Compile

```
shuqiny2@circinus-46 23:51:25 ~/253P/HW5/src
$ javac AVLTreeImpl.java
shuqiny2@circinus-46 23:51:32 ~/253P/HW5/src
$ java AVLTreeImpl
sample input
```

output: input: 50 (inserted) insert 50 50 25 (inserted) insert 25 50 25 10 (inserted) insert 10 25 10 5 (inserted) insert 5 25 10 5 7 (inserted) insert 7 25 7 5 3 (inserted) insert 3 7 25 50 30 (inserted) insert 30 7 25 10 20 (inserted) insert 20 7 25 10 8 (inserted) insert 8 7 25 10 20 15 (inserted) insert 15 10 (found) find 10 10 25 20 15 (not found!) find 12 10 7 5 3 (not found!) delete 4 10 25 20 (deleted) delete 20 10 25 15 (not found!) find 22 10 25 50 (deleted) delete 50 10 25 30 (found) find 30 10 (deleted) delete 10 8 5 7 (found) find 7

```
shuqiny2@circinus-4 10:34:40 ~/253P/HW5/src
$ java AVLTreeImpl
sample input
50 (inserted)
50 25 (inserted)
50 25 10 (inserted)
25 10 5 (inserted)
25 10 5 7 (inserted)
25 7 5 3 (inserted)
7 25 50 30 (inserted)
7 25 10 20 (inserted)
7 25 10 8 (inserted)
7 25 10 20 15 (inserted)
10 (found)
10 25 20 15 (not found!)
10 7 5 3 (not found!)
10 25 20 (deleted)
10 25 15 (not found!)
10 25 50 (deleted)
10 25 30 (found)
10 (deleted)
8 5 7 (found)
```

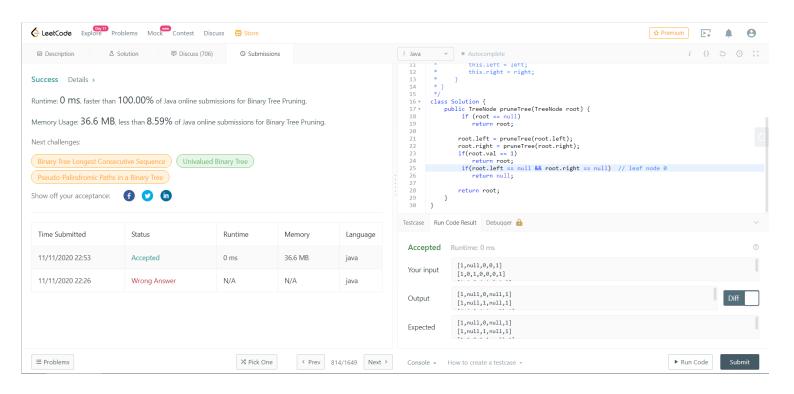
output: input: 1 (inserted) insert 1 1 2 (inserted) insert 2 1 2 3 (inserted) insert 3 2 3 4 (inserted) insert 4 2 3 4 8 (inserted) insert 8 2 4 8 7 (inserted) insert 7 4 8 7 6 (inserted) insert 6 4 7 6 5 (inserted) insert 5 4 7 6 (found) find 6 4 7 8 (not found!) find 9 4 (deleted) delete 4 3 7 8 (not found!) delete 20 3 2 (found) find 2 3 7 6 5 (deleted) delete 5 3 (found) find 3 3 2 1 (deleted) delete 1

```
shuqiny2@circinus-4 10:34:53 ~/253P/HW5/src
$ java AVLTreeImpl
sample_input2
1 (inserted)
1 2 (inserted)
1 2 3 (inserted)
2 3 4 (inserted)
 3 4 8 (inserted)
 4 8 7 (inserted)
 8 7 6 (inserted)
 7 6 5 (inserted)
 7 6 (found)
4 7 8 (not found!)
 (deleted)
3 7 8 (not found!)
 2 (found)
 7 6 5 (deleted)
3 (found)
  2 1 (deleted)
```

```
output:
input:
                                              1 (inserted)
insert 1
                                              1 2 (inserted)
insert 2
                                              1 2 3 (inserted)
insert 3
                                              2 3 4 (inserted)
insert 4
                                              2 3 4 (found)
find 4
                                              2 3 4 (deleted)
delete 4
                                              2 3 (deleted)
delete 3
                                              2 (deleted)
delete 2
                                              1 (deleted)
delete 1
                                              (not found!)
find 2
                                              2 (inserted)
insert 2
                                              2 (found)
find 2
```

```
shuqiny2@circinus-4 10:35:05 ~/253P/HW5/src
$ java AVLTreeImpl
sample_input3
1 (inserted)
1 2 (inserted)
2 3 4 (inserted)
2 3 4 (found)
2 3 4 (deleted)
2 3 (deleted)
1 (deleted)
1 (deleted)
1 (inserted)
2 (inserted)
2 (found)
```

Leetcode 814



Leetcode 310

