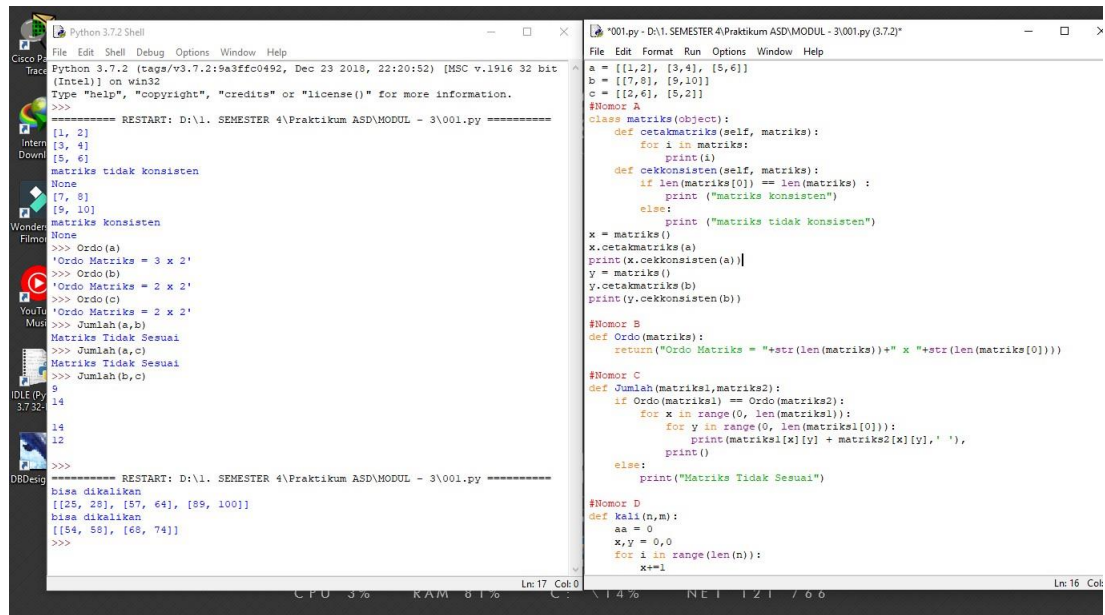


Nama : Alfian Pandu

Nim : L200180027

Kelas :B

1. Nomer 1



```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: D:\1. SEMESTER 4\Praktikum ASD\MODUL - 3\001.py =====
[1, 2]
[3, 4]
[5, 6]
Matrices tidak konsisten
None
[7, 8]
[9, 10]
Matrices konsisten
None
>>> Ordo(a)
'Ordo Matrics = 3 x 2'
>>> Ordo(b)
'Ordo Matrics = 2 x 2'
>>> Ordo(c)
'Ordo Matrics = 2 x 2'
>>> Jumlah(a,b)
Matrics Tidak Sesuai
>>> Jumlah(a,c)
Matrics Tidak Sesuai
>>> Jumlah(b,c)
>>>
===== RESTART: D:\1. SEMESTER 4\Praktikum ASD\MODUL - 3\001.py =====
bisa dikalikan
[[25, 28], [57, 64], [89, 100]]
bisa dikalikan
[[54, 58], [68, 74]]
>>>

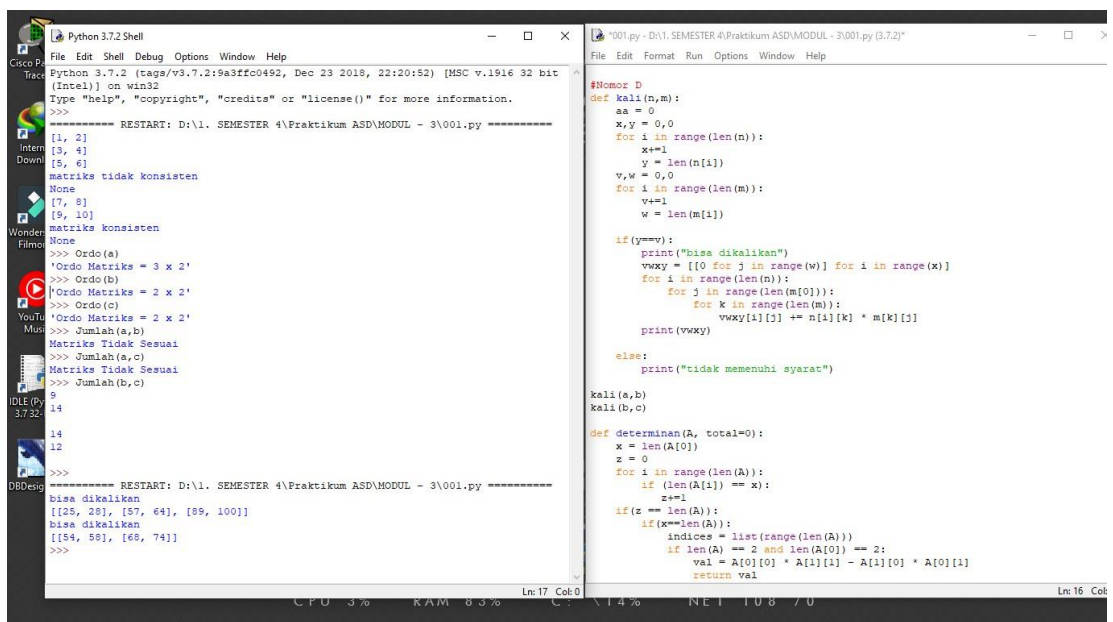
class Matrics(object):
    def cetakmatrics(self, matrics):
        for i in matrics:
            print(i)
    def cekkonsisten(self, matrics):
        if len(matrics[0]) == len(matrics):
            print ("Matrics konsisten")
        else:
            print ("Matrics tidak konsisten")
x = matrics()
x.cetakmatrics(a)
print(x.cekkonsisten(a))
y = matrics()
y.cetakmatrics(b)
print(y.cekkonsisten(b))

#Nomer B
def Ordo(matrics):
    return ("Ordo Matrics = "+str(len(matrics))+ " x "+str(len(matrics[0])))

#Nomer C
def Jumlah(matrics1,matrics2):
