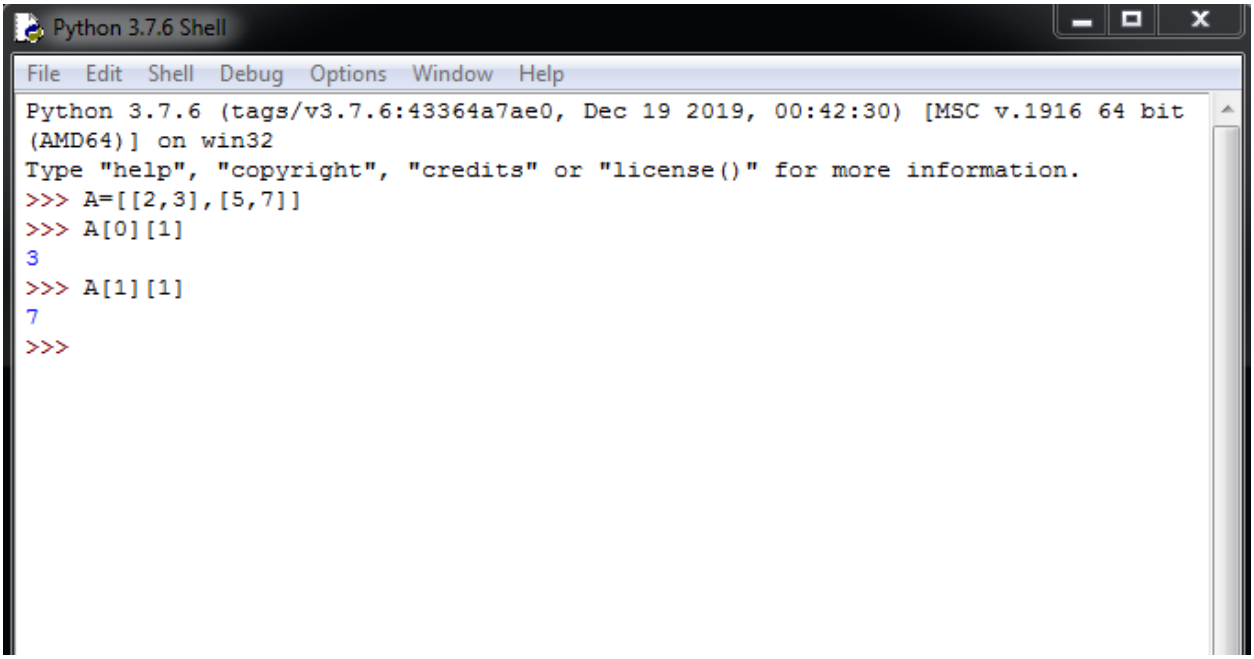
NIM: L200180004

Kelas: A

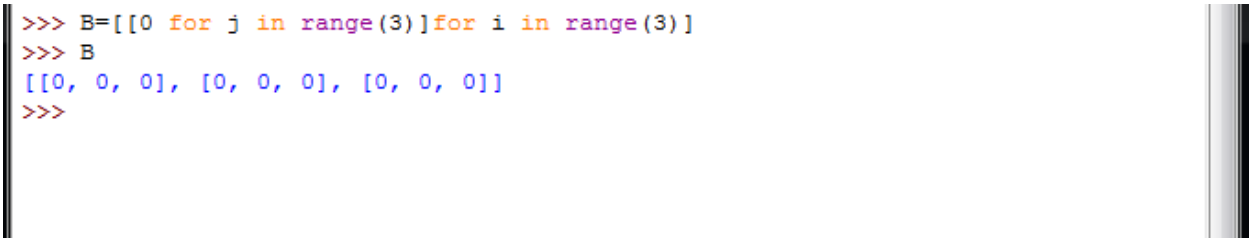
Laporan Praktikum modul 3 algoritma struktur data

