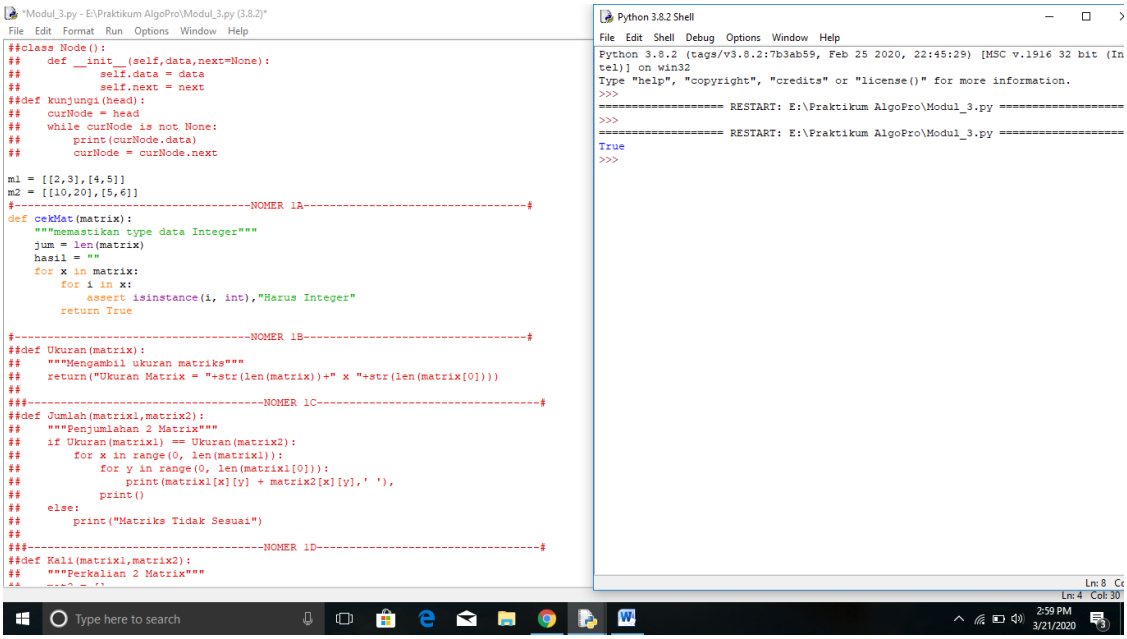
Nama : Suryo Pramuda Wicaksono

NIM : L200180053

