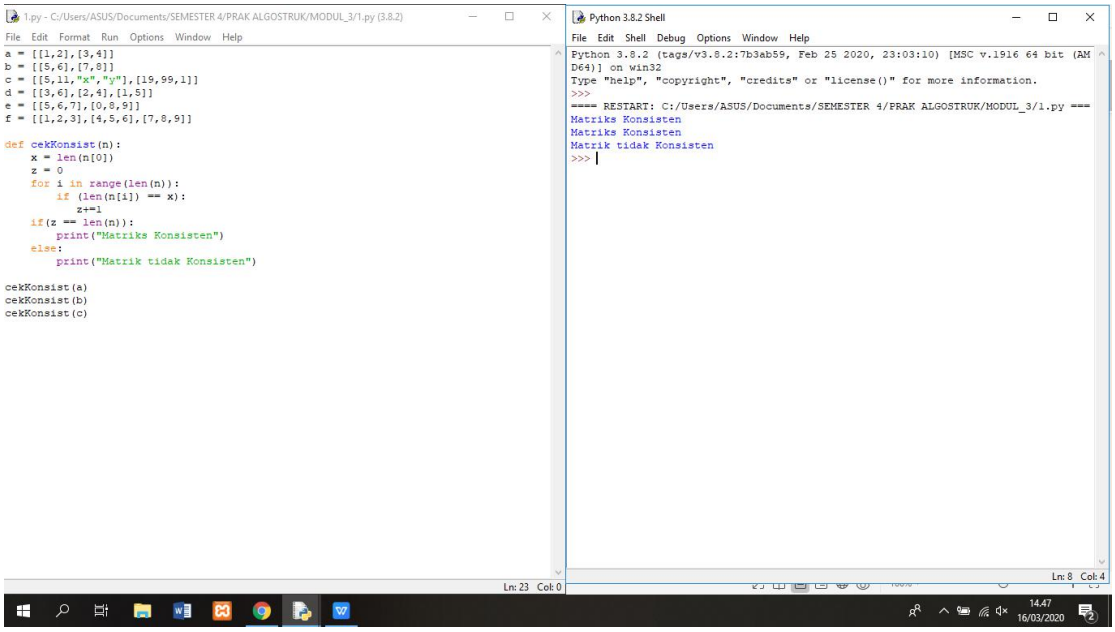
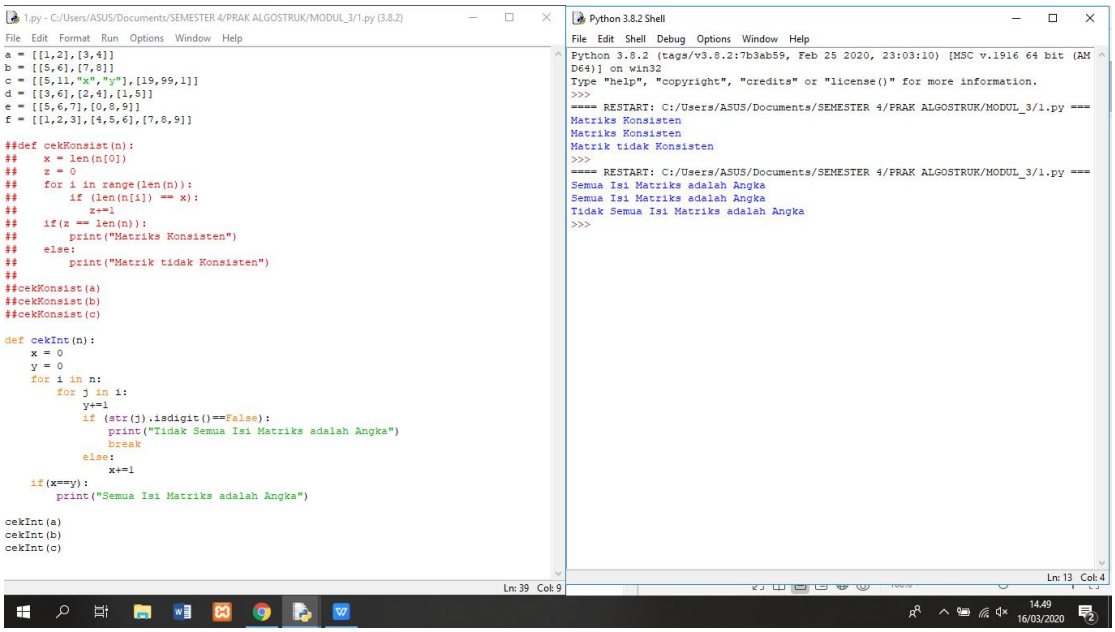
