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## DS Lab 10

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**Q1:**

*Code:*

*Output:*

```
0_task.cpp
H mufeez@mine:/media/mufeez/work1/FAST_KHI_Semester_3
out
D Displaying the first tree:
4 0
D 6 -1
8 0
10 1
M Displaying the second tree:
Pi 10 -1
12 0
V 16 1
18 0
T mufeez@mine:/media/mufeez/work1/FAST_KHI_Semester_3
```

**Q2:**

*Code:*

*Output:*

```

out
10 0
20 -1
30 -1
40 0
50 0
After insertion:
10 0
15 0
20 -1
30 -1
40 0
50 0
Height of the tree: 3
mufeez@mine:/media/mufeez/work1/FAST_KHI_Semester_

```

**Q3:**

*Code:*

*Output:*

```

2_task.cpp
mufeez@mine:/media/mufeez/work1/FAST_KHI_Semester_3/DS_1
out
20 0
30 0
40 0
50 0
60 0
70 0
80 0
After insertion:
20 0
30 0
40 0
50 -1
55 0
60 0
70 1
80 0
mufeez@mine:/media/mufeez/work1/FAST_KHI_Semester_3/DS_1

```

**Q4:**

*Code:*

*Output:*

```
70 1
80 0
mufeez@mine:/media/mufeez/work1/FAST_KHI_Semester_3/DS_la
3_task.cpp
mufeez@mine:/media/mufeez/work1/FAST_KHI_Semester_3/DS_la
out
5 0
15 0
10 0
7 0
3 0
After insertion:
5 0
15 0
10 -1
7 0
3 0
12 0
Height of the tree: 2
mufeez@mine:/media/mufeez/work1/FAST_KHI_Semester_3/DS_la
```

**Q5:**

*Code:*

*Output:*

```
mufeez@mine:/media/mufeez/work1/FAST_KHI_Semester_3/DS_la
out
20 0
30 0
40 0
50 0
60 0
70 0
80 0
printing the required smallest val: 50
printing left subtree height: 1
printing right subtree height: 1
mufeez@mine:/media/mufeez/work1/FAST_KHI_Semester_3/DS_la
```