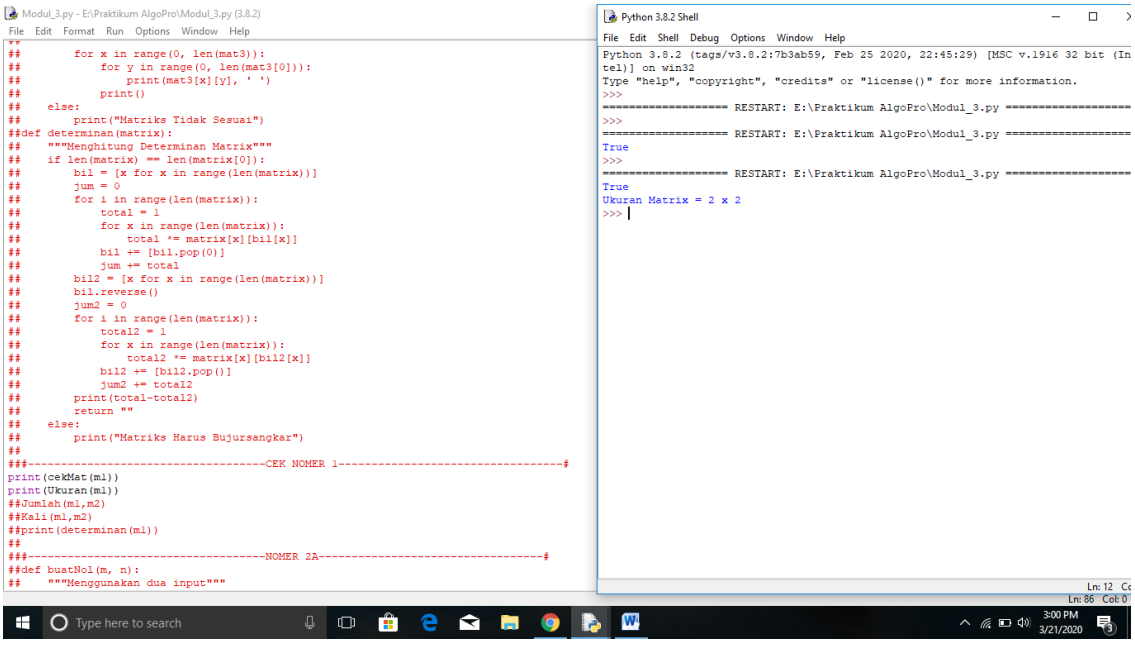
Kelas : C

Soal – Soal untuk Mahasiswa Modul 3

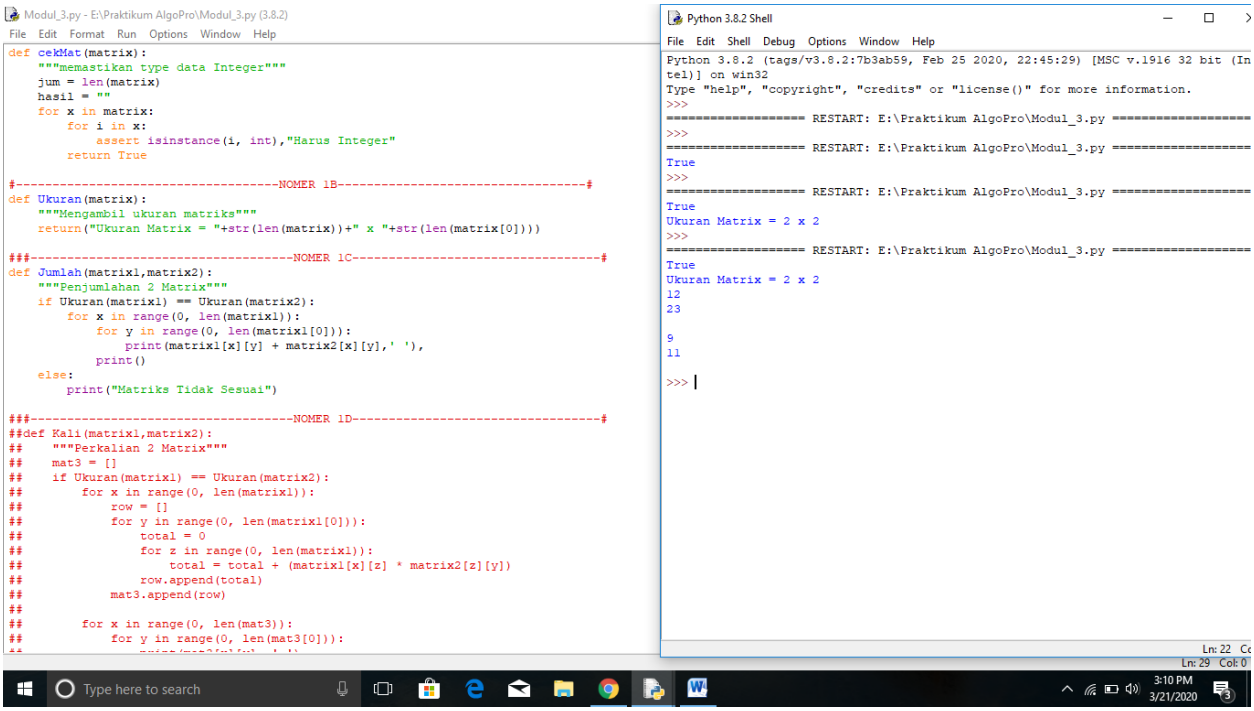