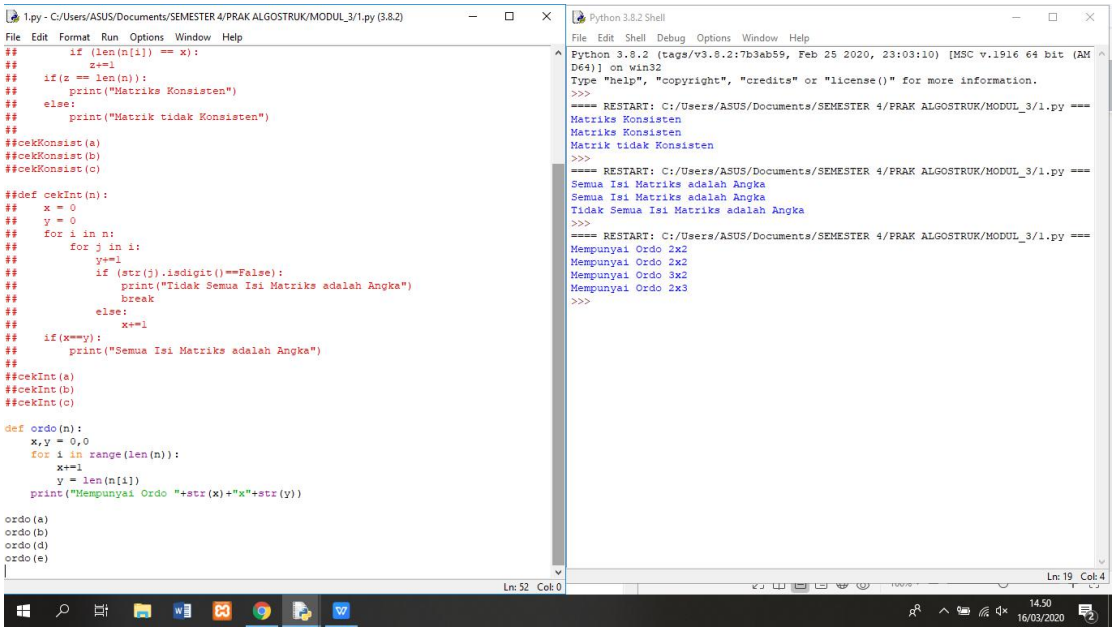
NAMA : ELSA PUTRI ALIYYA
NIM : L200180108
KELAS : D

