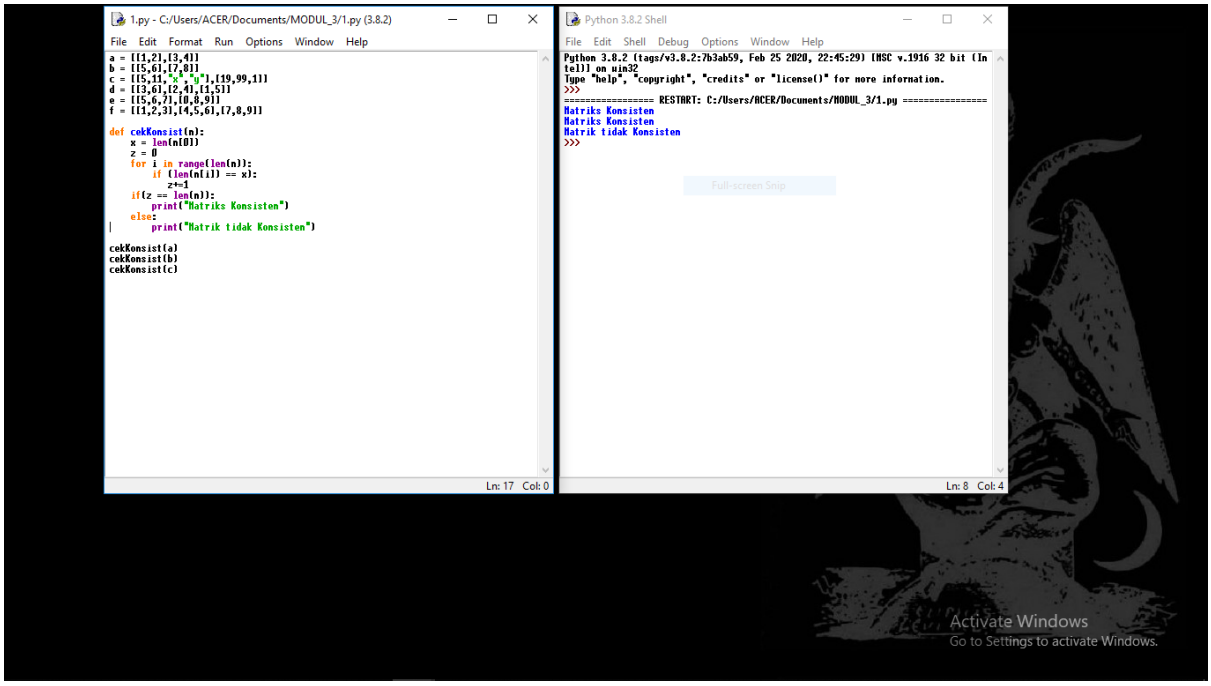
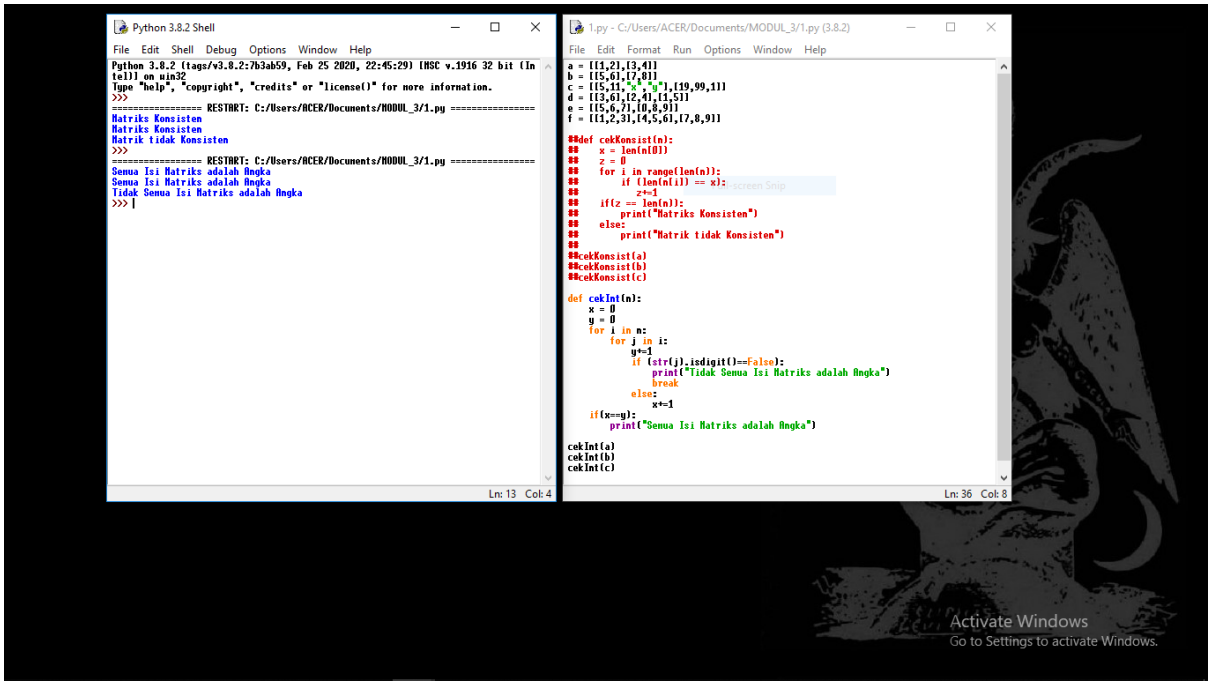
Nama : Berlian Vidia Puspa