Latihan

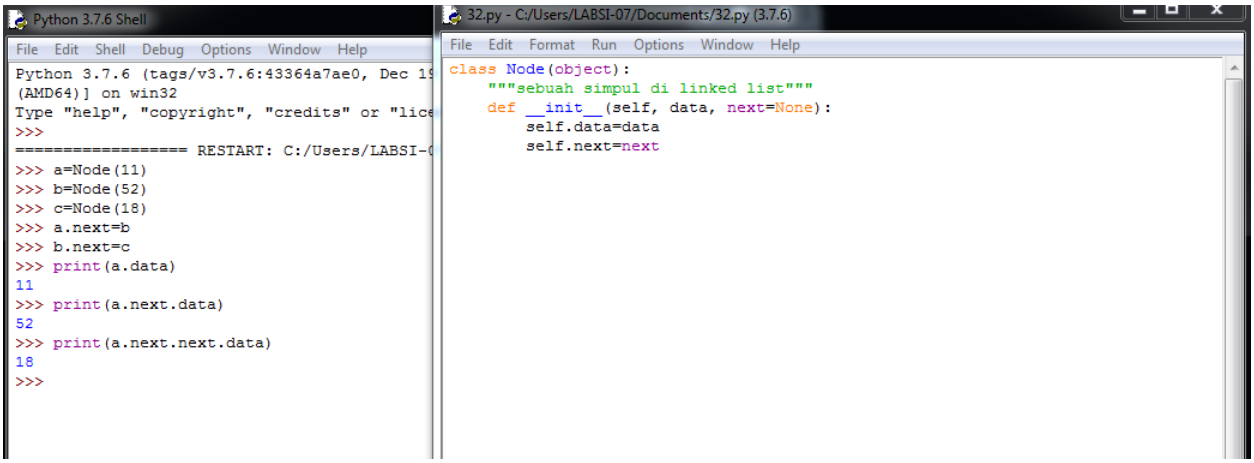
3.1

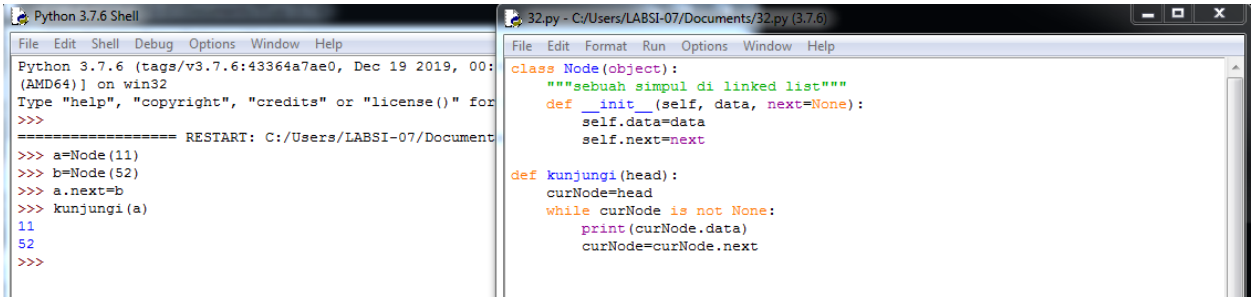


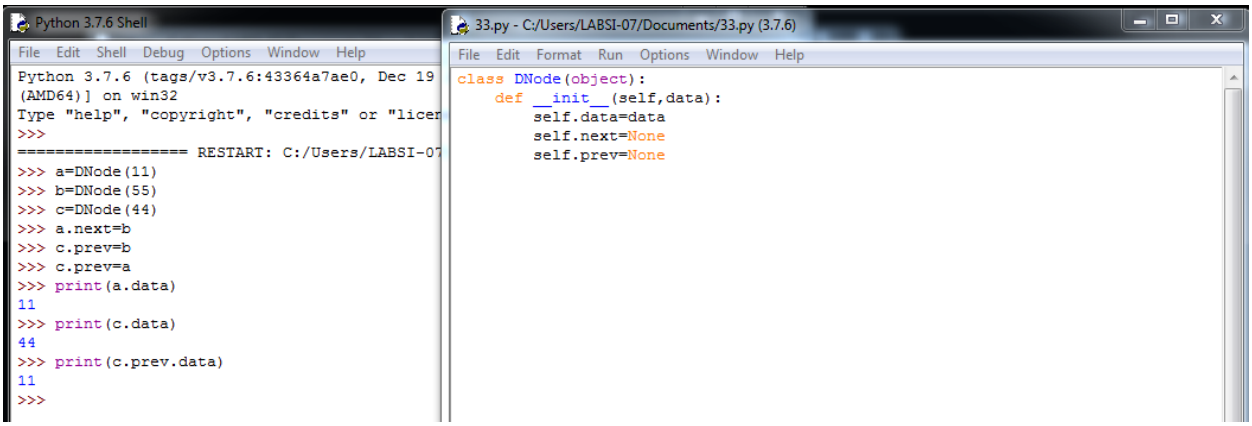
3.2



3.3


Python 3.7.6 Shell
File Edit Shell Debug Options Window Help
Python 3.7.6 (tags/v3.7.6:43364a7ae0, Dec 19
(AMD64)] on win32
Type "help", "copyright", "credits" or "lice
>>>
========== RESTART: C:/Users/LABSI-
>>> a=Node(11)
>>> b=Node(52)
>>> c=Node(18)
>>> a.next=b
>>> b.next=c
>>> print(a.data)
11
>>> print(a.next.data)
52
>>> print(a.next.next.data)
18
>>>
32.py - C:/Users/LABSI-07/Documents/32.py (3.7.6)
File Edit Format Run Options Window Help
class Node(object):
"""sebuah simpul di linked list"""
def __init__(self, data, next=None):
self.data=data
self.next=next


Python 3.7.6 Shell
File Edit Shell Debug Options Window Help
Python 3.7.6 (tags/v3.7.6:43364a7ae0, Dec 19 2019, 00:
(AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for
>>>
========== RESTART: C:/Users/LABSI-07/Document
>>> a=Node(11)
>>> b=Node(52)
>>> a.next=b
>>> kunjungi(a)
11
52
>>>
32.py - C:/Users/LABSI-07/Documents/32.py (3.7.6)
File Edit Format Run Options Window Help
class Node(object):
"""sebuah simpul di linked list"""
def __init__(self, data, next=None):
self.data=data
self.next=next
def kunjungi(head):
curNode=head
while curNode is not None:
print(curNode.data)
curNode=curNode.next


Python 3.7.6 Shell
File Edit Shell Debug Options Window Help