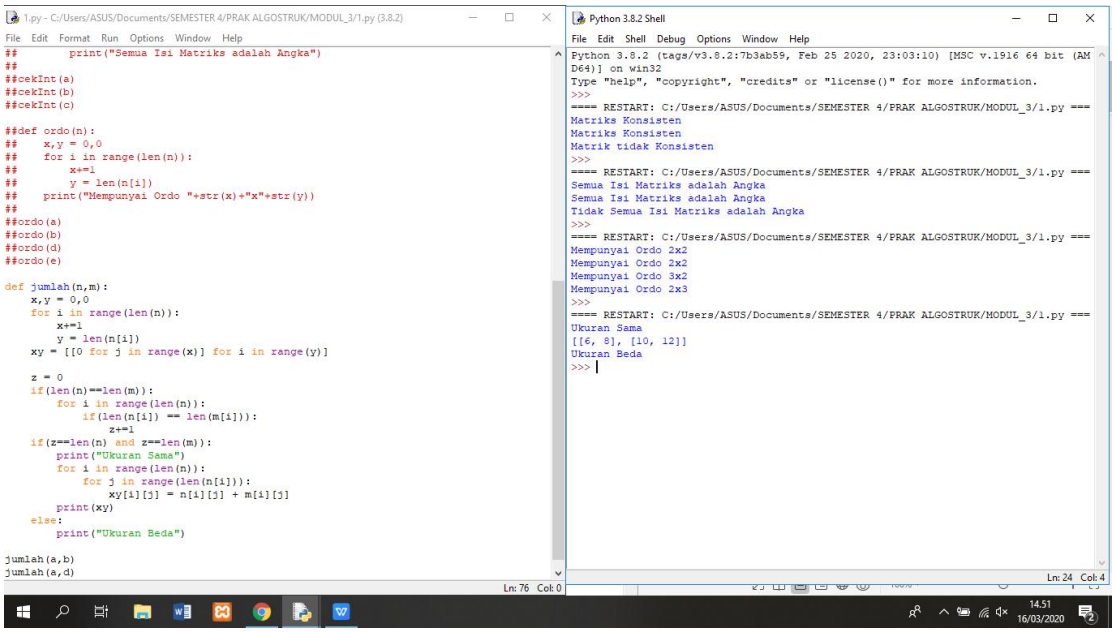
MODUL 3

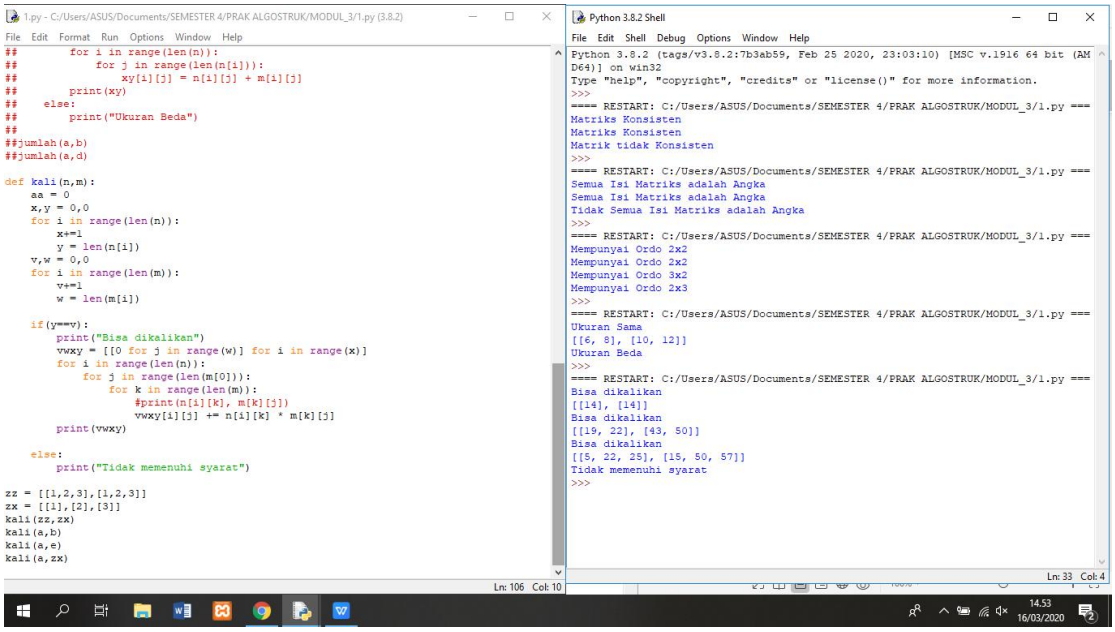
1.