    if Ordo(matrics1) == Ordo(matrics2):
        for x in range(0, len(matrics1)):
            for y in range(0, len(matrics1[0])):
                print(matrics1[x][y] + matrics2[x][y], ' '),
            print()
    else:
        print("Matrics Tidak Sesuai")

#Nomer D
def kali(n,m):
    aa = 0
    x,y = 0,0
    for i in range(len(n)):
        x+=1
        y = len(n[i])
        v,w = 0,0
        for i in range(len(m)):
            v+=1
            w = len(m[i])
            if (y==w):
                print("bisa dikalikan")
                vwxy = [[0 for j in range(w)] for i in range(x)]
                for i in range(len(n)):
                    for j in range(len(m[0])):
                        for k in range(len(m)):
                            vwxy[i][j] += n[i][k] * m[k][j]
                print(vwxy)
            else:
                print("tidak memenuhi syarat")
kali(a,b)
kali(b,c)

def determinan(A, total=0):
    x = len(A[0])
    z = 0
    for i in range(len(A)):
        if (len(A[i]) == x):
            z+=1
        if (z == len(A)):
            if (x==len(A)):
                indices = list(range(len(A)))
                if len(A) == 2 and len(A[0]) == 2:
                    val = A[0][0] * A[1][1] - A[1][0] * A[0][1]
                    return val
```