Python 3.7.6 (tags/v3.7.6:43364a7ae0, Dec 19
(AMD64)] on win32
Type "help", "copyright", "credits" or "licer
>>>
========== RESTART: C:/Users/LABSI-07
>>> a=DNode(11)
>>> b=DNode(55)
>>> c=DNode(44)
>>> a.next=b
>>> c.prev=b
>>> c.prev=a
>>> print(a.data)
11
>>> print(c.data)
44
>>> print(c.prev.data)
11
>>>
33.py - C:/Users/LABSI-07/Documents/33.py (3.7.6)
File Edit Format Run Options Window Help
class DNode(object):
def __init__(self,data):
self.data=data
self.next=None
self.prev=None

Tugas

1.

no1.py - C:/Users/kevin/Music/MODUL_3/no1.py (3.8.1)

File Edit Format Run Options Window Help

```
a = [[1,3],[3,4]]
b = [[9,9],[7,3]]
c = [[9,7,"AKU","YOU"],[4,13,4]]
d = [[13,62],[39,57],[22,31]]
e = [[32,4,62],[13,62,19]]
f = [[23,24,0],[23,5,0],[7,38,0]]

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:
        print("Matrik tidak konsisten")

cekKonsisten(a)
cekKonsisten(b)
cekKonsisten(c)
print("------------------------------------------------------------
def cekInt(n):
    x = 0
    y = 0
    for i in n:
        for j in i:
            y+=1
            if (str(j).isdigit()==False):
                print("Tidak semua isi matriks adalah angka")
                break
            else:
                x+=1
    if(x==y):
        print("semua isi matriks adalah angka")

cekInt(a)
cekInt(b)
cekInt(c)
print("------------------------------------------------------------
```