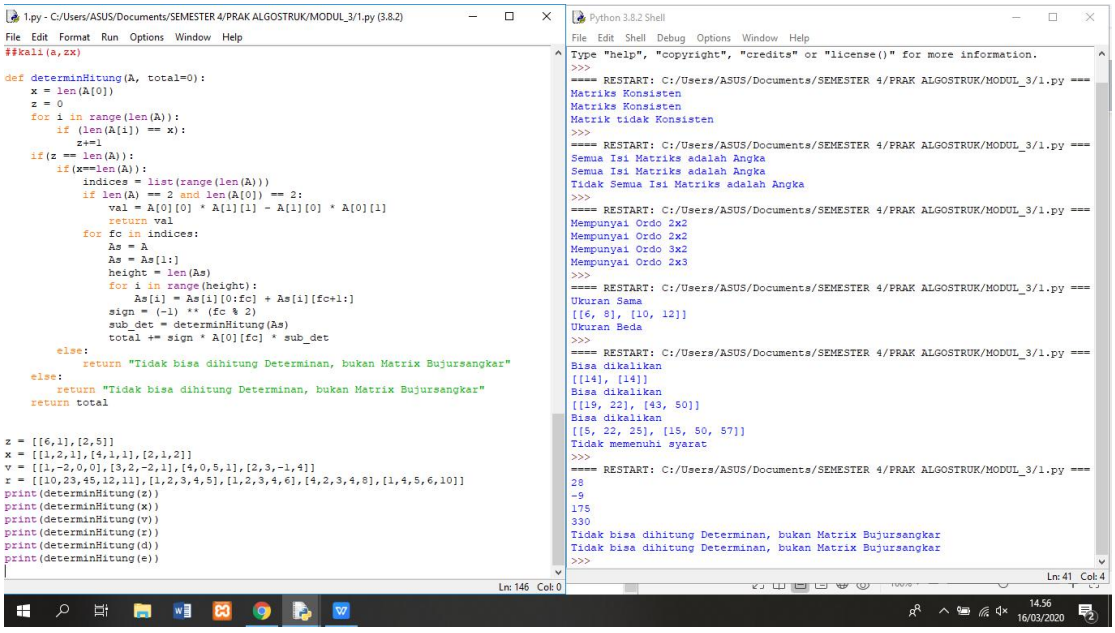




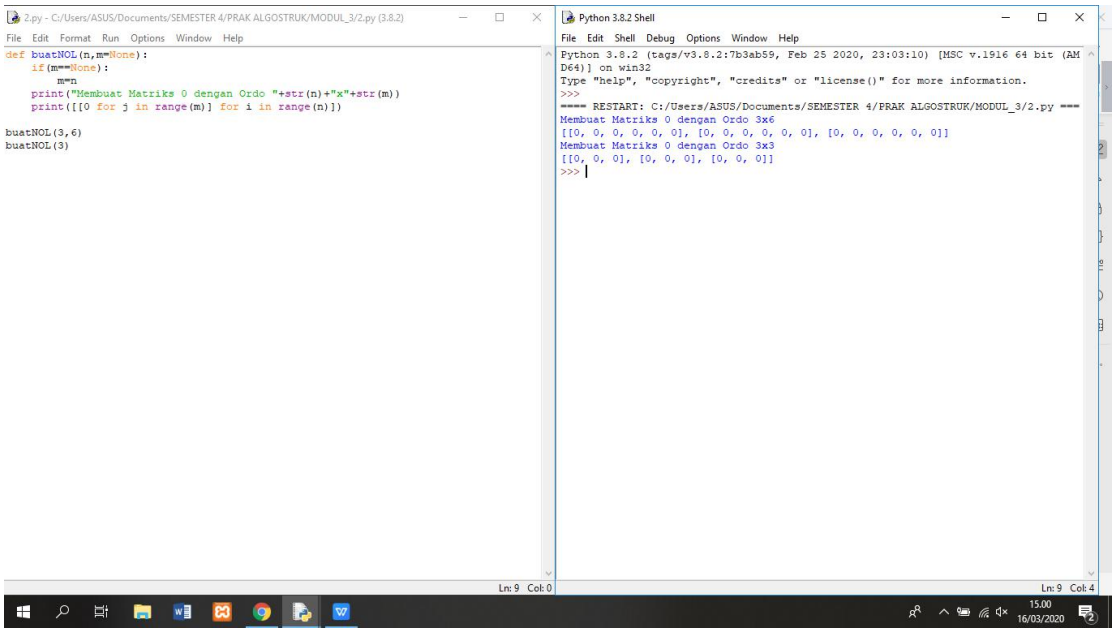

1.py - C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/MODUL_3/1.py (3.8.2)
File Edit Format Run Options Window Help
if (len(n[i]) == x):
z+=1
if(z == len(n)):
print("Matriks Konsisten")
else:
print("Matrik tidak Konsisten")
##
##cekKonsist(a)
##cekKonsist(b)
##cekKonsist(c)
##def cekInt(n):
x = 0
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)
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: 52 Col: 0
Python 3.8.2 Shell
File Edit Shell Debug Options Window Help
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 23:03:10) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
==== RESTART: C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/MODUL_3/1.py ===
Matriks Konsisten
Matriks Konsisten
Matrik tidak Konsisten
>>>
==== RESTART: C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/MODUL_3/1.py ===
Semua Isi Matriks adalah Angka
Semua Isi Matriks adalah Angka
Tidak Semua Isi Matriks adalah Angka
>>>
==== RESTART: C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/MODUL_3/1.py ===
Mempunyai Ordo 2x2
Mempunyai Ordo 2x2
Mempunyai Ordo 3x2
Mempunyai Ordo 2x3
>>>
Ln: 19 Col: 4
14.50
16/03/2020