1.a



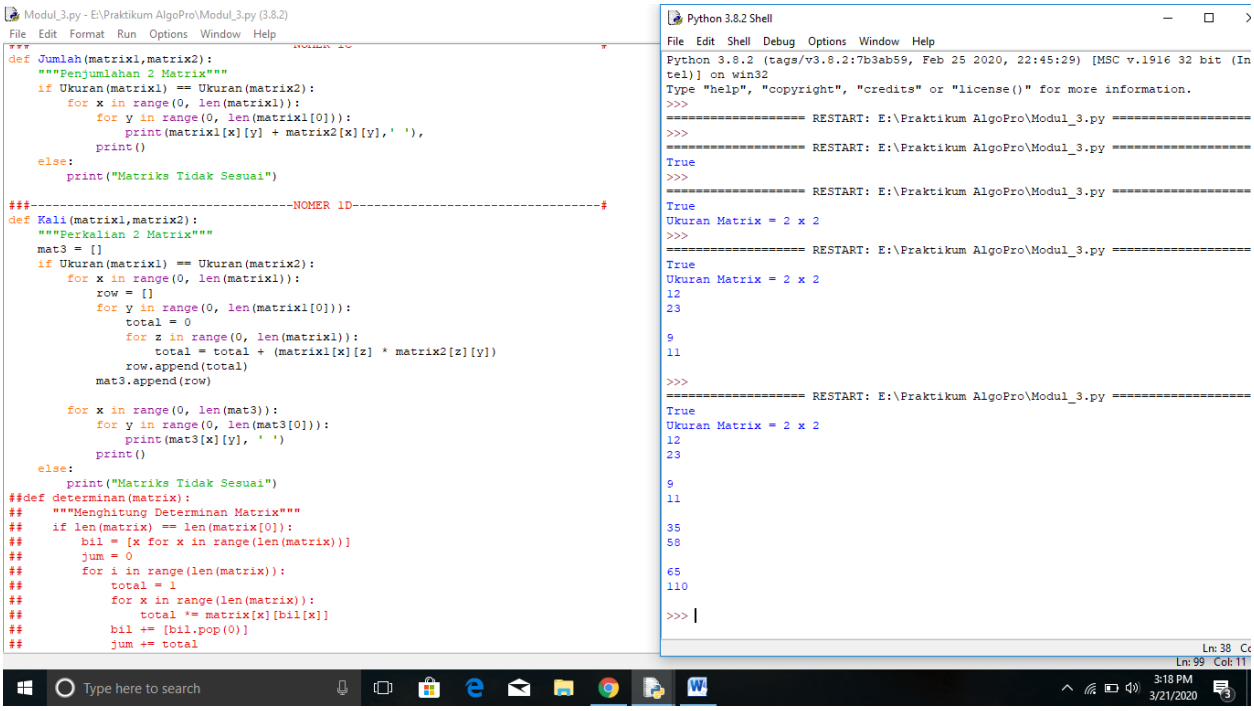
b.



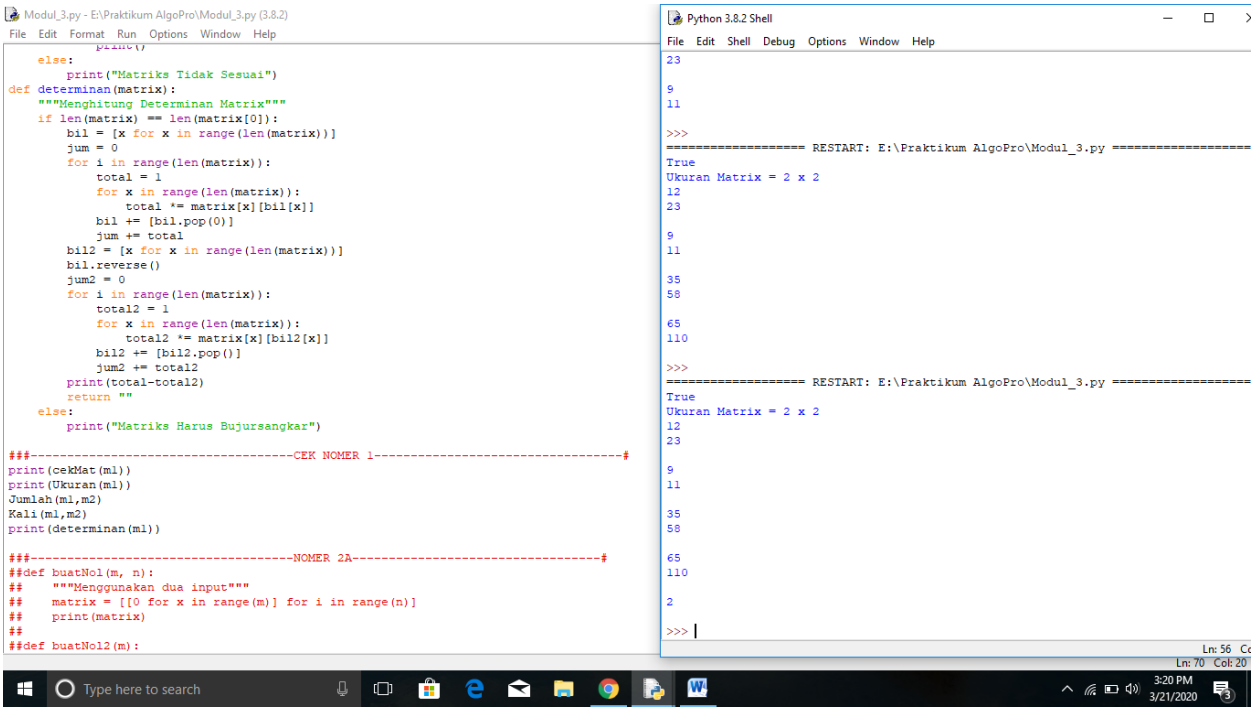
c.


