

Tanmaye Kohli
BSc Hons Computer Science
20191442

QUESTION 1

Output

```
Enter your choice.  
1.Insertion.  
2.Deletion.  
3.Search a number.  
4.Display its preorder and inorder transversals.  
5.Exit.  
1
```

```
Enter the number to be inserted in tree.  
2_
```

```
Enter the number to be inserted in tree.  
5
```

```
Enter the number to be inserted in tree.  
25
```

```
Enter the number to be inserted in tree.  
14_
```

Search

```
Enter number to be searched.  
14  
  
14color : redPress any key to continue . . .
```

Deletion

```
Enter number to be deleted.  
14  
Press any key to continue . . .
```

```
Enter number to be searched.  
14  
  
Number is not present.Press any key to continue . . . _
```

Exit

```
-----  
Process exited after 900.1 seconds with return value 0  
Press any key to continue . . .
```

Question 2

Output

```
*****KRUSKAL'S ALGORITHM*****
Enter the no. of vertices in the graph:3

Enter the weights of the following:
edge 1 , 2 :10
edge 1 , 3 :20
edge 2 , 3 :60

The edges in the given graph are::
< 1 , 2 > 10
< 1 , 3 > 20
< 2 , 3 > 60

After sorting the edges in the given graph are::
1 , 2 > ::10
1 , 3 > ::20
2 , 3 > ::60

***** THE MINIMUM SPANNING TREE IS*****The edge included in MST is :: < 1 , 2 >
The edge included in MST is :: < 1 , 3 >
Edge < 2 , 3 > is not included as it forms a cycle

-----
Process exited after 42.77 seconds with return value 0
Press any key to continue . . .
```

Question 3

Output

```
Enter your choice.  
1.Bubble Sort.  
2.Insertion Sort.  
3.Selection Sort.  
4.Quick Sort.  
5.Merge Sort  
6.Exit.  
_
```

```
                A: [4, 7, 9, 10, 6, 5, 13, 4, 11, 3]  
After Bubble Sort  
Sorted A: [3, 4, 4, 5, 6, 7, 9, 10, 11, 13]  
Press any key to continue . . . _
```

```
                A: [3, 4, 4, 5, 6, 7, 9, 10, 11, 13]  
After insertion Sort  
Sorted A: [3, 4, 4, 5, 6, 7, 9, 10, 11, 13]  
Press any key to continue . . . _
```

```
                A: [3, 4, 4, 5, 6, 7, 9, 10, 11, 13]
After Selection Sort
    Sorted A: [3, 4, 4, 5, 6, 7, 9, 10, 11, 13]
Press any key to continue . . .
```

```
                A: [3, 4, 4, 5, 6, 7, 9, 10, 11, 13]
After Quick Sort
    Sorted A: [3, 4, 4, 5, 6, 7, 9, 10, 11]

Press any key to continue . . . ■
```

```
                A: [3, 4, 4, 5, 6, 7, 9, 10, 11, 13]
After Merge Sort
    Sorted A: [3, 4, 4, 5, 6, 7, 9, 10, 11, 13]
Press any key to continue . . . ■
```

```
-----
Process exited after 133.2 seconds with return value 0
Press any key to continue . . . ■
```