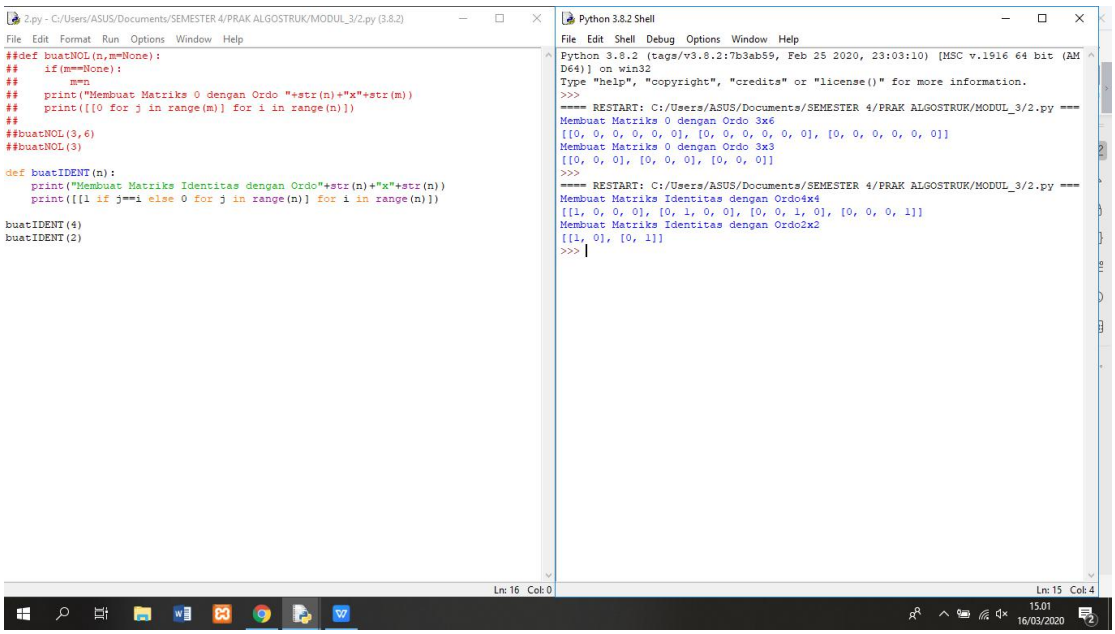

1.py - C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/MODUL_3/1.py (3.8.2)
File Edit Format Run Options Window Help
print("Semua Isi Matriks adalah Angka")
##
##cekInt(a)
##cekInt(b)
##cekInt(c)
##def ordo(n):
x,y = 0,0
for i in range(len(n)):
x+=1
y = len(n[i])
print("Mempunyai Ordo "+str(x)+"x"+str(y))
##
##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(m)):
        for i in range(len(n)):
            if(len(n[i]) == len(m[i])):
                z+=1
    if(z==len(n) and z==len(m)):
        print("Ukuran Sama")
        for i in range(len(n)):
            for j in range(len(n[i])):
                xy[i][j] = n[i][j] + m[i][j]
        print(xy)
    else:
        print("Ukuran Beda")
jumlah(a,b)
jumlah(a,d)
Ln: 76 Col: 0
Python 3.8.2 Shell
File Edit Shell Debug Options Window Help
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 23:03:10) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
==== RESTART: C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/MODUL_3/1.py ===
Matriks Konsisten
Matriks Konsisten
Matrik tidak Konsisten
>>>
==== RESTART: C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/MODUL_3/1.py ===
Semua Isi Matriks adalah Angka
Semua Isi Matriks adalah Angka
Tidak Semua Isi Matriks adalah Angka
>>>
==== RESTART: C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/MODUL_3/1.py ===
Mempunyai Ordo 2x2
Mempunyai Ordo 2x2
Mempunyai Ordo 3x2
Mempunyai Ordo 2x3
>>>
==== RESTART: C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/MODUL_3/1.py ===
Ukuran Sama
[[6, 8], [10, 12]]
Ukuran Beda
>>>
Ln: 24 Col: 4
14.51
16/03/2020


1.py - C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/MODUL_3/1.py (3.8.2)
File Edit Format Run Options Window Help
for i in range(len(n)):
for j in range(len(n[i])):
xy[i][j] = n[i][j] + m[i][j]
print(xy)
else:
print("Ukuran Beda")
##
##jumlah(a,b)
##jumlah(a,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==v):
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)):
#print(n[i][k], m[k][j])
vwxy[i][j] += n[i][k] * m[k][j]
print(vwxy)
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
Python 3.8.2 Shell
File Edit Shell Debug Options Window Help
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 23:03:10) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
==== RESTART: C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/MODUL_3/1.py ===
Matriks Konsisten
Matriks Konsisten
Matrik tidak Konsisten
>>>
==== RESTART: C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/MODUL_3/1.py ===
Semua Isi Matriks adalah Angka
Semua Isi Matriks adalah Angka
Tidak Semua Isi Matriks adalah Angka
>>>
==== RESTART: C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/MODUL_3/1.py ===
Mempunyai Ordo 2x2
Mempunyai Ordo 2x2
Mempunyai Ordo 3x2
Mempunyai Ordo 2x3
>>>
==== RESTART: C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/MODUL_3/1.py ===
Ukuran Sama
[[6, 8], [10, 12]]
Ukuran Beda
>>>
==== RESTART: C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/MODUL_3/1.py ===
Bisa dikalikan
[[14], [14]]
Bisa dikalikan
[[19, 22], [43, 50]]
Bisa dikalikan
[[5, 22, 25], [15, 50, 57]]
Tidak memenuhi syarat
>>>
Ln: 33 Col: 4
14.53
16/03/2020

