

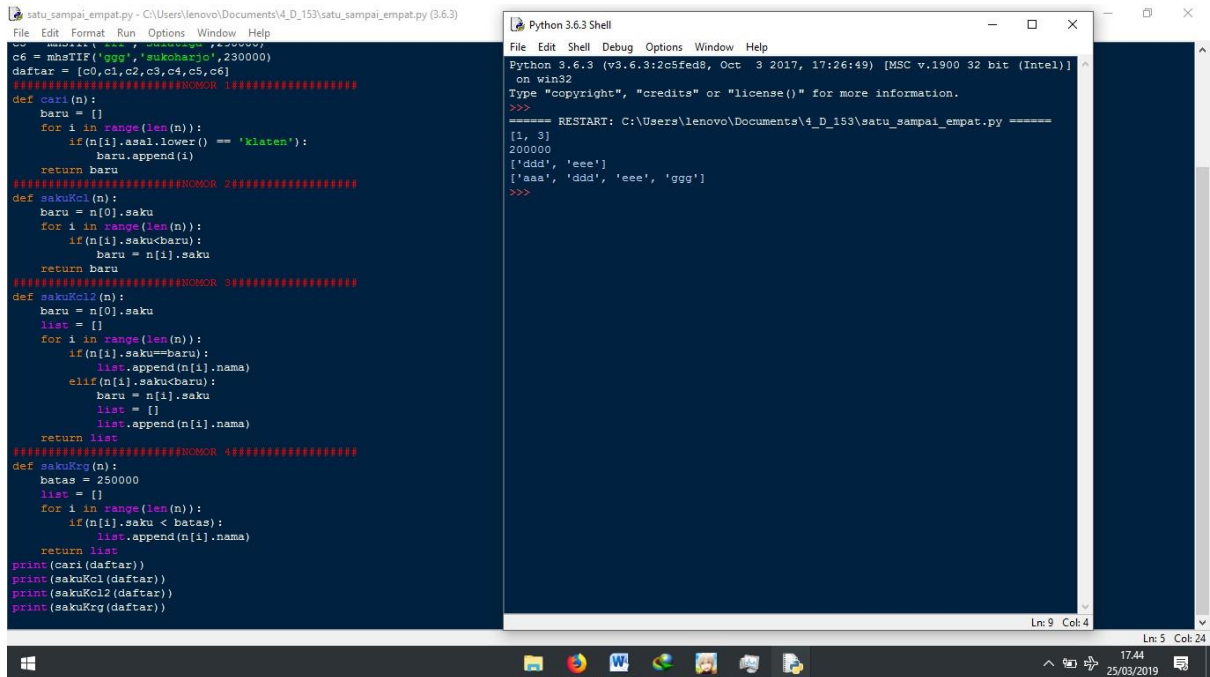
Akbar Probo B.

