

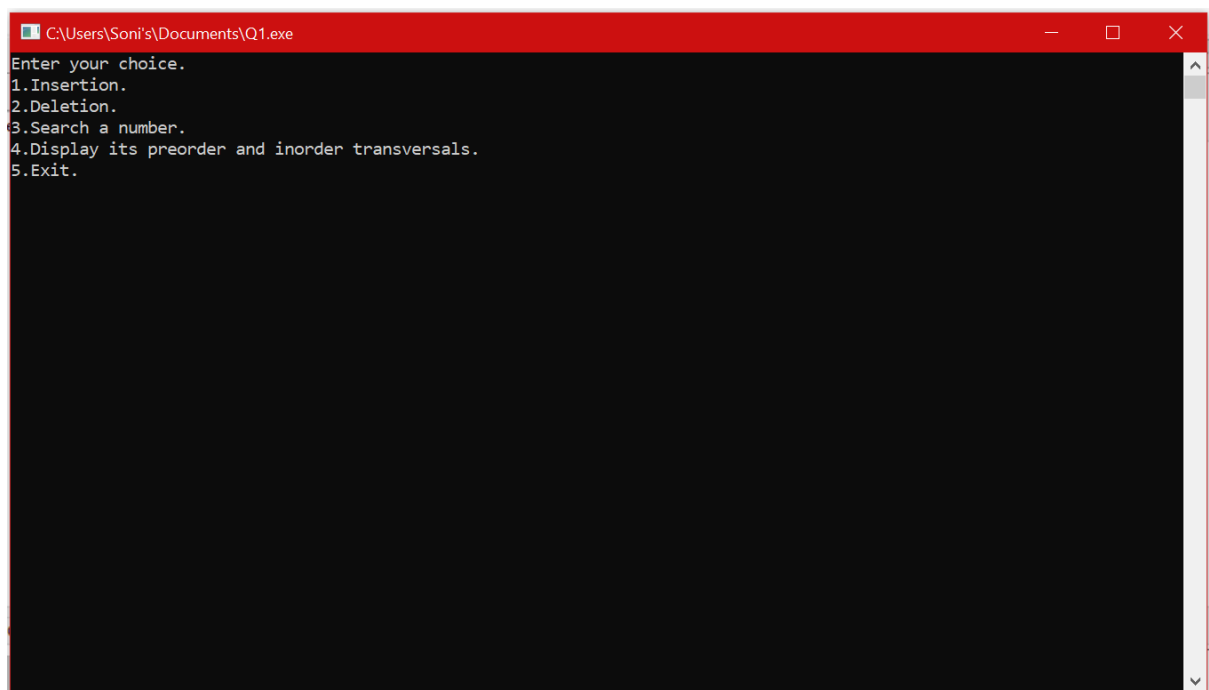
**KA SHANKAR
NARAYAN**

DAA PRACTICAL

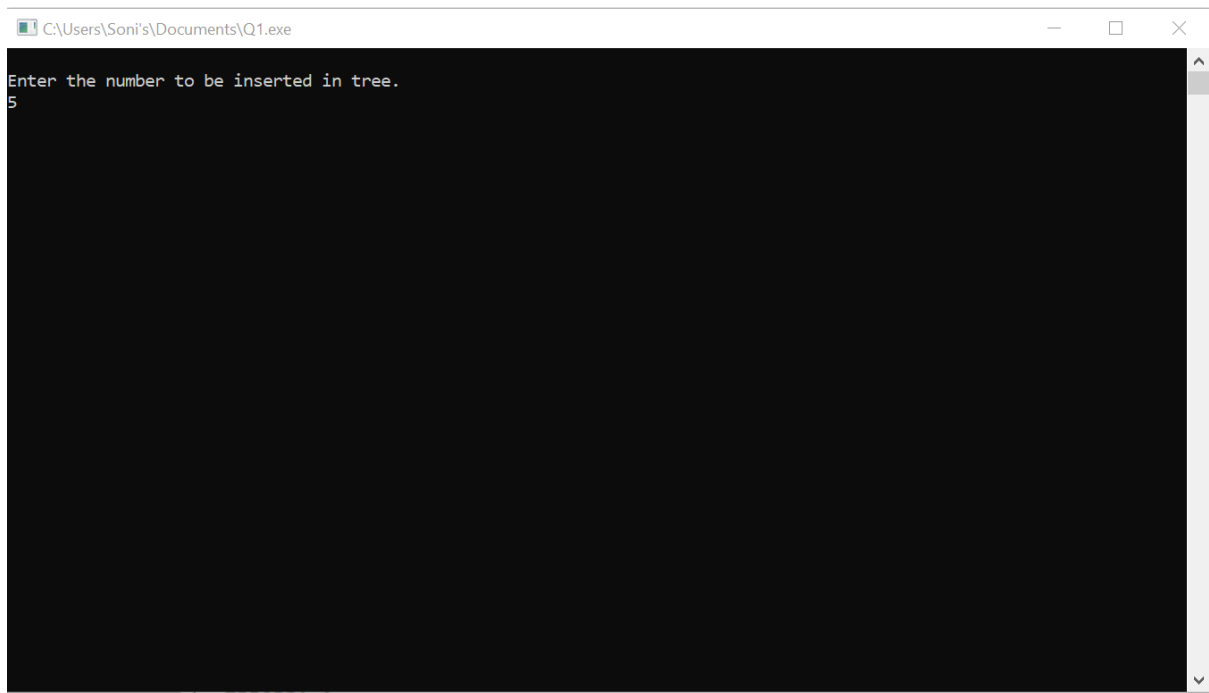