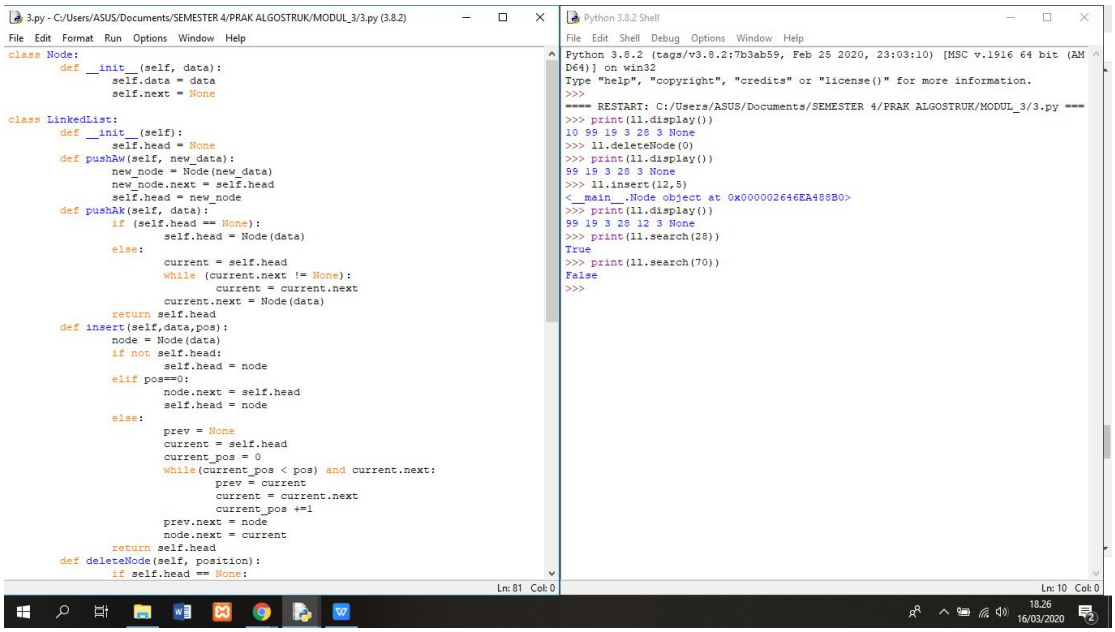

1.py - C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/MODUL_3/1.py (3.8.2)
File Edit Format Run Options Window Help
##kali(a,zx)
def determinHitung(A, total=0):
x = len(A[0])
z = 0
for i in range(len(A)):
if (len(A[i]) == x):
z+=1
if(z == len(A)):
if(x==len(A)):
indices = list(range(len(A)))
if len(A) == 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: 146 Col: 0
Python 3.8.2 Shell
File Edit Shell Debug Options Window Help
Type "help", "copyright", "credits" or "license()" for more information.
>>>
==== RESTART: C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/MODUL_3/1.py ===
Matriks Konsisten
Matriks Konsisten
Matrik tidak Konsisten
>>>
==== RESTART: C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/MODUL_3/1.py ===
Semua Isi Matriks adalah Angka
Semua Isi Matriks adalah Angka
Tidak Semua Isi Matriks adalah Angka
>>>
==== RESTART: C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/MODUL_3/1.py ===
Mempunyai Ordo 2x2
Mempunyai Ordo 2x2
Mempunyai Ordo 3x2
Mempunyai Ordo 2x3
>>>
==== RESTART: C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/MODUL_3/1.py ===
Ukuran Sama
[[6, 8], [10, 12]]
Ukuran Beda
>>>
==== RESTART: C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/MODUL_3/1.py ===
Bisa dikalikan
[[14], [14]]
Bisa dikalikan
[[19, 22], [43, 50]]
Bisa dikalikan
[[5, 22, 25], [15, 50, 57]]
Tidak memenuhi syarat
>>>
==== RESTART: C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/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
14.56
16/03/2020

2.