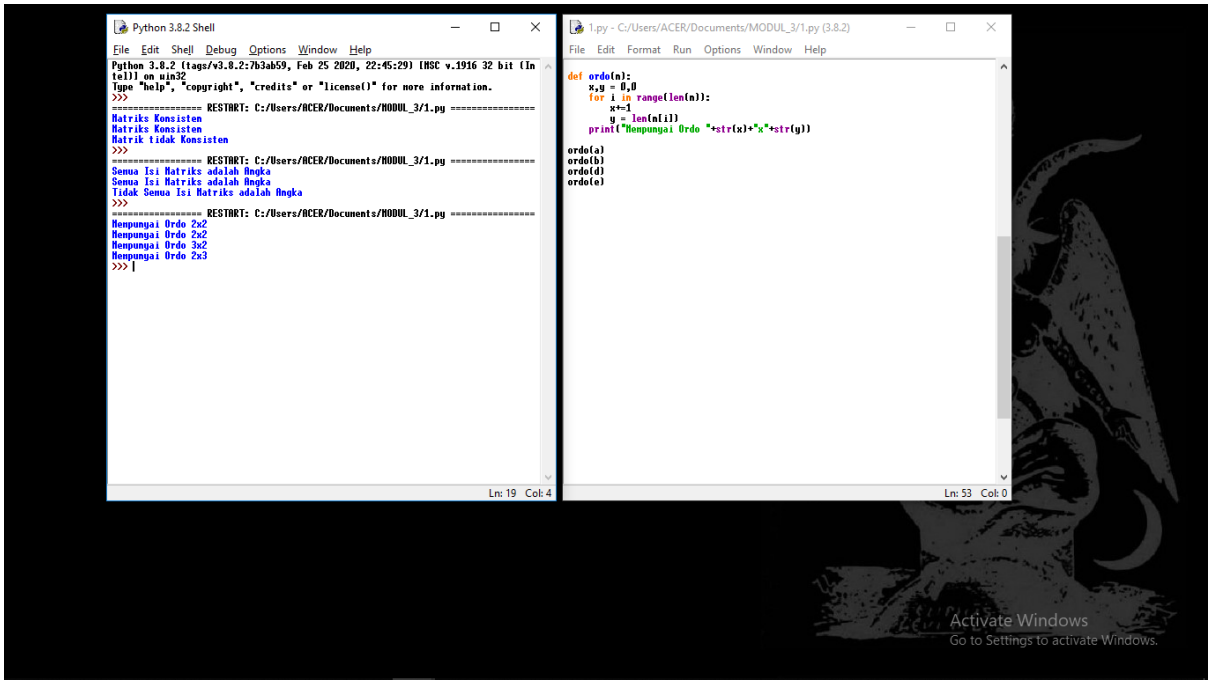
NIM : L200180107