Modul_3.py - E:\Praktikum AlgoPro\Modul_3.py (3.8.2)
File Edit Format Run Options Window Help
def cekMat(matrix):
"""memastikan type data Integer"""
jum = len(matrix)
hasil = ""
for x in matrix:
for i in x:
assert isinstance(i, int),"Harus Integer"
return True
#----------NOMER 1B----------#
def Ukuran(matrix):
"""Mengambil ukuran matriks"""
return("Ukuran Matrix = "+str(len(matrix))+" x "+str(len(matrix[0])))
###----------NOMER 1C----------#
def Jumlah(matrix1,matrix2):
"""Penjumlahan 2 Matrix"""
if Ukuran(matrix1) == Ukuran(matrix2):
for x in range(0, len(matrix1)):
for y in range(0, len(matrix1[0])):
print(matrix1[x][y] + matrix2[x][y],' '),
print()
else:
print("Matriks Tidak Sesuai")
###----------NOMER 1D----------#
##def Kali(matrix1,matrix2):
"""Perkalian 2 Matrix"""
mat3 = []
if Ukuran(matrix1) == Ukuran(matrix2):
for x in range(0, len(matrix1)):
row = []
for y in range(0, len(matrix1[0])):
total = 0
for z in range(0, len(matrix1)):
total = total + (matrix1[x][z] * matrix2[z][y])
row.append(total)
mat3.append(row)
##
for x in range(0, len(mat3)):
for y in range(0, len(mat3[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, 22:45:29) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: E:\Praktikum AlgoPro\Modul_3.py ==========
>>>
========== RESTART: E:\Praktikum AlgoPro\Modul_3.py ==========
True
>>>
========== RESTART: E:\Praktikum AlgoPro\Modul_3.py ==========
True
Ukuran Matrix = 2 x 2
>>>
========== RESTART: E:\Praktikum AlgoPro\Modul_3.py ==========
True
Ukuran Matrix = 2 x 2
12
23
9
11
>>>
Ln: 22 Col: 0
Ln: 29 Col: 0
Type here to search
3:10 PM
3/21/2020

