### Modul 4

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NIM : L200184044

### **Linier Search**

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```

# Pencarian Lurus Objek Buatan Sendiri

```
      Latihan_Modul4.py - C:/Users/user/AppData/Local/Programs/Python/Python37/Latihan_Mo...
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      X

      Python 3.7.4 Shell

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                                                                                                                                                                                                                                                                                                       File Edit Shell Debug Options Window Help
 def cariLurus(wadah, target):
    n = len(wadah)
    for i in range (n):
        if wadah[i] == target:
                                                                                                                                                                                                                                                                                                      Python 3.7.4 (tags/v3.7.4:e09359112e, Jul 8 2019, 20:34:20) [MSC v.1916 64 k
                                                                                                                                                                                                                                                                                                        (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
             return True
                                                                                                                                                                                                                                                                                                        RESTART: C:/Users/user/AppData/Local/Programs/Python/Python37/Latihan Modul4
                                                                                                                                                                                                                                                                                                      >>> A =[10, 51, 2, 18, 4, 31, 13, 5, 23, 64, 29]
>>> cariLurus(A,31)
True
class MhsTIF(object):
    def __init__(self, nama, nim, kota, us):
        self.nama = nama
        self.nim = nim
        self.kota = kota
                                                                                                                                                                                                                                                                                                      >>> cariLurus(A,8)
False
                                                                                                                                                                                                                                                                                                         RESTART: C:/Users/user/AppData/Local/Programs/Python/Python37/Latihan_Module
                             self.uangSaku = us
                                                                                                                                                                                                                                                                                                        >>> cariAsal()
                          ! _str_ (self):
s = self.nama + ', nim ' + str(self.nim)\
+ '. Tinggal di ' + self.kota\
+ '. Uang saku Rp ' + str(self.uangSalu)\
+ '. tiap bulannya.'
return s
                                                                                                                                                                                                                                                                                                      Deni tinggal di Klaten
Janto tinggal di Klaten
c0 = MhsTIF("Ika", 10, "Sukoharjo", 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("Beal", 13, "Klaten", 245000)
c7 = MhsTIF("Galuh", 5, "Wonogiri", 245000)
c8 = MhsTIF("Baluh", 23, "Klaten", 245000)
c9 = MhsTIF("Hasan", 64, "Karanganyar", 270000)
c10 = MhsTIF("Khalid", 29, "Furwodadi", 265000)
Daftar = [c0, c1, c2, c3, c4, c5, c6, c7, c8, c9, c10]
                                                                                                                                                                                                                                                                                                                               >>> A =[10, 51, 2, 18, 4, 31, 13, 5, 23, 64, 29]
                                                                                                                                                                                                                                                                                                                                 >>> cariLurus(A,31)
def cariTerkecil(kumpulan):
                                                                                                                                                                                                                                                                                                                               True
               n = len(kumpulan)
terkecil = kumpulan[0]
                                                                                                                                                                                                                                                                                                                                 >>> cariLurus(A,8)
               for i in range(l, n):
    if kumpulan[i] < terkecil:
        terkecil = kumpulan[i]</pre>
                                                                                                                                                                                                                                                                                                                                 RESTART: C:/Users/user/AppData/Local/Programs/Python/Python37/Local/Programs/Python/Python37/Local/Programs/Python/Python37/Local/Programs/Python/Python37/Local/Programs/Python/Python37/Local/Programs/Python/Python37/Local/Programs/Python/Python37/Local/Programs/Python/Python37/Local/Programs/Python/Python37/Local/Programs/Python/Python37/Local/Programs/Python/Python37/Local/Programs/Python/Python37/Local/Programs/Python/Python37/Local/Programs/Python/Python37/Local/Programs/Python/Python37/Local/Programs/Python/Python37/Local/Programs/Python/Python37/Local/Programs/Python/Python37/Local/Programs/Python/Python37/Local/Programs/Python/Python37/Local/Programs/Python37/Local/Programs/Python37/Local/Programs/Python37/Local/Programs/Python37/Local/Programs/Python37/Local/Programs/Python37/Local/Programs/Python37/Local/Programs/Python37/Local/Programs/Python37/Local/Programs/Python37/Local/Programs/Python37/Local/Programs/Python37/Local/Programs/Python37/Local/Programs/Python37/Local/Programs/Python37/Local/Programs/Python37/Local/Python37/Local/Programs/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python37/Local/Python
                                                                                                                                                                                                                                                                                                                              Deni tinggal di Klaten
Janto tinggal di Klaten
kumpulan = [2, 5, 753, 24, 25, 3, 5, 7, 12]
cariTerkecil(kumpulan)
```