2.py - C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/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(3,6)
buatNOL(3)
Ln: 9 Col: 0
Python 3.8.2 Shell
File Edit Shell Debug Options Window Help
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 23:03:10) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
==== RESTART: C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/MODUL_3/2.py ====
Membuat Matriks 0 dengan Ordo 3x6
[[0, 0, 0, 0, 0, 0], [0, 0, 0, 0, 0, 0], [0, 0, 0, 0, 0, 0]]
Membuat Matriks 0 dengan Ordo 3x3
[[0, 0, 0], [0, 0, 0], [0, 0, 0]]
>>>
Ln: 9 Col: 4
15.00
16/03/2020


2.py - C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/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(3,6)
##buatNOL(3)
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(4)
buatIDENT(2)
Ln: 16 Col: 0
Python 3.8.2 Shell
File Edit Shell Debug Options Window Help
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 23:03:10) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
==== RESTART: C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/MODUL_3/2.py ====
Membuat Matriks 0 dengan Ordo 3x6
[[0, 0, 0, 0, 0, 0], [0, 0, 0, 0, 0, 0], [0, 0, 0, 0, 0, 0]]
Membuat Matriks 0 dengan Ordo 3x3
[[0, 0, 0], [0, 0, 0], [0, 0, 0]]
>>>
==== RESTART: C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/MODUL_3/2.py ====
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
15.01
16/03/2020

3.



3.py - C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/MODUL_3/3.py (3.8.2)

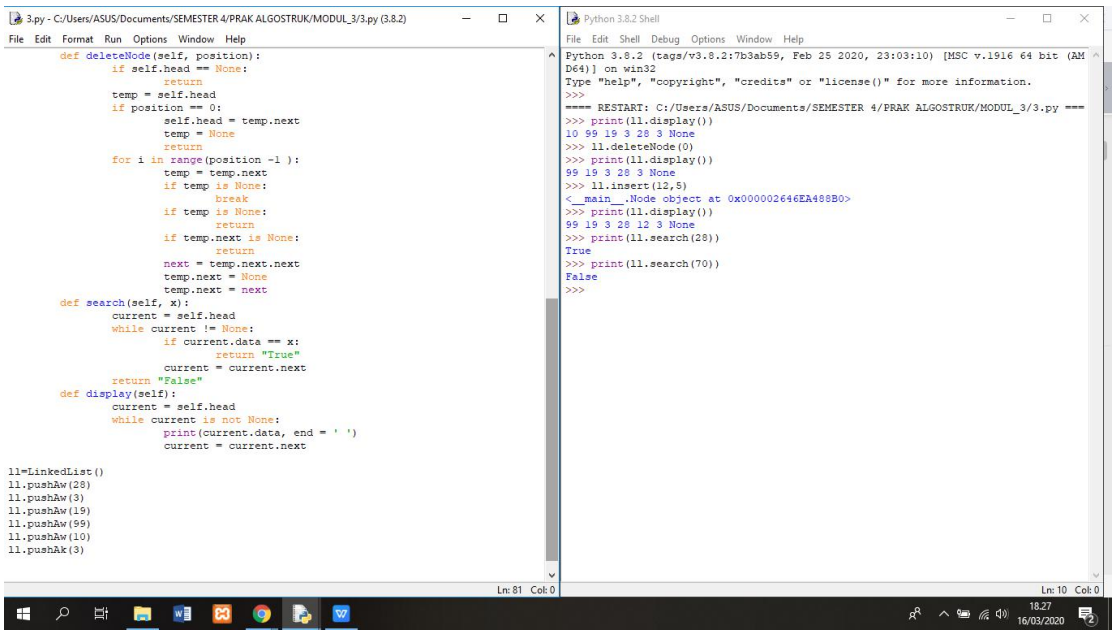
```
File  Edit  Format  Run  Options  Window  Help
class Node:
        def __init__(self, data):
                self.data = data
                self.next = None

class LinkedList:
        def __init__(self):
                self.head = None
        def 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):
                if self.head == None:
```

Ln: 81 Col: 0

Python 3.8.2 Shell

```
File  Edit  Shell  Debug  Options  Window  Help
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 23:03:10) [MSC v.1916 64 bit (AM
D64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
==== RESTART: C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/MODUL_3/3.py ===
>>> print(ll.display())
10 99 19 3 28 3 None
>>> ll.deleteNode(0)
>>> print(ll.display())
99 19 3 28 3 None
>>> ll.insert(12,5)
<__main__.Node object at 0x000002646EA488B0>
>>> print(ll.display())
99 19 3 28 12 3 None
>>> print(ll.search(28))
True
>>> print(ll.search(70))
False
>>>
```