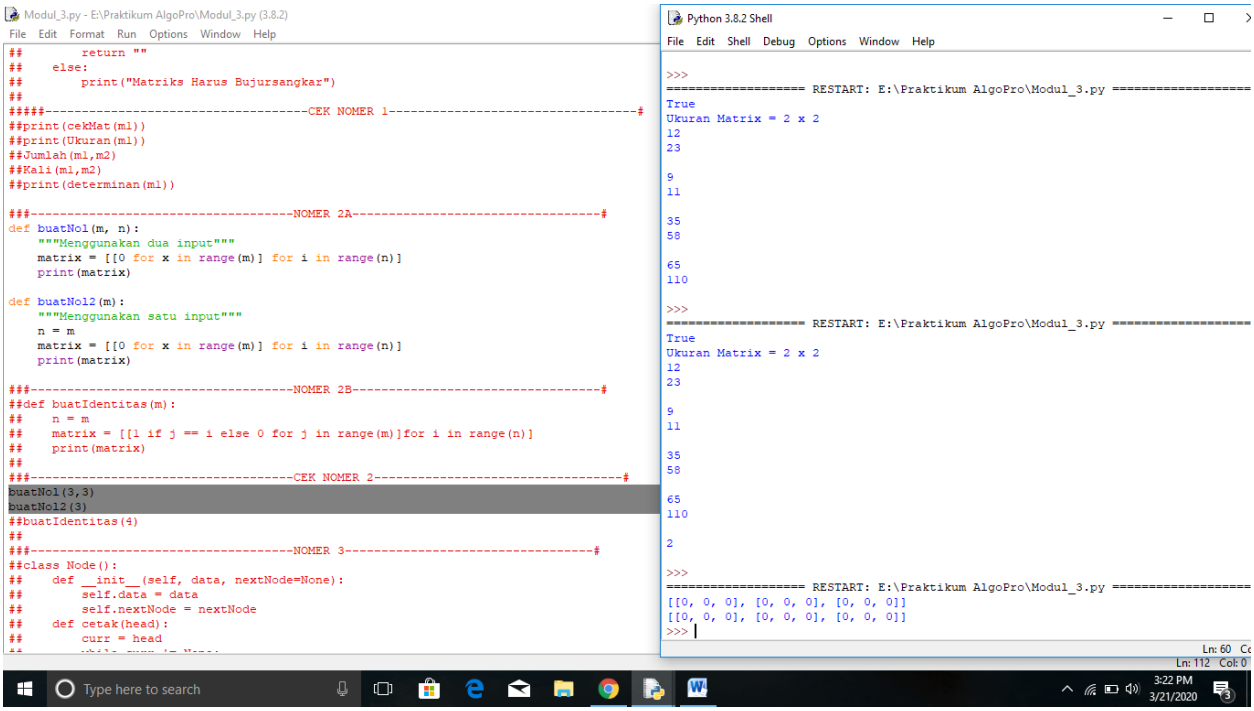
d.


Modul_3.py - E:\Praktikum AlgoPro\Modul_3.py (3.8.2)
File Edit Format Run Options Window Help
def Jumlah(matrix1,matrix2):
"""Penjumlahan 2 Matrix"""
if Ukuran(matrix1) == Ukuran(matrix2):
for x in range(0, len(matrix1)):
for y in range(0, len(matrix1[0])):
print(matrix1[x][y] + matrix2[x][y],' '),
print()
else:
print("Matriks Tidak Sesuai")
###----------NOMER 1D----------#
def Kali(matrix1,matrix2):
"""Perkalian 2 Matrix"""
mat3 = []
if Ukuran(matrix1) == Ukuran(matrix2):
for x in range(0, len(matrix1)):
row = []
for y in range(0, len(matrix1[0])):
total = 0
for z in range(0, len(matrix1)):
total = total + (matrix1[x][z] * matrix2[z][y])
row.append(total)
mat3.append(row)
for x in range(0, len(mat3)):
for y in range(0, len(mat3[0])):
print(mat3[x][y], ' ')
print()
else:
print("Matriks Tidak Sesuai")
##def determinan(matrix):
"""Menghitung Determinan Matrix"""
if len(matrix) == len(matrix[0]):
bil = [x for x in range(len(matrix))]
jum = 0
for i in range(len(matrix)):
total = 1
for x in range(len(matrix)):
total *= matrix[x][bil[x]]
bil += [bil.pop(0)]
jum += total
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: E:\Praktikum AlgoPro\Modul_3.py ==========
>>>
========== RESTART: E:\Praktikum AlgoPro\Modul_3.py ==========
True
>>>
========== RESTART: E:\Praktikum AlgoPro\Modul_3.py ==========
True
Ukuran Matrix = 2 x 2
>>>
========== RESTART: E:\Praktikum AlgoPro\Modul_3.py ==========
True
Ukuran Matrix = 2 x 2
12
23
9
11
>>>
========== RESTART: E:\Praktikum AlgoPro\Modul_3.py ==========
True
Ukuran Matrix = 2 x 2
12
23
9
11
35
58
65
110
>>>
Ln: 38 Col: 0
Ln: 99 Col: 11
Type here to search
3:18 PM
3/21/2020

