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NIM : L200180115

TUGAS PRAKTIKUM MODUL 3

Nomor1.py - /Users/ryananindityamanggala/Downloads/L200180123_Algostruk_...

```
A = [[1,2],[3,4],[5,6]]
B = [[7,8],[9,10]]
C = [[3,6],[5,2]]

#Nomor 1A
class matriks (object):
    def cetakmatriks(self, matriks):
        for i in matriks:
            print(i)
    def cekkonsisten(self, matriks):
        if len(matriks[0]) == len(matriks) :
            print ("matriks konsisten")
        else:
            print ("matriks tidak konsisten")

x = matriks()
x.cetakmatriks(A)
print(x.cekkonsisten(A))

y = matriks()
y.cetakmatriks(B)
print(y.cekkonsisten(B))

#Nomor 1B
def ordo(matriks):
    return ("Ordo matriks = "+str(len(matriks))+" x "+str(len(matriks[0])))

#Nomor 1C
def Jumlah(matriks1, matriks2):
    if ordo(matriks1) == ordo(matriks2):
        for x in range(0, len(matriks1)):
            for y in range(0, len(matriks1[0])):
                print (matriks1[x][y] + matriks2[x][y],' '),
            print()
    else:
        print("Matriks tidak sesuai")

#Nomor 1D
def kali(m,n):
    a = 0
```

Ln: 11 Col: 0

Python 3.8.2 Shell

```
Python 3.8.2 (v3.8.2:7b3ab5921f, Feb 24 2020, 17:52:18)
[Clang 6.0 (clang-600.0.57)] on darwin
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: /Users/ryananindityamanggala/Downloads/L200180123_Algostruk_Modul3/No
mor1.py
[1, 2]
[3, 4]
[5, 6]
matriks tidak konsisten
None
[7, 8]
[9, 10]
matriks konsisten
None
Bisa Dikalikan
[[25, 28], [57, 64], [89, 100]]
Bisa Dikalikan
[[61, 58], [77, 74]]
>>>
```

Ln: 7 Col: 6

Nomor2.py - /Users/ryananindityamanggala/Downloads/L200180123_Algostruk_...

```
#Nomor 2A
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)])

#Nomor 2B
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)
```

Ln: 3 Col: 19

Python 3.8.2 Shell

```
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[9, 10]
matriks konsisten
None
Bisa Dikalikan
[[25, 28], [57, 64], [89, 100]]
Bisa Dikalikan
[[61, 58], [77, 74]]
>>>
= RESTART: /Users/ryananindityamanggala/Downloads/L200180123_Algostruk_Modul3/No
mor2.py
>>> buatNol(2,3)
Membuat matriks 0 dengan ordo 2 x 3
[[0, 0, 0], [0, 0, 0]]
>>> buatIdentitas(4)
Membuat matriks identitas dengan ordo 4 x 4
[[1, 0, 0, 0], [0, 1, 0, 0], [0, 0, 1, 0], [0, 0, 0, 1]]
>>>
```

Ln: 1 Col: 30

Nomor3.py - /Users/ryananindityamanggala/Downloads/L200180123_Algostruk_...

```
#Nomor 3
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):
```

Ln: 13 Col: 0

Python 3.8.2 Shell

```
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>>>
= RESTART: /Users/ryananindityamanggala/Downloads/L200180123_Algostruk_Modul3/No
mor3.py
12 Apakah ada dalam data?
True
90 Apakah ada dalam data?
False
12 31 3 19
>>>
```

Ln: 34 Col: 4

Nomor3.py - /Users/ryananindityamanggala/Downloads/L200180123_Algostruk_...

```
            self.head = temp.next
            temp = None
            return
        for i in range(posisi - 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 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.tambahAkhir(19)
A.hapus(0)
A.tambah(3,5)
print(A.cari(12))
print(A.cari(90))
A.display()
```

Ln: 13 Col: 0

Python 3.8.2 Shell

```
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Ln: 34 Col: 4