DSA Lab09

23K2001

M.Muzammil Siddiqui

BCS-3J

Q1:

```
Elements in the tree through inOrder traversal:
15 25 27 42 90
Enter element to delete: 27

Element: 27 found in the tree.
Deleting..
Node with value: 27 was deleted!

Elements in the tree through inOrder traversal:
15 25 42 90
```

```
Elements in the tree through inOrder traversal:
15 25 27 42 90
Enter element to delete: 0

No node with value: 0 was found in the tree!

Elements in the tree through inOrder traversal:
15 25 27 42 90
```

Q2:

```
Elements in the tree through inOrder traversal:
15 25 27 42 90
Enter element to search: 90

Node with value: 90 is present in the tree!

Elements in the tree after search() function:
15 25 27 42 90
```

```
Elements in the tree through inOrder traversal:
15 25 27 42 90
Enter element to search: 2001

Node with value: 2001 was not found!
Inserting node with value: 2001

Elements in the tree after search() function:
15 25 27 42 90 2001
PS F:\Semester Material - Muzammil\FAST-KHI-Semester-3\Data
```

Q3:

```
tree flex;
flex.insertNode(10);
flex.insertNode(5);
flex.insertNode(20);
flex.insertNode(25);
flex.insertNode(30);
```

```
Elements in the tree through inOrder traversal:
5 10 20 25 30

This tree is a Binary-Search Tree!
```

```
node* flex2 = new node(10);
flex2->left = new node(6);
flex2->right = new node(13);
flex2->left->left = new node(1);
flex2->left->right = new node(12);
flex2->right->left = new node(9);
flex2->right->right = new node(14);
```

```
Elements in the tree through inOrder traversal:
1 6 12 10 9 13 14

NOT a Binary-Search Tree!
PS F:\Semester Material - Muzammil\FAST-KHI-Semester-3\Data Structures
```

Q4:

```
How many products: 2
Input 2 product details..(ID:XXXX QTY:XX)
2001 27
5932 10

Displaying products through inOrder traverse:
ID: 2001        Quantity: 27
ID: 5932        Quantity: 10

1. Insert new product
2. Update quantity of a product
3. Search product by ID
4. Display product with highest quantity
5. Exit
3
Enter ID to search by: 2001
Product with ID 2001 found in inventory!
```

```
1. Insert new product
2. Update quantity of a product
3. Search product by ID
4. Display product with highest quantity
5. Exit
4
Highest quantity product in inventory:
ID: 2001        Quantity: 27
```

```
1. Insert new product
2. Update quantity of a product
3. Search product by ID
4. Display product with highest quantity
5. Exit
4
Highest quantity product in inventory:
ID: 2001        Quantity: 27

1. Insert new product
2. Update quantity of a product
3. Search product by ID
4. Display product with highest quantity
5. Exit
2
Enter ID of product to update: 5932
Enter new quantity: 35
Quantity updated!

1. Insert new product
2. Update quantity of a product
3. Search product by ID
4. Display product with highest quantity
5. Exit
4
Highest quantity product in inventory:
ID: 5932        Quantity: 35
```

Q5:

```
Elements in the tree through inOrder traversal:
15 25 27 42 90

Median value:27
PS F:\Semester Material - Muzammil\FAST-KHI-Seme
```

Q6:

```
Elements in the tree through inOrder traversal:
15 25 27 42 90

Provide range: [a,b]
27 100

Nodes present in the range [27,100] : 3
PS F:\Semester Material - Muzammil\FAST-KHI-Semester-3\
```