Python 3.8.1 Shell

File Edit Shell Debug Options Window Help

```
Python 3.8.1 (tags/v3.8.1:1b293b6, Dec 18 2019, 22:39:24) [
tel)] on win32
Type "help", "copyright", "credits" or "license()" for more
>>>
================ RESTART: C:/Users/kevin/Music/MODUL_3/no1
Matriks konsisten
Matriks konsisten
Matrik tidak konsisten
------------------------------------------------------------
semua isi matriks adalah angka
semua isi matriks adalah angka
Tidak semua isi matriks adalah angka
------------------------------------------------------------
mempunyai ordo 2x2
mempunyai ordo 2x2
mempunyai ordo 3x2
mempunyai ordo 2x3
------------------------------------------------------------
ukuran sama
[[10, 12], [10, 7]]
ukuran beda
------------------------------------------------------------
bisa dikalikan
[[14], [14]]
bisa dikalikan
[[30, 18], [55, 39]]
bisa dikalikan
[[71, 190, 119], [148, 260, 262]]
tidak memenuhi syarat
------------------------------------------------------------
13
-6
200
330
tidak bisa dihitung determinan, bukan matrix bujursangkar
tidak bisa dihitung determinan, bukan matrix bujursangkar
>>>
```

2.

no2.py - C:/Users/kevin/Music/MODUL_3/no2.py (3.8.1)

File Edit Format Run Options Window Help

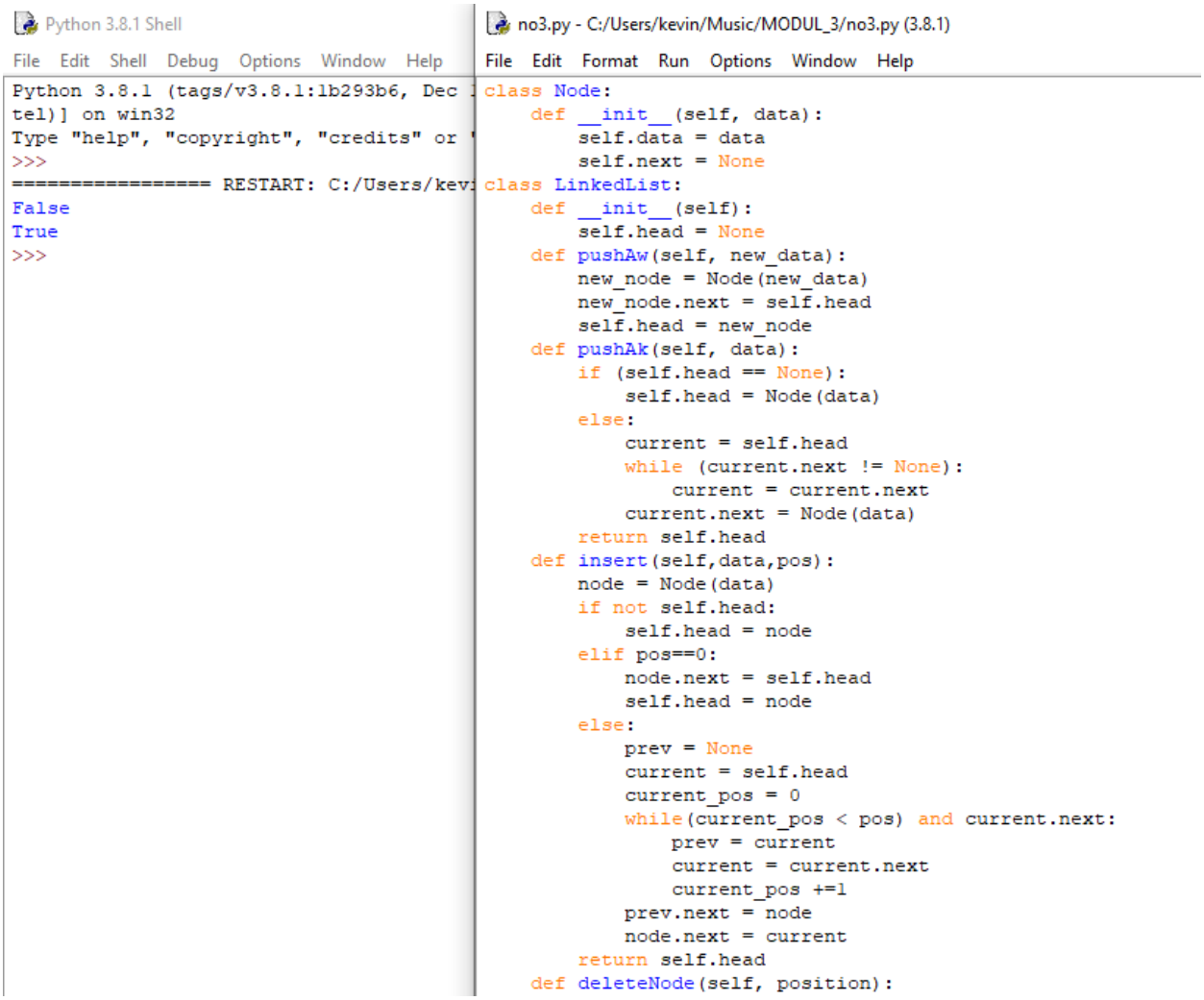
```
def buatNol(n,m=None):
    if(m==None):
        m=n
    print("membuat matriks 0 dengan ordo "+str(n)+"x"+str(m))
    print([[0 for j in range(m)] for i in range(n)])

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)
```