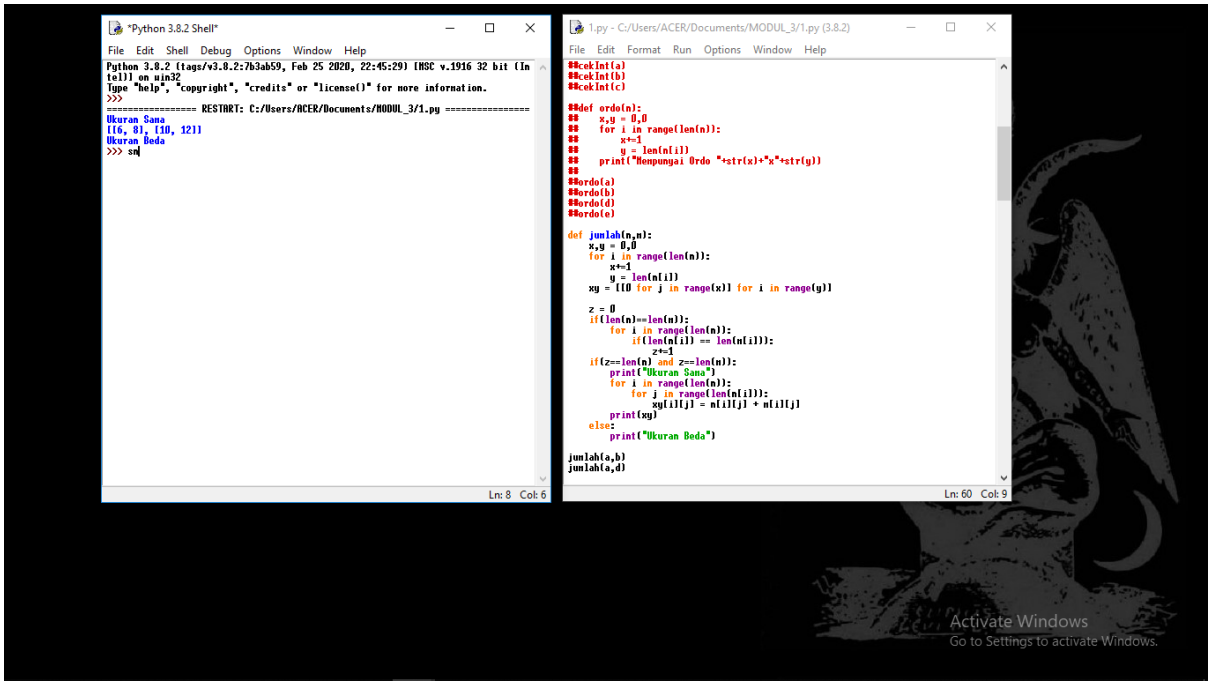
MODUL 3

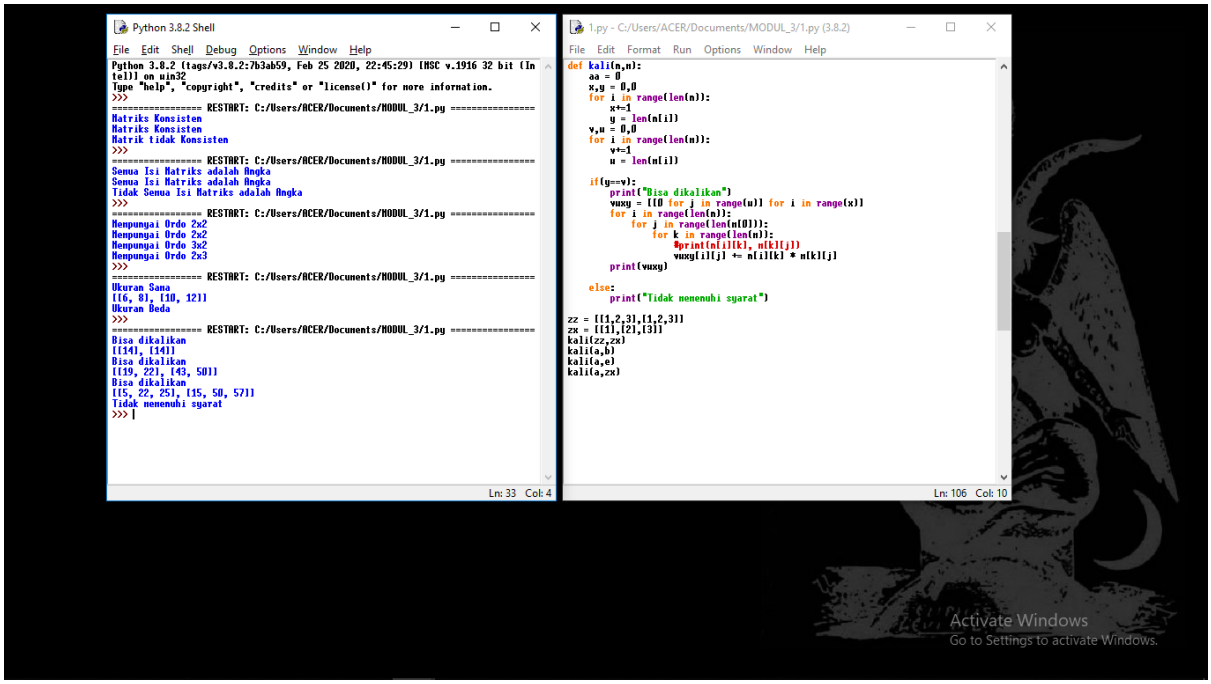
NO 1.

