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Kelas : D

Modul 9

Nomor 6 dan 7

modul9.py - D:\modul9.py (3.6.3)

```
G.kanan=I

datalist=[A.data, B.data, C.data, D.data, E.data, F.data, G.data, H.data, I.data
level=[]

def preord(sub):
    if sub is not None:
        print(sub.data)
        preord(sub.kiri)
        preord(sub.kanan)
def inord(sub):
    if sub is not None:
        inord(sub.kiri)
        print(sub.data)
        inord(sub.kanan)

def postord(sub):
    if sub is not None:
        postord(sub.kiri)
        postord(sub.kanan)
        print(sub.data)

def size(node):
    if node is None:
        return 0
    else:
        return (size(node.kiri)+ 1 + size(node.kanan))

def maxDepth(node):
    if node is None:
        return 0 ;

    else :
        lDepth = maxDepth(node.kiri)
        rDepth = maxDepth(node.kanan)

        if (lDepth > rDepth):
            return lDepth+1
        else:
            return rDepth+1
```

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: D:\modul9.py ==========
Ukuran dari Binary Tree adalah 9

Tinggi maksimal dari Binary Tree adalah 4

Ambarawa , Level 0
Bantul , Level 1
Cimahi , Level 1
Denpasar , Level 2
Enrekang , Level 2
Flores , Level 2
Garut , Level 2
Halmahera Timur , Level 3
Indramayu , Level 3
>>>
```

Nomor 8

modul9.py - D:\modul9.py (3.6.3)

```
        if (lDepth > rDepth):
            return lDepth+1
        else:
            return rDepth+1


def traverse(root):
    lvlist=[]
    current_level = [root]
    lv=0
    while current_level:
        #print(' '.join(str(node) for node in current_level))
        next_level = list()
        for n in current_level:
            if n.kiri:
                next_level.append(n.kiri)
                level.append(lv+1)
            if n.kanan:
                next_level.append(n.kanan)
                level.append(lv+1)
            current_level = next_level

        lv+=1
        lvlist.append(lv)
    return lvlist

def cetakdatadanlevel(root):
    traverse(A)
    print(root.data, ', Level 0')
    for i in range(len(level)):
          print(datalist[i+1], ', Level', level[i])


print('Ukuran dari Binary Tree adalah', size(A))
print('')
print('Tinggi maksimal dari Binary Tree adalah', maxDepth(A))
print('')
cetakdatadanlevel(A)
```

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: D:\modul9.py ==========
Ukuran dari Binary Tree adalah 9

Tinggi maksimal dari Binary Tree adalah 4

Ambarawa , Level 0
Bantul , Level 1
Cimahi , Level 1
Denpasar , Level 2
Enrekang , Level 2
Flores , Level 2
Garut , Level 2
Halmahera Timur , Level 3
Indramayu , Level 3
>>>
```