Python 3.8.1 Shell

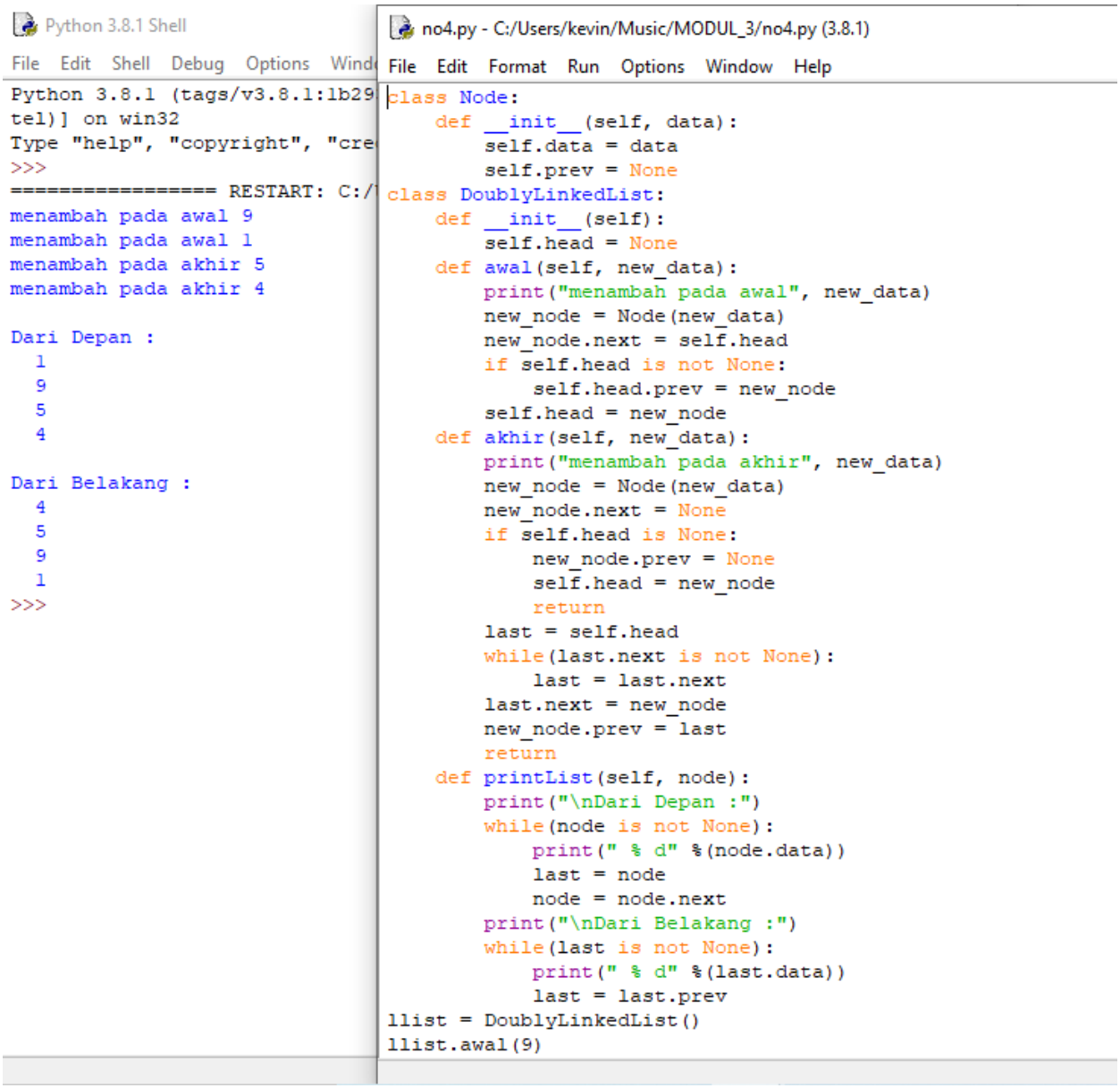
File Edit Shell Debug Options Window Help

```
Python 3.8.1 (tags/v3.8.1:1b293b6, Dec 18 2019, 22:39:24) [MSC
tel)] on win32
Type "help", "copyright", "credits" or "license()" for more inf
>>>
================ RESTART: C:/Users/kevin/Music/MODUL_3/no2.py
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]]
>>>
```