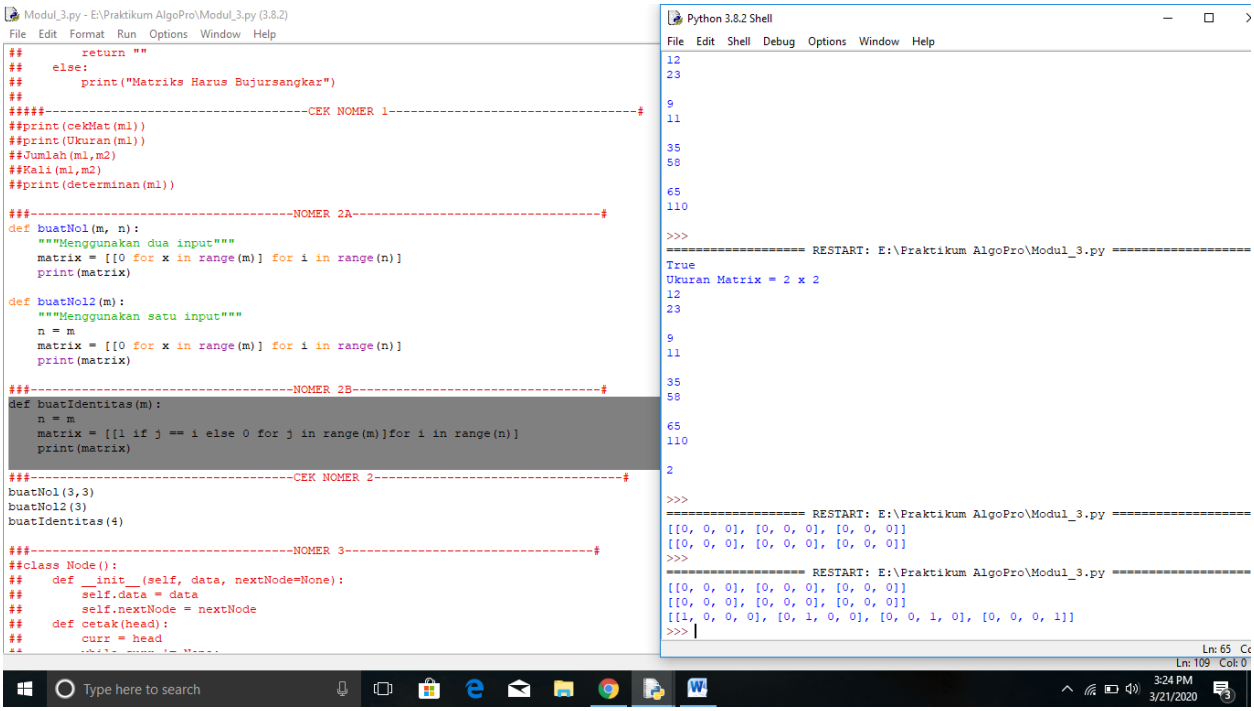
e.


Modul_3.py - E:\Praktikum AlgoPro\Modul_3.py (3.8.2)
File Edit Format Run Options Window Help
print()
else:
print("Matriks Tidak Sesuai")
def determinan(matrix):
"""Menghitung Determinan Matrix"""
if len(matrix) == len(matrix[0]):
bil = [x for x in range(len(matrix))]
jum = 0
for i in range(len(matrix)):
total = 1
for x in range(len(matrix)):
total *= matrix[x][bil[x]]
bil += [bil.pop(0)]
jum += total
bil2 = [x for x in range(len(matrix))]
bil.reverse()
jum2 = 0
for i in range(len(matrix)):
total2 = 1
for x in range(len(matrix)):
total2 *= matrix[x][bil2[x]]
bil2 += [bil2.pop()]
jum2 += total2
print(total-total2)
return ""
else:
print("Matriks Harus Bujursangkar")
###-----------------------------------CEK NOMER 1---------------------------------#
print(cekMat(m1))
print(Ukuran(m1))
Jumlah(m1,m2)
Kali(m1,m2)
print(determinan(m1))
###-----------------------------------NOMER 2A---------------------------------#
##def buatNol(m, n):
"""Menggunakan dua input"""
matrix = [[0 for x in range(m)] for i in range(n)]
print(matrix)
##
##def buatNol2(m):
Python 3.8.2 Shell
File Edit Shell Debug Options Window Help
23
9
11
>>>
========== RESTART: E:\Praktikum AlgoPro\Modul_3.py ==========
True
Ukuran Matrix = 2 x 2
12
23
9
11
35
58
65
110
>>>
========== RESTART: E:\Praktikum AlgoPro\Modul_3.py ==========
True
Ukuran Matrix = 2 x 2
12
23
9
11
35
58
65
110
2
>>>
Ln: 56 Col: 20
Type here to search
3:20 PM
3/21/2020