### Pencarian Lurus di Linked List

```
      ▶ Latihan_Modul4.py - C:/Users/user/AppData/Local/Programs/Python/Python37/Latihan_Mo...
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      Python 3.7.4 Shell

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                                                                                                                                                           File Edit Shell Debug Options Window Help
                                                                                                                                                           Python 3.7.4 (tags/v3.7.4:e09359112e, Jul 8 2019, 20:34:20) [MSC v.1916 64 bit
 #1
#if target in arrayTempatYangDicari:
                                                                                                                                                           (AMD64)] on win32 Type "help", "copyright", "credits" or "license()" for more information.
        print ("targetnya tidak terdapat di array itu.")
                                                                                                                                                            RESTART: C:/Users/user/AppData/Local/Programs/Python/Python37/Latihan_Modul4.1
                                                                                                                                                           >>> A =[10, 51, 2, 18, 4, 31, 13, 5, 23, 64, 29] >>> cariLurus(A,31)
  def cariLurus(wadah, target):
    n = len(wadah)
    for i in range (n):
        if wadah[i] == target:
                                                                                                                                                          >>> cariLurus(A,8)
False
        return True return False
                                                                                                                                                            RESTART: C:/Users/user/AppData/Local/Programs/Python/Python37/Latihan Modul4.1
                                                                                                                                                           >>> carileal()
 class MhsTIF(object):
                                                                                                                                                          >>> carlasai()
Deni tinggal di Klaten
Janto tinggal di Klaten
>>> kumpulan = [2, 5, 753, 24, 25, 3, 5, 7, 12]
        def __init__(self, nama, nim, kota, us):
    self.nama = nama
    self.nim = nim
    self.kota = kota
                                                                                                                                                           >>> cariTerkecil(kumpulan)
               self.uangSaku = us
       def _str_ (self):
    s = self.nama + ', nim ' + str(self.nim)\
        + '. Tinggal di ' + self.kota\
        + '. Uang saku Rp ' + str(self.uangSalu)\
        + '. tiap bulannya.'
c0 = MhsTIF("Ika", 10, "Sukoharjo", 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("Beal", 13, "Klaten", 245000)
c7 = MhsTIF("Beal", 13, "Klaten", 245000)
c8 = MhsTIF("Janto", 23, "Klaten", 245000)
```

## **Binary Search**

```
🕟 Latihan_Modul4.py - C:/Users/user/AppData/Local/Programs/Python/Python37/Latihan_Mo...
                                                                                                                                        Python 3.7.4 Shell
File Edit Format Run Options Window Help
                                                                                                                                           File Edit Shell Debug Options Window Help
       for i in Daftar:
    if i.kota == target:
        print(i.nama + ' tinggal di ' + target)
                                                                                                                                           t (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
                                                                                                                                            RESTART: C:/Users/user/AppData/Local/Programs/Python/Python37/Latihan Modul4
                                                                                                                                           Py >>> h = [10, 51, 2, 18, 4, 31, 13, 5, 23, 64, 29] >>> cariLurus(A,31) True
#def cariTerkecil(kumpulan):
       cariferkecii(kumpulan):
    n = len(kumpulan)
terkecil = kumpulan[0]
for i in range(l, n):
    if kumpulan[i] < terkecil:
        terkecil = kumpulan[i]</pre>
                                                                                                                                          >>> cariLurus(A,8)
                                                                                                                                            RESTART: C:/Users/user/AppData/Local/Programs/Python/Python37/Latihan_Modul4
       return terkecil
                                                                                                                                          RESIMENT ---
PY
>>> cariAsal()
Deni tinggal di Klaten
Janto tinggal di Klaten
>>> kumpulan = [2, 5, 753, 24, 25, 3, 5, 7, 12]
>>> cariTerkecil(kumpulan)
#kumpulan = [2, 5, 753, 24, 25, 3, 5, 7, 12]
#cariTerkecil(kumpulan)
def binSe(kumpulan, target):
    #Mulai dari seluruh runtutan elemen
    low = 0
    high = len(kumpulan) - 1
                                                                                                                                            RESTART: C:/Users/user/AppData/Local/Programs/Python/Python37/Latihan Modul4
                                                                                                                                          RESIANT: C://Jsers/user/Applata/Local/Programs/Python/Pyt
PY
>>> kumpulan = [2, 4, 5, 10, 13, 18, 23, 29, 31, 51, 64]
>>> binSe(kumpulan, 18]
Traceback (most recent call last):
    File "cpysheli#>", line 1, in <module>
    binSe(kumpulan, 18)
TypeFror: 'function' object is not subscriptable
>>> kumpulan = [2, 4, 5, 10, 13, 18, 23, 29, 31, 51, 64]
>>> binSe(kumpulan, 18)
      # Secara berulang belah runtutan itu menjadi separuhnya
      >> binSe(kumpulan,51)
            high = mid - 1

# ataukah targetnya di sebelah kanannya?
      else:
low = mid + 1

# Jika runtutnya tidak bisa dibelah lagi, berarti targetnya tidak ada
return False
                                                                                                                                            >>> binSe(kumpulan,10)
                                                                                                                                               > binSe(kumpulan,13)
```