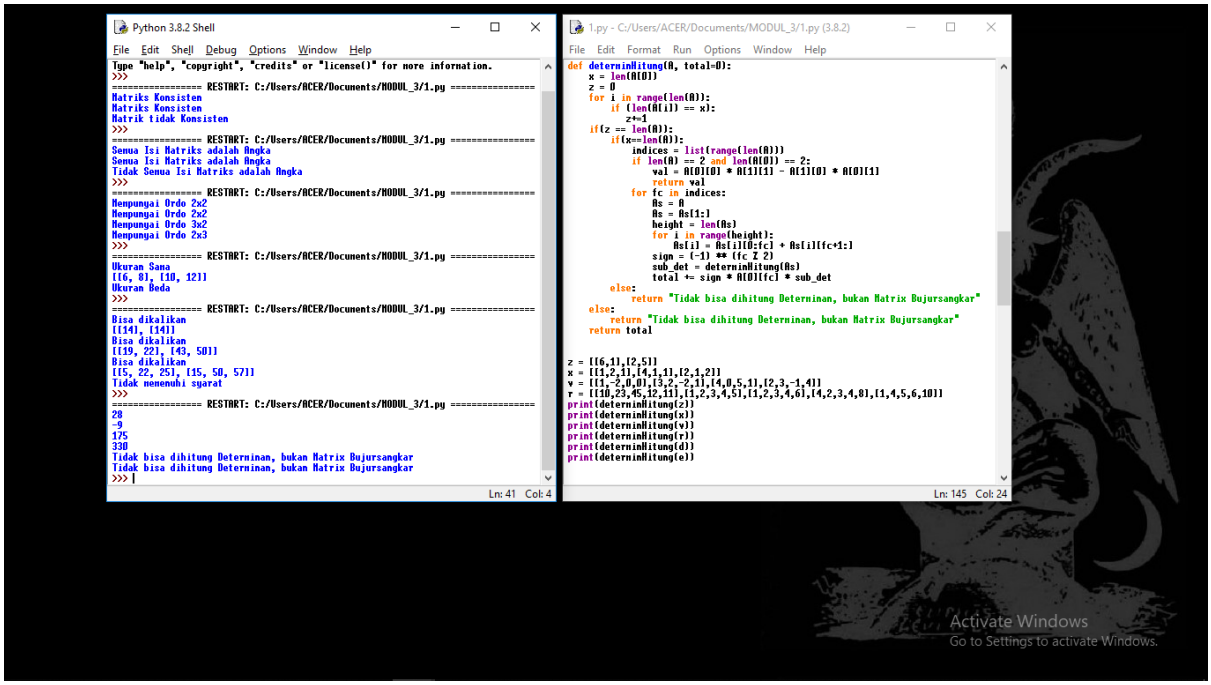




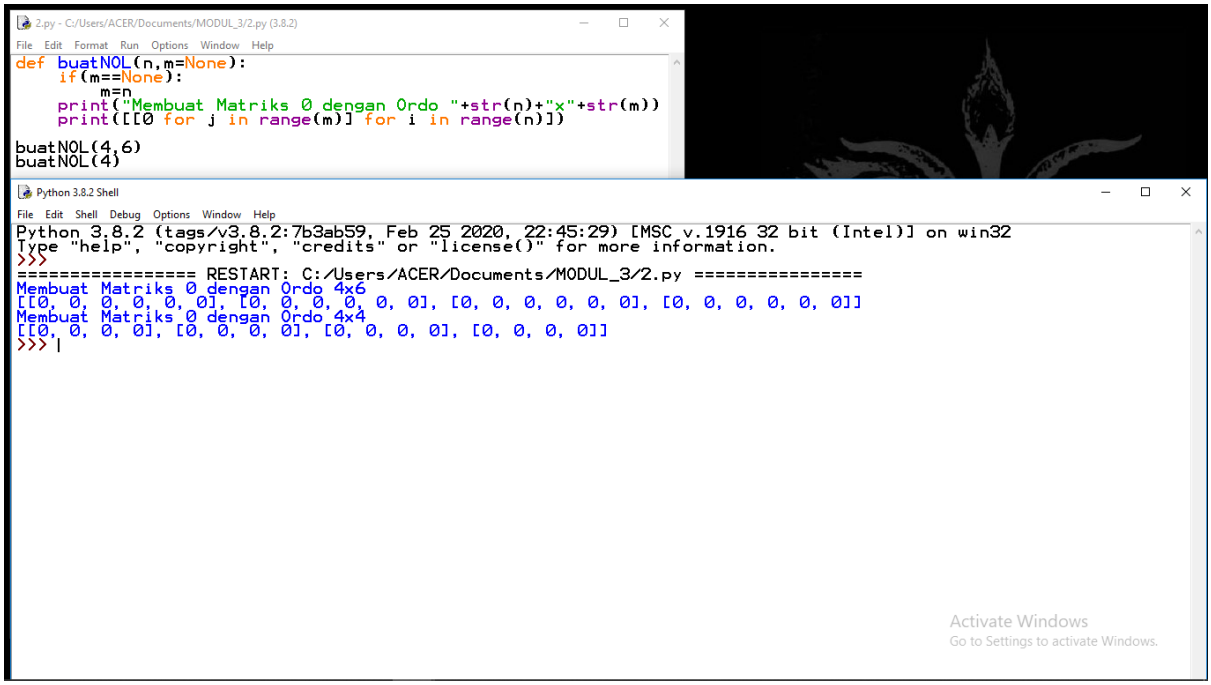

Python 3.8.2 Shell
File Edit Shell Debug Options Window Help
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 22:45:29) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:/Users/ACER/Documents/MODUL_3/1.py ==========
Matriks Konsisten
Matriks Konsisten
Matrik tidak Konsisten
>>>
========== RESTART: C:/Users/ACER/Documents/MODUL_3/1.py ==========
Semua Isi Matriks adalah Angka
Semua Isi Matriks adalah Angka
Tidak Semua Isi Matriks adalah Angka
>>>
========== RESTART: C:/Users/ACER/Documents/MODUL_3/1.py ==========
Mempunyai Ordo 2x2
Mempunyai Ordo 2x2
Mempunyai Ordo 3x2
Mempunyai Ordo 2x3
>>>
Ln: 19 Col: 4
1.py - C:/Users/ACER/Documents/MODUL_3/1.py (3.8.2)
File Edit Format Run Options Window Help
def ordo(n):
x,y = 0,0
for i in range(len(n)):
x+=1
y = len(n[i])
print("Mempunyai Ordo "+str(x)+"x"+str(y))
ordo(a)
ordo(b)
ordo(d)
ordo(e)
Ln: 53 Col: 0
Activate Windows
Go to Settings to activate Windows.


Python 3.8.2 Shell
File Edit Shell Debug Options Window Help
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 22:45:29) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:/Users/ACER/Documents/MODUL_3/1.py ==========
Ukuran Sama
[[6, 8], [10, 12]]
Ukuran Beda
>>> sa
Ln: 8 Col: 6
1.py - C:/Users/ACER/Documents/MODUL_3/1.py (3.8.2)
File Edit Format Run Options Window Help
##ceklnt(a)
##ceklnt(b)
##ceklnt(c)
##def ordo(n):
x,y = 0,0
for i in range(len(n)):
x+=1
y = len(n[i])
print("Mempunyai Ordo "+str(x)+"x"+str(y))
##
##ordo(a)
##ordo(b)
##ordo(d)
##ordo(e)
def jumlah(n,m):
x,y = 0,0
for i in range(len(n)):
x+=1
y = len(n[i])
xy = [[0 for j in range(x)] for i in range(y)]
z = 0
if(len(n)==len(n)):
for i in range(len(n)):
if(len(n[i]) == len(n[i])):
z+=1
if(z==len(n) and z==len(n)):