Ln: 10 Col: 0



3.py - C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/MODUL_3/3.py (3.8.2)

```
File  Edit  Format  Run  Options  Window  Help
        def deleteNode(self, position):
                if self.head == None:
                        return
                temp = self.head
                if position == 0:
                        self.head = temp.next
                        temp = None
                        return
                for i in range(position -1 ):
                        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 search(self, x):
                current = self.head
                while current != None:
                        if current.data == x:
                                return "True"
                        current = current.next
                return "False"
        def display(self):
                current = self.head
                while current is not None:
                        print(current.data, end = ' ')
                        current = current.next

ll=LinkedList()
ll.pushAw(28)
ll.pushAw(3)
ll.pushAw(19)
ll.pushAw(99)
ll.pushAw(10)
ll.pushAk(3)
```

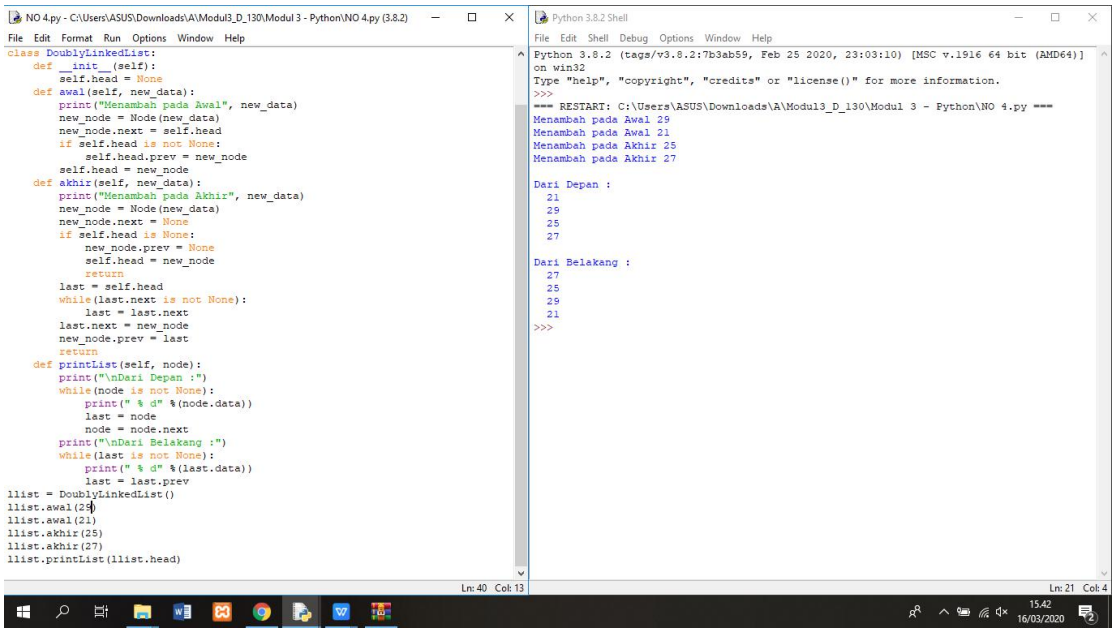
Ln: 81 Col: 0

Python 3.8.2 Shell

```
File  Edit  Shell  Debug  Options  Window  Help
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 23:03:10) [MSC v.1916 64 bit (AM
D64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
==== RESTART: C:/Users/ASUS/Documents/SEMESTER 4/PRAK ALGOSTRUK/MODUL_3/3.py ===
>>> print(ll.display())
10 99 19 3 28 3 None
>>> ll.deleteNode(0)
>>> print(ll.display())
99 19 3 28 3 None
>>> ll.insert(12,5)
<__main__.Node object at 0x000002646EA488B0>
>>> print(ll.display())
99 19 3 28 12 3 None
>>> print(ll.search(28))
True
>>> print(ll.search(70))
False
>>>
```

Ln: 10 Col: 0

4.


NO 4.py - C:\Users\ASUS\Downloads\A\Modul3_D_130\Modul 3 - Python\NO 4.py (3.8.2)
File Edit Format Run Options Window Help
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(29)
llist.awal(21)
llist.akhir(25)
llist.akhir(27)
llist.printList(llist.head)
Ln: 40 Col: 13
Python 3.8.2 Shell
File Edit Shell Debug Options Window Help
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 23:03:10) [MSC v.1916 64 bit (AMD64)]
on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
=== RESTART: C:\Users\ASUS\Downloads\A\Modul3_D_130\Modul 3 - Python\NO 4.py ===
Menambah pada Awal 29
Menambah pada Awal 21
Menambah pada Akhir 25
Menambah pada Akhir 27
Dari Depan :
21
29
25
27
Dari Belakang :
27
25
29
21
>>>
Ln: 21 Col: 4
15.42
16/03/2020