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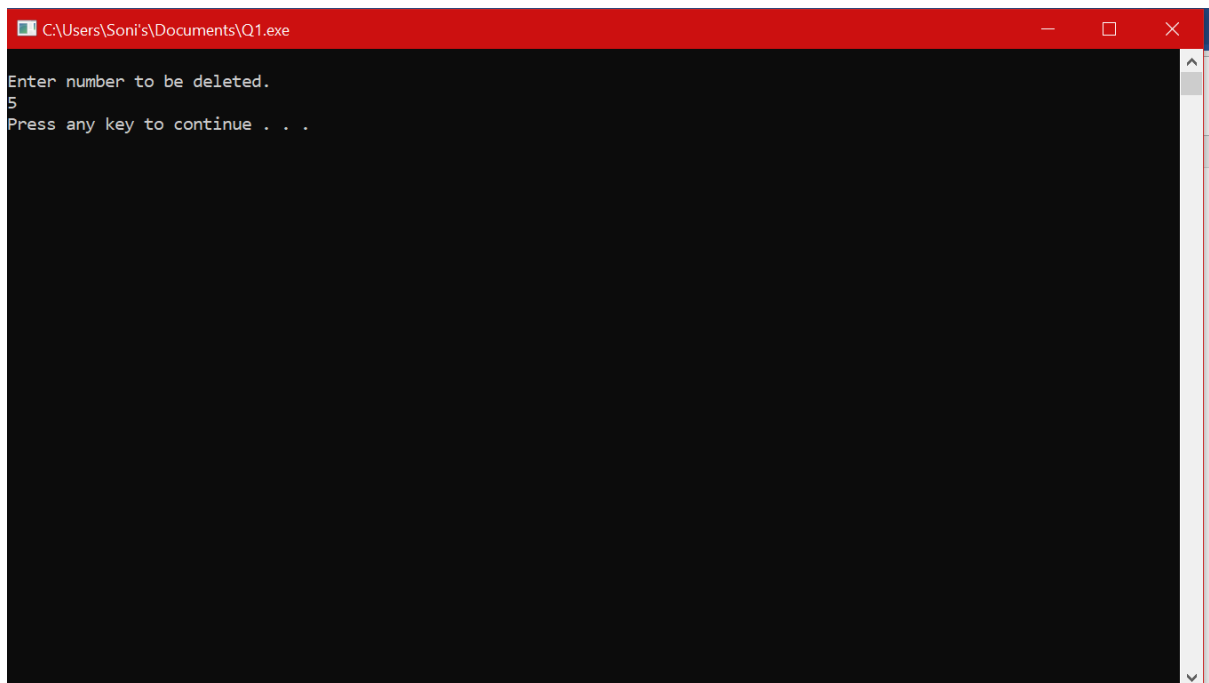
Q1