print("Ukuran Sama")
for i in range(len(n)):
for j in range(len(n[i])):
xy[i][j] = n[i][j] + n[i][j]
print(xy)
else:
print("Ukuran Beda")
jumlah(a,b)
jumlah(a,d)
Ln: 60 Col: 9
Activate Windows
Go to Settings to activate Windows.


Python 3.8.2 Shell
File Edit Shell Debug Options Window Help
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 22:45:29) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:/Users/ACER/Documents/MODUL_3/1.py ==========
Matriks Konsisten
Matriks Konsisten
Matrik tidak Konsisten
>>>
========== RESTART: C:/Users/ACER/Documents/MODUL_3/1.py ==========
Semua Isi Matriks adalah Angka
Semua Isi Matriks adalah Angka
Tidak Semua Isi Matriks adalah Angka
>>>
========== RESTART: C:/Users/ACER/Documents/MODUL_3/1.py ==========
Mempunyai Ordo 2x2
Mempunyai Ordo 2x2
Mempunyai Ordo 3x2
Mempunyai Ordo 2x3
>>>
========== RESTART: C:/Users/ACER/Documents/MODUL_3/1.py ==========
Ukuran Sama
[[6, 8], [10, 12]]
Ukuran Beda
>>>
========== RESTART: C:/Users/ACER/Documents/MODUL_3/1.py ==========
Bisa dikalikan
[[14], [14]]
Bisa dikalikan
[[19, 22], [43, 50]]
Bisa dikalikan
[[5, 22, 251, [15, 50, 571]
Tidak menemuhi syarat
>>>
Ln: 33 Col: 4
1.py - C:/Users/ACER/Documents/MODUL_3/1.py (3.8.2)
File Edit Format Run Options Window Help
def kali(n,m):
aa = 0
x,y = 0,0
for i in range(len(n)):
x+=1
y = len(n[i])
v,u = 0,0
for i in range(len(m)):
v+=1
u = len(m[i])
if(y==v):
print("Bisa dikalikan")
vuxy = [[0 for j in range(u)] for i in range(x)]
for i in range(len(n)):
for j in range(len(m[0])):
for k in range(len(m)):
#print(n[i][k], m[k][j])
vuxy[i][j] += n[i][k] * m[k][j]
print(vuxy)
else:
print("Tidak memenuhi syarat")
zz = [[1,2,3],[1,2,3]]
zx = [[1],[2],[3]]
kali(zz,zx)
kali(a,b)
kali(a,e)
kali(a,zx)
Ln: 106 Col: 10
Activate Windows
Go to Settings to activate Windows.