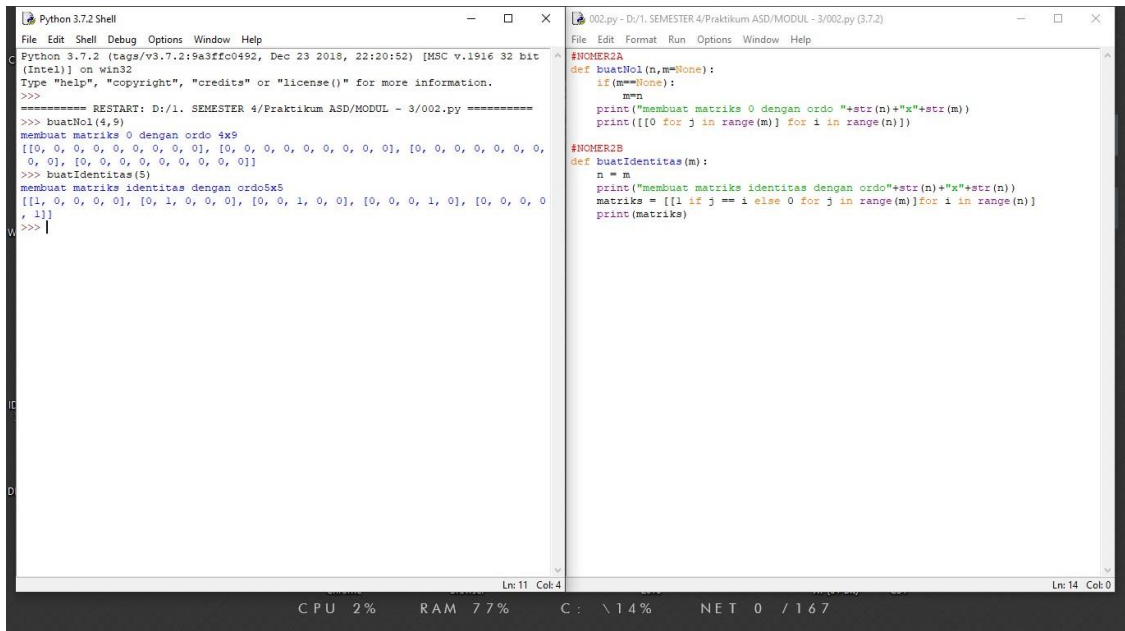


```
===== RESTART: D:\1. SEMESTER 4\Praktikum ASD\MODUL - 3\001.py =====
bisa dikalikan
[[25, 28], [57, 64], [89, 100]]
bisa dikalikan
[[54, 58], [68, 74]]
>>>

#Nomer D
def kali(n,m):
    aa = 0
    x,y = 0,0
    for i in range(len(n)):
        x+=1
        y = len(n[i])
        v,w = 0,0
        for i in range(len(m)):
            v+=1
            w = len(m[i])
            if (y==w):
                print("bisa dikalikan")
                vwxy = [[0 for j in range(w)] for i in range(x)]
                for i in range(len(n)):
                    for j in range(len(m[0])):
                        for k in range(len(m)):
                            vwxy[i][j] += n[i][k] * m[k][j]
                print(vwxy)
            else:
                print("tidak memenuhi syarat")
kali(a,b)
kali(b,c)

def determinan(A, total=0):
    x = len(A[0])
    z = 0
    for i in range(len(A)):
        if (len(A[i]) == x):
            z+=1
        if (z == len(A)):
            if (x==len(A)):
                indices = list(range(len(A)))
                if len(A) == 2 and len(A[0]) == 2:
                    val = A[0][0] * A[1][1] - A[1][0] * A[0][1]
                    return val
```

2. Nomer 2

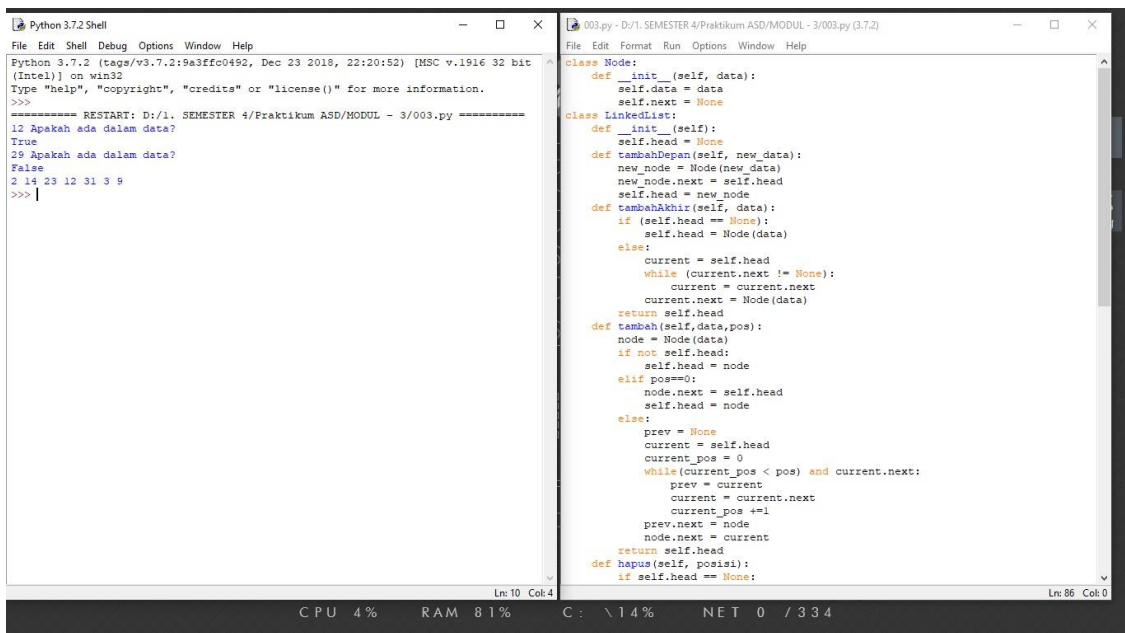


```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: D:/1. SEMESTER 4/Praktikum ASD/MODUL - 3/002.py =====
>>> buatMatriks(4,9)
membuat matriks 0 dengan ordo 4x9
[[0, 0, 0, 0, 0, 0, 0, 0, 0], [0, 0, 0, 0, 0, 0, 0, 0, 0], [0, 0, 0, 0, 0, 0, 0, 0, 0], [0, 0, 0, 0, 0, 0, 0, 0, 0]]
>>> buatIdentitas(5)
membuat matriks identitas dengan ordo 5x5
[[1, 0, 0, 0, 0], [0, 1, 0, 0, 0], [0, 0, 1, 0, 0], [0, 0, 0, 1, 0], [0, 0, 0, 0, 1]]
>>>

002.py - D:/1. SEMESTER 4/Praktikum ASD/MODUL - 3/002.py (3.7.2)
File Edit Format Run Options Window Help
#NOMER2A
def buatMatriks(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)])
#NOMER2B
def buatIdentitas(m):
    n = m
    print("membuat matriks identitas dengan ordo "+str(n)+"x"+str(n))
    matriks = [[1 if j == i else 0 for j in range(m)] for i in range(n)]
    print(matriks)
```