3.


Python 3.8.1 Shell
File Edit Shell Debug Options Window Help
Python 3.8.1 (tags/v3.8.1:1b293b6, Dec
tel)] on win32
Type "help", "copyright", "credits" or
>>>
================ RESTART: C:/Users/kev
False
True
>>>
no3.py - C:/Users/kevin/Music/MODUL_3/no3.py (3.8.1)
File Edit Format Run Options Window Help
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)
return self.head
def insert(self,data,pos):
node = Node(data)
if not self.head:
self.head = node
elif pos==0:
node.next = self.head
self.head = node
else:
prev = None
current = self.head
current_pos = 0
while(current_pos < pos) and current.next:
prev = current
current = current.next
current_pos +=1
prev.next = node
node.next = current
return self.head
def deleteNode(self, position):

4.



Python 3.8.1 Shell

File Edit Shell Debug Options Windo

```
Python 3.8.1 (tags/v3.8.1:1b29
tel)] on win32
Type "help", "copyright", "cre
>>>
================ RESTART: C:/
menambah pada awal 9
menambah pada awal 1
menambah pada akhir 5
menambah pada akhir 4

Dari Depan :
  1
  9
  5
  4

Dari Belakang :
  4
  5
  9
  1
>>>
```

no4.py - C:/Users/kevin/Music/MODUL_3/no4.py (3.8.1)

File Edit Format Run Options Window Help

```
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:
            new_node.prev = None
            self.head = new_node
            return
        last = self.head
        while(last.next is not None):
            last = last.next
        last.next = new_node
        new_node.prev = last
        return
    def printList(self, node):
        print("\nDari Depan :")
        while(node is not None):
            print(" % d" %(node.data))
            last = node
            node = node.next
        print("\nDari Belakang :")
        while(last is not None):
            print(" % d" %(last.data))
            last = last.prev
llist = DoublyLinkedList()
llist.awal(9)
```