Python 3.8.2 Shell
File Edit Shell Debug Options Window Help
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:/Users/ACER/Documents/MODUL_3/1.py ==========
Matriks Konsisten
Matriks Konsisten
Matrik tidak Konsisten
>>>
========== RESTART: C:/Users/ACER/Documents/MODUL_3/1.py ==========
Semua Isi Matriks adalah Angka
Semua Isi Matriks adalah Angka
Tidak Semua Isi Matriks adalah Angka
>>>
========== RESTART: C:/Users/ACER/Documents/MODUL_3/1.py ==========
Mempunyai Ordo 2x2
Mempunyai Ordo 2x2
Mempunyai Ordo 3x2
Mempunyai Ordo 2x3
>>>
========== RESTART: C:/Users/ACER/Documents/MODUL_3/1.py ==========
Ukuran Sama
[[6, 8], [10, 12]]
Ukuran Beda
>>>
========== RESTART: C:/Users/ACER/Documents/MODUL_3/1.py ==========
Bisa dikalikan
[[14], [14]]
Bisa dikalikan
[[19, 22], [43, 50]]
Bisa dikalikan
[[5, 22, 251, [15, 50, 571]
Tidak menemuhi syarat
>>>
========== RESTART: C:/Users/ACER/Documents/MODUL_3/1.py ==========
28
-9
175
330
Tidak bisa dihitung Determinan, bukan Matrix Bujursangkar
Tidak bisa dihitung Determinan, bukan Matrix Bujursangkar
>>>
Ln: 41 Col: 4
1.py - C:/Users/ACER/Documents/MODUL_3/1.py (3.8.2)
File Edit Format Run Options Window Help
def determinHitung(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
for fc in indices:
As = A
As = As[1:]
height = len(As)
for i in range(height):
As[i] = As[i][0:fc] + As[i][fc+1:]
sign = (-1) ** (fc % 2)
sub_det = determinHitung(As)
total += sign * A[0][fc] * sub_det
else:
return "Tidak bisa dihitung Determinan, bukan Matrix Bujursangkar"
else:
return "Tidak bisa dihitung Determinan, bukan Matrix Bujursangkar"
return total
z = [[6,1],[2,5]]
x = [[1,2,1],[4,1,1],[2,1,2]]
v = [[1,-2,0,0],[3,2,-2,1],[4,0,5,1],[2,3,-1,4]]
r = [[10,23,45,12,11],[1,2,3,4,5],[1,2,3,4,6],[4,2,3,4,8],[1,4,5,6,10]]
print(determinHitung(z))
print(determinHitung(x))
print(determinHitung(v))
print(determinHitung(r))
print(determinHitung(d))
print(determinHitung(e))
Ln: 145 Col: 24
Activate Windows
Go to Settings to activate Windows.