L200180078

Kelas C

Modul 4

## NOMOR 1 – 4

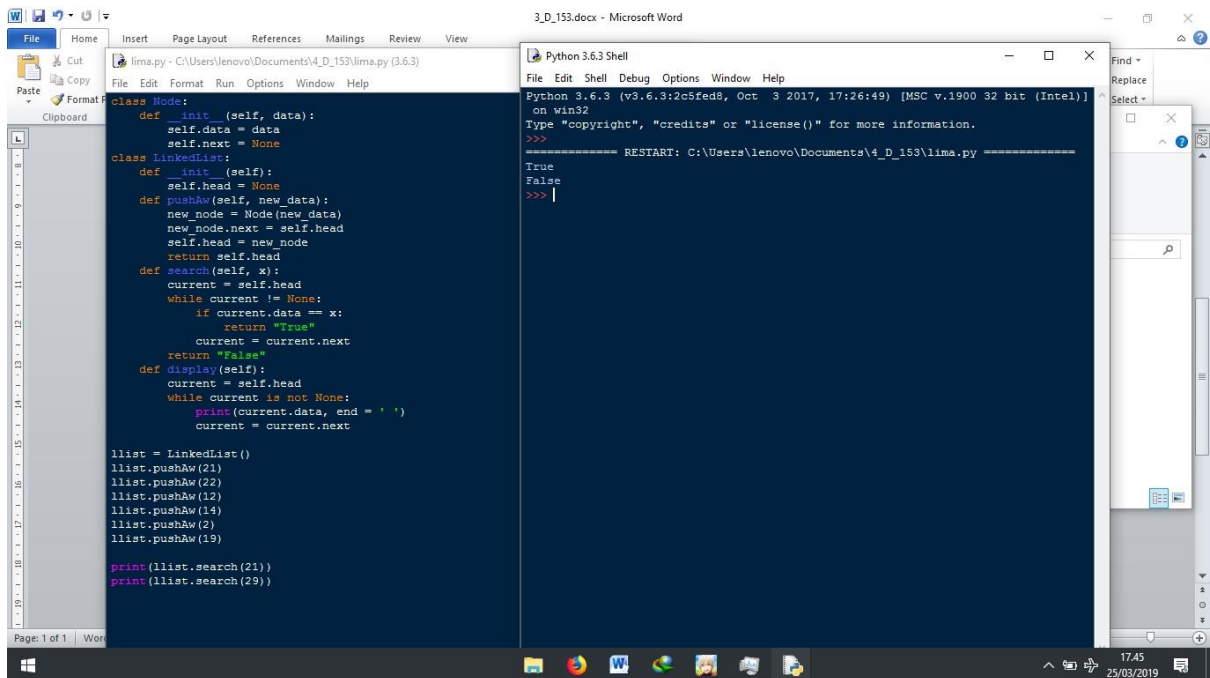


```
satu_sampai_empat.py - C:\Users\lenovo\Documents\4_D_153\satu_sampai_empat.py (3.6.3)
File Edit Format Run Options Window Help

c6 = mhsTIF('ggg','sukoharjo',230000)
daftar = [c0,c1,c2,c3,c4,c5,c6]
#####NOMOR 1#####
def cari(n):
    baru = []
    for i in range(len(n)):
        if n[i].asal.lower() == 'klaten':
            baru.append(i)
    return baru
#####NOMOR 2#####
def sakuKol(n):
    baru = n[0].saku
    for i in range(len(n)):
        if n[i].saku < baru:
            baru = n[i].saku
    return baru
#####NOMOR 3#####
def sakuKol2(n):
    baru = n[0].saku
    list = []
    for i in range(len(n)):
        if n[i].saku == baru:
            list.append(n[i].nama)
        elif n[i].saku < baru:
            baru = n[i].saku
            list = []
            list.append(n[i].nama)
    return list
#####NOMOR 4#####
def sakuKrg(n):
    batas = 250000
    list = []
    for i in range(len(n)):
        if n[i].saku < batas:
            list.append(n[i].nama)
    return list
print(cari(daftar))
print(sakuKol(daftar))
print(sakuKol2(daftar))
print(sakuKrg(daftar))

Python 3.6.3 Shell
File Edit Shell Debug Options Window Help
Python 3.6.3 (v3.6.3:2c5fed8, Oct 3 2017, 17:26:49) [MSC v.1900 32 bit (Intel)]
on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\lenovo\Documents\4_D_153\satu_sampai_empat.py =====
[1, 3]
200000
['ddd', 'eee']
['aaa', 'ddd', 'eee', 'ggg']
>>>
```