CPU 2% RAM 77% C: \14% NET 0 /167

3. Nomer 3



```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: D:/1. SEMESTER 4/Praktikum ASD/MODUL - 3/003.py =====
12 Apakah ada dalam data?
True
29 Apakah ada dalam data?
False
2 14 23 12 31 3 9
>>>

003.py - D:/1. SEMESTER 4/Praktikum ASD/MODUL - 3/003.py (3.7.2)
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 tambahDepan(self, new_data):
        new_node = Node(new_data)
        new_node.next = self.head
        self.head = new_node
    def tambahAkhir(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 tambah(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 hapus(self, posisi):
        if self.head == None:
```

CPU 4% RAM 81% C: \14% NET 0 /334

```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: D:/1. SEMESTER 4/Praktikum ASD/MODUL - 3/003.py =====
12 Apakah ada dalam data?
True
29 Apakah ada dalam data?
False
2 14 23 12 31 3 9
>>>

003.py - D:/1. SEMESTER 4/Praktikum ASD/MODUL - 3/003.py (3.7.2)
File Edit Format Run Options Window Help
temp = temp.next
if temp is None:
    break
if temp is None:
    return
if temp.next is None:
    return
next = temp.next.next
temp.next = None
temp.next = next
def cari(self, x):
    current = self.head
    while current != None:
        if current.data == x:
            print(x, "Apakah ada dalam data?")
            return True
        current = current.next
    print(x, "Apakah ada dalam data?")
    return False
def display(self):
    current = self.head
    while current is not None:
        print(current.data, end = ' ')
        current = current.next
a = LinkedList()
a.tambahDepan(31)
a.tambahDepan(12)
a.tambahDepan(23)
a.tambahDepan(14)
a.tambahDepan(2)
a.tambahDepan(19)
a.tambahAkhir(9)
a.hapus(0)
a.tambah(3,5)
print(a.cari(12))
print(a.cari(29))
a.display()
Ln: 10 Col: 4
Ln: 86 Col: 0
CPU 3% RAM 82% C: \ 14% NET 0 / 0
```

4. Nomer 4

```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: D:/1. SEMESTER 4/Praktikum ASD/MODUL - 3/004.py =====
menambah pada awal 8
menambah pada awal 1
menambah pada akhir 7
menambah pada akhir 3
Dari Depan :
1
8
7
3
Dari Belakang :
3
7
8
1
>>>

004.py - D:/1. SEMESTER 4/Praktikum ASD/MODUL - 3/004.py (3.7.2)
File Edit Format Run Options Window Help
class Node:
    def __init__(self, data):
        self.data = data
        self.prev = None
        self.next = 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
    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
b = DoublyLinkedList()
Ln: 20 Col: 0
Ln: 45 Col: 0
CPU 5% RAM 80% C: \ 14% NET 2 k / 4 k
```

```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: D:/1. SEMESTER 4/Praktikum ASD/MODUL - 3/004.py =====
menambah pada awal 8
menambah pada awal 1
menambah pada akhir 7
menambah pada akhir 3

Dari Depan :
1
8
7
3

Dari Belakang :
3
7
8
1
>>>

004.py - D:/1. SEMESTER 4/Praktikum ASD/MODUL - 3/004.py (3.7.2)
File Edit Format Run Options Window Help

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
    else:
        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

b = DoublyLinkedList()
b.awal(8)
b.awal(1)
b.akhir(7)
b.akhir(3)
b.printList(b.head)

Ln: 20 Col: 0
Ln: 45 Col: 0
CPU 45% RAM 81% C: \14% NET 66 / 0
```