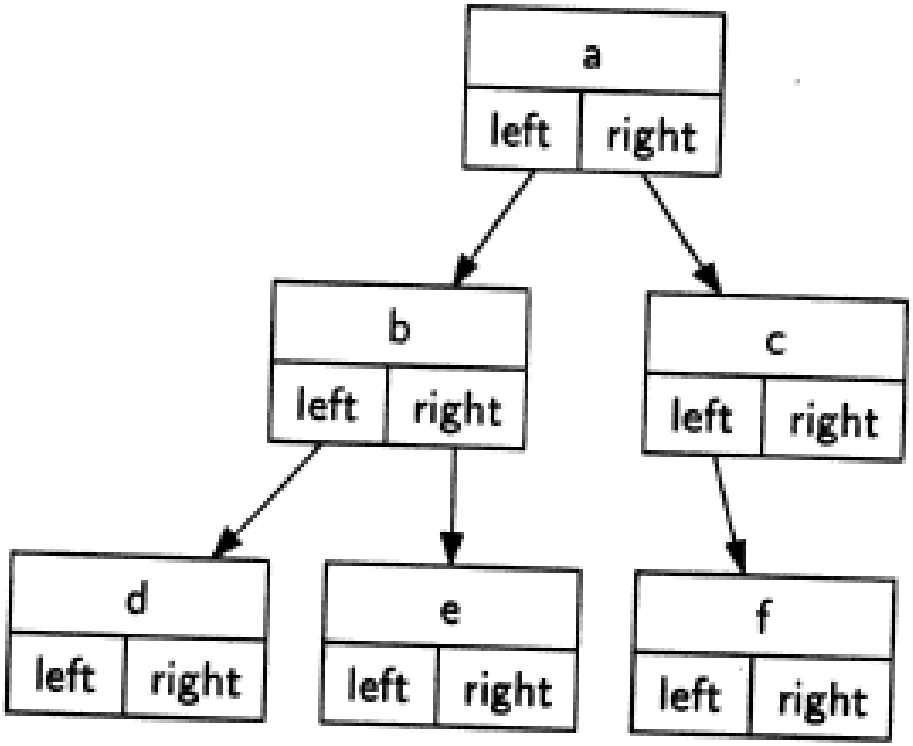
5.4.2 düğümler ve referanslar

→ sınıf kullan,

→ her biri BinaryTree nesnesi olan



gerçekleme - kavramlar

gerçekleme

```
1       class BinaryTree:
2           def __init__(self,rootObj):
3               self.key = rootObj
4               self.left = None
5               self.right = None
```

kavramlar

- → key: kök
- → sol | sağ: referans, altağaç

altağacı ekle

sol altağacı ekle

```
1           def insertLeft(self,newNode):
2               if self.left == None:
3                   self.left = BinaryTree(newNode)
4               else:
5                   t = BinaryTree(newNode)
6                   t.left = self.left
7                   self.left = t
```

→ demo

```
1  myTree = BinaryTree('a')
2  myTree.insertLeft('d')
3  myTree.insertLeft('b')
```

→ dipnot: defterden çizim (S1)

altağacı ekle

sağ altağacı ekle

```
1           def insertRight(self,newNode):
2               if self.right == None:
3                   self.right = BinaryTree(newNode)
4               else:
5                   t = BinaryTree(newNode)
6                   t.right = self.right
7                   self.right = t
```

demo

PB:5205

```
>>> # cat listing_5_5..8.py \
>>> #     > listing_5_5_8.py
>>> from listing_5_5_8 import *
>>> myTree = BinaryTree('a')
>>> myTree.insertLeft('b')
>>> myTree.left.insertLeft('d')
>>> myTree.left.insertRight('e')
>>> myTree.insertRight('c')
>>> myTree.right.insertLeft('f')
>>> # show tree
>>> myTree.getRootVal()
'a'
>>> myTree.left.getRootVal()
'b'
>>> myTree.right.getRootVal()
'c'
```

→ dipnot: defterden çizim (s2)

devam

```
>>> solAltAgac = myTree.left
>>> solAltAgac.getRootVal()
'b'
>>> solAltAgac.left.getRootVal()
'd'
>>> solAltAgac.right.getRootVal()
'e'
>>> sagAltAgac = myTree.right
>>> sagAltAgac.getRootVal()
'c'
>>> sagAltAgac.left.getRootVal()
'f'
```