2.a


Modul_3.py - E:\Praktikum AlgoPro\Modul_3.py (3.8.2)
File Edit Format Run Options Window Help
return ""
else:
print("Matriks Harus Bujursangkar")
##
#####-----------------------------------CEK NOMER 1---------------------------------#
##print(cekMat(m1))
##print(Ukuran(m1))
##Jumlah(m1,m2)
##Kali(m1,m2)
##print(determinan(m1))
###-----------------------------------NOMER 2A---------------------------------#
def buatNol(m, n):
"""Menggunakan dua input"""
matrix = [[0 for x in range(m)] for i in range(n)]
print(matrix)
def buatNol2(m):
"""Menggunakan satu input"""
n = m
matrix = [[0 for x in range(m)] for i in range(n)]
print(matrix)
###-----------------------------------NOMER 2B---------------------------------#
##def buatIdentitas(m):
n = m
matrix = [[1 if j == i else 0 for j in range(m)]for i in range(n)]
print(matrix)
##
###-----------------------------------CEK NOMER 2---------------------------------#
buatNol(3,3)
buatNol2(3)
##buatIdentitas(4)
##
###-----------------------------------NOMER 3---------------------------------#
##class Node():
def __init__(self, data, nextNode=None):
self.data = data
self.nextNode = nextNode
def cetak(head):
curr = head
Python 3.8.2 Shell
File Edit Shell Debug Options Window Help
>>>
========== RESTART: E:\Praktikum AlgoPro\Modul_3.py ==========
True
Ukuran Matrix = 2 x 2
12
23
9
11
35
58
65
110
>>>
========== RESTART: E:\Praktikum AlgoPro\Modul_3.py ==========
True
Ukuran Matrix = 2 x 2
12
23
9
11
35
58
65
110
2
>>>
========== RESTART: E:\Praktikum AlgoPro\Modul_3.py ==========
[[0, 0, 0], [0, 0, 0], [0, 0, 0]]
[[0, 0, 0], [0, 0, 0], [0, 0, 0]]
>>>
Ln: 60 Col: 0
Ln: 112 Col: 0
Type here to search
3:22 PM
3/21/2020

b.


Modul_3.py - E:\Praktikum AlgoPro\Modul_3.py (3.8.2)
File Edit Format Run Options Window Help
return ""
else:
print("Matriks Harus Bujursangkar")
##
#####----------------------------------CEK NOMER 1----------------------------------#
##print(cekMat(ml))
##print(Ukuran(ml))
##Jumlah(ml,m2)
##Kali(ml,m2)
##print(determinan(ml))
###----------------------------------NOMER 2A----------------------------------#
def buatNol(m, n):
"""Menggunakan dua input"""
matrix = [[0 for x in range(m)] for i in range(n)]
print(matrix)
def buatNol2(m):
"""Menggunakan satu input"""
n = m
matrix = [[0 for x in range(m)] for i in range(n)]
print(matrix)
###----------------------------------NOMER 2B----------------------------------#
def buatIdentitas(m):
n = m
matrix = [[1 if j == i else 0 for j in range(m)]for i in range(n)]
print(matrix)
###----------------------------------CEK NOMER 2----------------------------------#
buatNol(3,3)
buatNol2(3)
buatIdentitas(4)
###----------------------------------NOMER 3----------------------------------#
##class Node():
def __init__(self, data, nextNode=None):
self.data = data
self.nextNode = nextNode
def cetak(head):
curr = head
Python 3.8.2 Shell
File Edit Shell Debug Options Window Help
12
23
9
11
35
58
65
110
>>>
========== RESTART: E:\Praktikum AlgoPro\Modul_3.py ==========
True
Ukuran Matrix = 2 x 2
12
23
9
11
35
58
65
110
2
>>>
========== RESTART: E:\Praktikum AlgoPro\Modul_3.py ==========
[[0, 0, 0], [0, 0, 0], [0, 0, 0]]
[[0, 0, 0], [0, 0, 0], [0, 0, 0]]
>>>
========== RESTART: E:\Praktikum AlgoPro\Modul_3.py ==========
[[0, 0, 0], [0, 0, 0], [0, 0, 0]]
[[0, 0, 0], [0, 0, 0], [0, 0, 0]]
[[1, 0, 0, 0], [0, 1, 0, 0], [0, 0, 1, 0], [0, 0, 0, 1]]
>>>
Ln: 65 Col: 0
Ln: 109 Col: 0
Type here to search
3:24 PM
3/21/2020