## NOMOR 5



```
3_D_153.docx - Microsoft Word
File Edit Format Run Options Window Help
lima.py - C:\Users\lenovo\Documents\4_D_153\lima.py (3.6.3)
File Edit Format Run Options Window Help

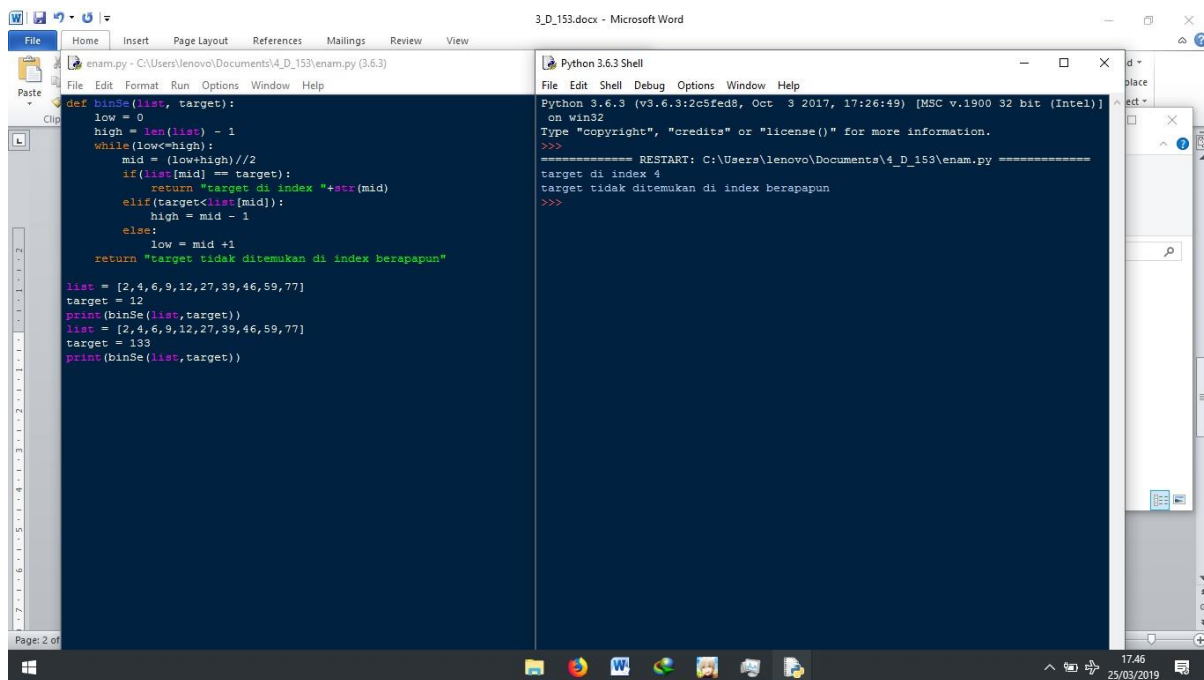
class Node:
    def __init__(self, data):
        self.data = data
        self.next = None
class LinkedList:
    def __init__(self):
        self.head = None
    def pushAw(self, new_data):
        new_node = Node(new_data)
        new_node.next = self.head
        self.head = new_node
        return self.head
    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

l1ist = LinkedList()
l1ist.pushAw(21)
l1ist.pushAw(22)
l1ist.pushAw(12)
l1ist.pushAw(14)
l1ist.pushAw(2)
l1ist.pushAw(19)

print(l1ist.search(21))
print(l1ist.search(29))

Python 3.6.3 Shell
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on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\lenovo\Documents\4_D_153\lima.py =====
True
False
>>>
```

## NOMOR 6



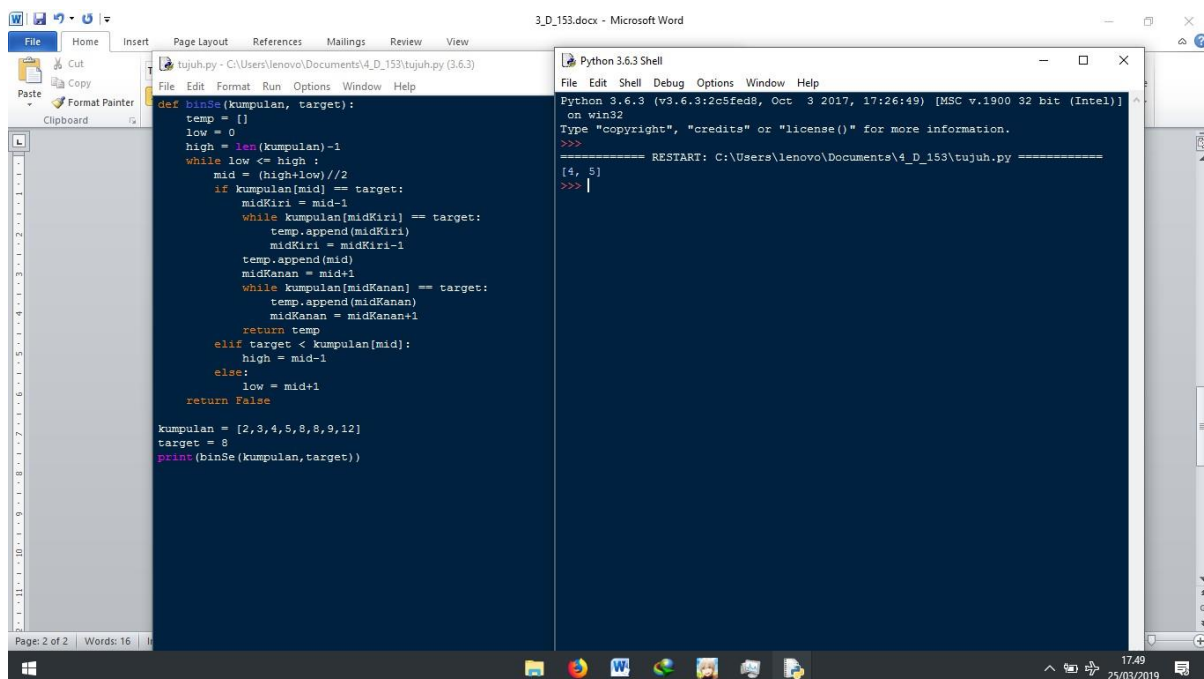
The screenshot shows a Windows desktop with a Microsoft Word document titled "3\_D\_153.docx" and a Python 3.6.3 Shell window. The Word document contains a Python script for a binary search algorithm. The Shell window shows the execution of the script, which finds the target value 12 at index 4.

```
def binSe(list, target):
    low = 0
    high = len(list) - 1
    while (low <= high):
        mid = (low+high)//2
        if (list[mid] == target):
            return "target di index "+str(mid)
        elif (target < list[mid]):
            high = mid - 1
        else:
            low = mid + 1
    return "target tidak ditemukan di index berapapun"

list = [2,4,6,9,12,27,39,46,59,77]
target = 12
print(binSe(list,target))
list = [2,4,6,9,12,27,39,46,59,77]
target = 139
print(binSe(list,target))
```

```
Python 3.6.3 Shell
Python 3.6.3 (v3.6.3:2c5fed8, Oct 3 2017, 17:26:49) [MSC v.1900 32 bit (Intel)]
on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\lenovo\Documents\4_D_153\enam.py =====
target di index 4
target tidak ditemukan di index berapapun
>>>
```