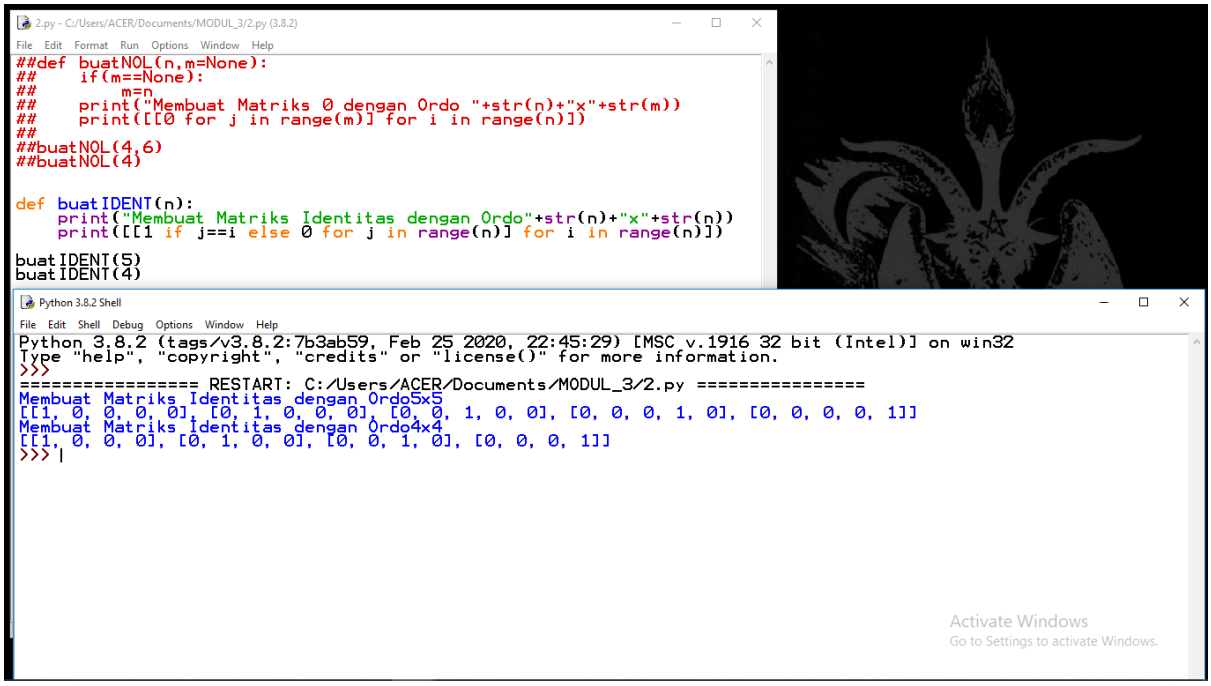
NO 2.



```
2.py - C:/Users/ACER/Documents/MODUL_3/2.py (3.8.2)
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(4,6)
buatNOL(4)
```

```
Python 3.8.2 Shell
File  Edit  Shell  Debug  Options  Window  Help
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 22:45:29) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
================= RESTART: C:/Users/ACER/Documents/MODUL_3/2.py ================
Membuat Matriks 0 dengan Ordo 4x6
[[0, 0, 0, 0, 0, 0], [0, 0, 0, 0, 0, 0], [0, 0, 0, 0, 0, 0], [0, 0, 0, 0, 0, 0]]
Membuat Matriks 0 dengan Ordo 4x4
[[0, 0, 0, 0], [0, 0, 0, 0], [0, 0, 0, 0], [0, 0, 0, 0]]
>>>
```

Activate Windows
Go to Settings to activate Windows.

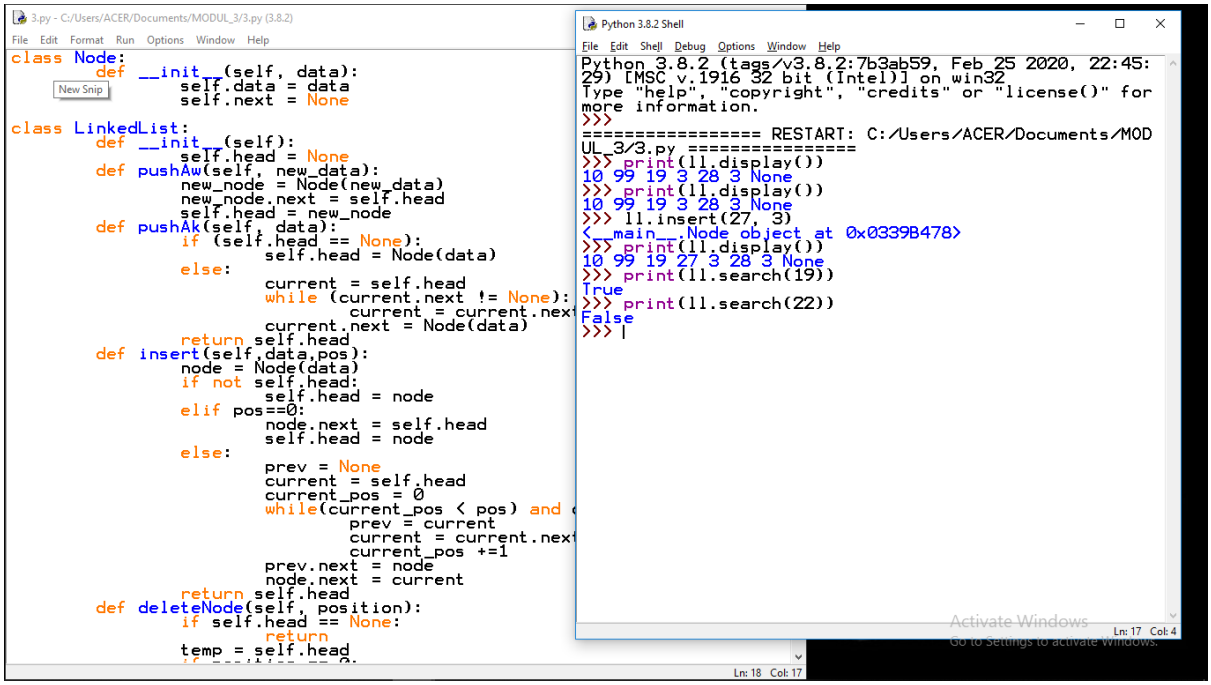


```
2.py - C:/Users/ACER/Documents/MODUL_3/2.py (3.8.2)
File  Edit  Format  Run  Options  Window  Help
##def buatNOL(n,m=None):
##    if(m==None):
##        m=n
##    print("Membuat Matriks 0 dengan Ordo "+str(n)+"x"+str(m))
##    print([[0 for j in range(m)] for i in range(n)])
##
##buatNOL(4,6)
##buatNOL(4)


def buatIDENT(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)])

buatIDENT(5)
buatIDENT(4)
```

```
Python 3.8.2 Shell
File  Edit  Shell  Debug  Options  Window  Help
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 22:45:29) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
================= RESTART: C:/Users/ACER/Documents/MODUL_3/2.py ================
Membuat Matriks Identitas dengan Ordo5x5
[[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]]
Membuat Matriks Identitas dengan Ordo4x4
[[1, 0, 0, 0], [0, 1, 0, 0], [0, 0, 1, 0], [0, 0, 0, 1]]
>>>
```

