Praktikum Algostruk
Modul 4

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Latihan
Linier Search
4.1

latihan1.py - E:/algostruk/MODUL_4/latihan1.py (3.7.4)

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```
def cariLurus(wadah, target):
    n = len(wadah)
    for i in range(n):
        if wadah[i] == target:
            return print("targetnya terdapat di array itu.")
    return print("targetnya tidak terdapat di array itu.")
```

Python 3.7.4 Shell

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```
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul  8 2019, 19:29:22) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: E:/algostruk/MODUL_4/latihan1.py ==========
>>> A = [10, 51, 2, 18, 4, 31, 13, 5, 23, 64, 29]
>>> cariLurus(A, 31)
targetnya terdapat di array itu.
>>> cariLurus(A, 8)
targetnya tidak terdapat di array itu.
>>>
```

4.2

Latihan2.py - E:/algostruk/MODUL_4/Latihan2.py (3.7.4)

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```
class MhsTif(object):
    def __init__(self, nama, nim, kota, uangsaku):
        self.nama = nama
        self.nim = nim
        self.kota = kota
        self.uangSaku = uangsaku

c0 = MhsTif("Ika", 10, "Solo", 240000)
c1 = MhsTif("Budi",51, "Sragen", 230000)
c2 = MhsTif("Ahmad", 2, "Surakarta", 250000)
c3 = MhsTif("Chandra", 18, "Surakarta", 235000)
c4 = MhsTif("Eka", 4, "Boyolali", 240000)
c5 = MhsTif("Fandi", 31, "Salatiga", 250000)
c6 = MhsTif("Deni", 13, "Klaten", 245000)
c7 = MhsTif("Galuh", 5, "Wonogiri", 245000)
c8 = MhsTif("Janto", 23, "Klaten", 245000)
c9 = MhsTif("Hasan", 64, "Karanganyar", 270000)
c10 = MhsTif("Khalid", 29, "Purwodadi", 265000)

Daftar = [c0, c1, c2, c3, c4, c5, c6, c7, c8, c9, c10]

target = 'Klaten'
for i in Daftar:
    if i.kota == target:
        print(i.nama + ' tinggal di ' + target)
```

Python 3.7.4 Shell

File Edit Shell Debug Options Window Help

```
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul  8 2019, 19:29:22) [MSC v.1916 32 bi
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: E:/algostruk/MODUL_4/Latihan2.py ==========
Deni tinggal di Klaten
Janto tinggal di Klaten
>>>
```

Linked List

latihan3.py - E:/algostruk/MODUL_4/latihan3.py (3.7.4)

File Edit Format Run Options Window Help

```
class MhsTif(object):
    def __init__(self, nama, nim, kota, uangsaku):
        self.nama = nama
        self.nim = nim
        self.kota = kota
        self.uangSaku = uangsaku

c0 = MhsTif("Ika", 10, "Solo", 240000)
c1 = MhsTif("Budi",51, "Sragen", 230000)
c2 = MhsTif("Ahmad", 2, "Surakarta", 250000)
c3 = MhsTif("Chandra", 18, "Surakarta", 235000)
c4 = MhsTif("Eka", 4, "Boyolali", 240000)
c5 = MhsTif("Fandi", 31, "Salatiga", 250000)
c6 = MhsTif("Deni", 13, "Klaten", 245000)
c7 = MhsTif("Galuh", 5, "Wonogiri", 245000)
c8 = MhsTif("Janto", 23, "Klaten", 245000)
c9 = MhsTif("Hasan", 64, "Karanganyar", 270000)
c10 = MhsTif("Khalid", 29, "Purwodadi", 265000)

kumpulan = [c0, c1, c2, c3, c4, c5, c6, c7, c8, c9, c10]


def cariTerkecil(kumpulan):
    n = len (kumpulan)
    terkecil = kumpulan[0]
    for i in range(1,n):
        if kumpulan[i] < terkecil:
            terkecil = kumpulan[i]

    return terkecil
```

Python 3.7.4 Shell

File Edit Shell Debug Options Window Help

```
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul  8 2019, 19:29:22) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
================ RESTART: E:/algostruk/MODUL_4/latihan3.py ================
>>>
```

Binary Search

latihan4.py - E:/algostruk/MODUL_4/latihan4.py (3.7.4)

File Edit Format Run Options Window Help

```
class MhsTif(object):
    def __init__(self, nama, nim, kota, uangsaku):
        self.nama = nama
        self.nim = nim
        self.kota = kota
        self.uangSaku = uangsaku

c0 = MhsTif("Ika", 10, "Solo", 240000)
c1 = MhsTif("Budi",51, "Sragen", 230000)
c2 = MhsTif("Ahmad", 2, "Surakarta", 250000)
c3 = MhsTif("Chandra", 18, "Surakarta", 235000)
c4 = MhsTif("Eka", 4, "Boyolali", 240000)
c5 = MhsTif("Fandi", 31, "Salatiga", 250000)
c6 = MhsTif("Deni", 13, "Klaten", 245000)
c7 = MhsTif("Galuh", 5, "Wonogiri", 245000)
c8 = MhsTif("Janto", 23, "Klaten", 245000)
c9 = MhsTif("Hasan", 64, "Karanganyar", 270000)
c10 = MhsTif("Khalid", 29, "Purwodadi", 265000)

Daftar = [c0, c1, c2, c3, c4, c5, c6, c7, c8, c9, c10]

kumpulan = c0
target = 'Solo'
def binSe(kumpulan, target):
    low = 0
    high = len(kumpulan) -1

    while low <= high :
        mid = (high+low) //2
        if kumpulan[mid] == target:
            return True
        elif target < kumpulan[mid]:
            high = mid - 1
        else:
            low = mid + 1
    return False
```

Python 3.7.4 Shell

File Edit Shell Debug Options Window Help

```
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul  8 2019, 19:29:22) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
================ RESTART: E:/algostruk/MODUL_4/latihan4.py ================
>>>
```