## NOMOR 7



The screenshot shows a Windows desktop with a Microsoft Word document titled "3\_D\_153.docx" and a Python 3.6.3 Shell window. The Word document contains a Python script for a binary search algorithm. The Shell window shows the execution of the script, which finds the target value 8 at index 4.

```
def binSe(kumpulan, target):
    temp = []
    low = 0
    high = len(kumpulan)-1
    while low <= high:
        mid = (high+low)//2
        if kumpulan[mid] == target:
            midKiri = mid-1
            while kumpulan[midKiri] == target:
                temp.append(midKiri)
                midKiri = midKiri-1
            temp.append(mid)
            midKanan = mid+1
            while kumpulan[midKanan] == target:
                temp.append(midKanan)
                midKanan = midKanan+1
            return temp
        elif target < kumpulan[mid]:
            high = mid-1
        else:
            low = mid+1
    return False

kumpulan = [2,3,4,5,8,9,12]
target = 8
print(binSe(kumpulan,target))
```

```
Python 3.6.3 Shell
Python 3.6.3 (v3.6.3:2c5fed8, Oct 3 2017, 17:26:49) [MSC v.1900 32 bit (Intel)]
on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\lenovo\Documents\4_D_153\tujuh.py =====
[4, 5]
>>>
```

## NOMOR 8

Ada 2 kemungkinan pola yang bisa digunakan.

Misalkan, angka yang akan ditebak adalah 70.

Pola pertama :

$a = \text{nilai tebakan pertama} // 2$

tebakan selanjutnya = nilai tebakan "lebih dari" +  $a$

"jika hasil tebakan selanjutnya "kurang dari", maka nilai yang dipakai tetap nilai lebih dari sebelumnya"

$a = a // 2$

Simulasi

tebakan 1 : 50 (mengambil nilai tengah) jawaban "lebih dari itu"

tebakan 2 : 75 (lebih dari 50) jawaban "kurang dari itu"

tebakan 3 : 62 (kurang dari 75) jawaban "lebih dari itu"

tebakan 4 : 68 (lebih dari 62) jawaban "lebih dari itu"

tebakan 5 : 71 (lebih dari 68) jawaban "kurang dari itu"

tebakan 6 : 69 (kurang dari 71) jawaban "lebih dari itu"

tebakan 7 : antara 71 dan 69, jadi jawabannya 70

Pola kedua :

menggunakan barisan geometri  $S_n = 2^n$

Barisan yang terjadi 2, 4, 8, 16, 32, 64

Misal angka yang akan ditebak adalah 68

tebakan 1 : 64 jawaban "lebih dari itu"

tebakan 2 : 96 ( $64 + 32$ ) jawaban "kurang dari itu"

tebakan 3 : 80 ( $64 + 16$ ) jawaban "kurang dari itu"

tebakan 4 : 72 ( $64 + 8$ ) jawaban "kurang dari itu"

tebakan 5 : 68 ( $64 + 4$ ) jawaban "lebih dari itu"

tebakan 6 : 70 ( $64 + 2$ ) jawaban "Pas"