Activate Windows
Go to Settings to activate Windows.

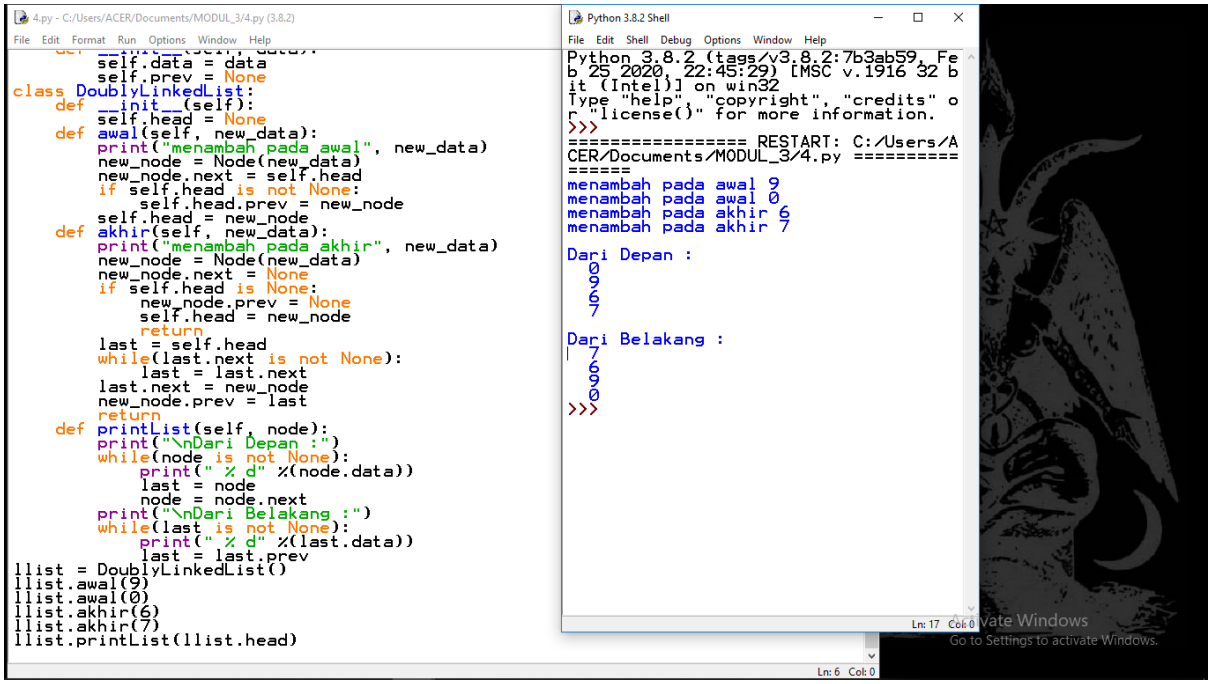
NO 3.



```
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)
                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
                                prev = current
                                current = current.next
                                current_pos +=1
                        prev.next = node
                        node.next = current
                return self.head
        def deleteNode(self, position):
                if self.head == None:
                        return
                temp = self.head
```

```
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 22:45:29) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:/Users/ACER/Documents/MODUL_3/3.py ==========
>>> print(ll.display())
10 99 19 3 28 3 None
>>> print(ll.display())
10 99 19 3 28 3 None
>>> ll.insert(27, 3)
<__main__.Node object at 0x0339B478>
>>> print(ll.display())
10 99 19 27 3 28 3 None
>>> print(ll.search(19))
True
>>> print(ll.search(22))
False
>>>
```

NO 4.



```
        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)
llist.awal(0)
llist.akhir(6)
llist.akhir(7)
llist.printList(llist.head)
```

```
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 22:45:29) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:/Users/ACER/Documents/MODUL_3/4.py ==========
menambah pada awal 9
menambah pada awal 0
menambah pada akhir 6
menambah pada akhir 7

Dari Depan :
 0
 9
 6
 7

Dari Belakang :
 7
 6
 9
 0
>>>
```