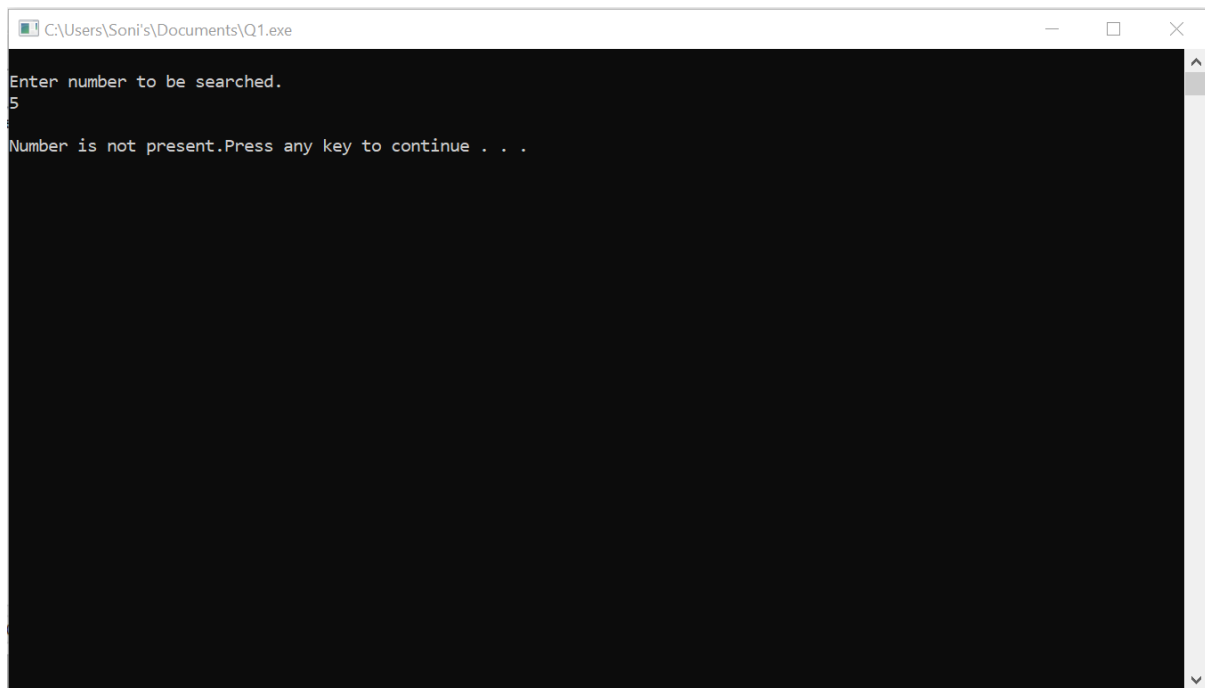
Insertion



Deletion

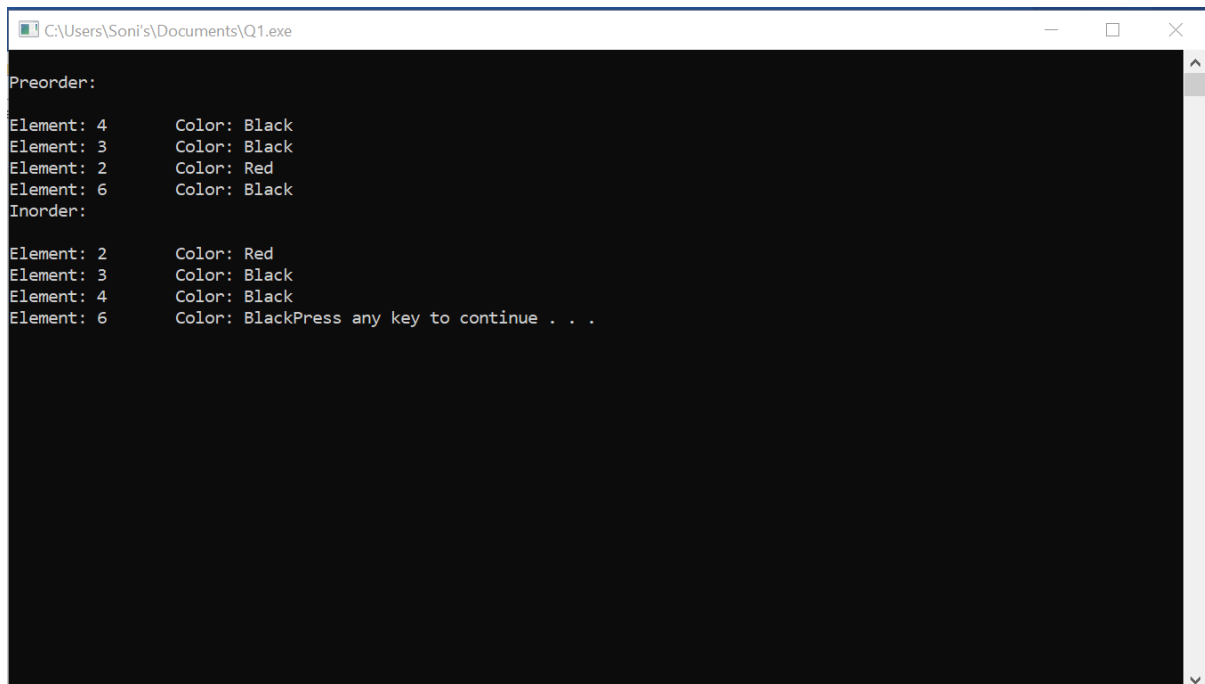


Search a number



```
C:\Users\Soni's\Documents\Q1.exe
Enter number to be searched.
5
Number is not present.Press any key to continue . . .
```

Display its preorder and inorder transversals



```
C:\Users\Soni's\Documents\Q1.exe
Preorder:
Element: 4      Color: Black
Element: 3      Color: Black
Element: 2      Color: Red
Element: 6      Color: Black
Inorder:
Element: 2      Color: Red
Element: 3      Color: Black
Element: 4      Color: Black
Element: 6      Color: BlackPress any key to continue . . .
```

Q2

```
C:\Users\Soni's\Documents\Q2.exe

vertices:5

weights of the following:
edge 1 , 2 :2
edge 1 , 3 :4
edge 1 , 4 :4
edge 1 , 5 :4
edge 2 , 3 :5
edge 2 , 4 :6
edge 2 , 5 :7
edge 3 , 4 :8
edge 3 , 5 :9
edge 4 , 5 :3

Edges:
< 1 , 2 > 2
< 1 , 3 > 4
< 1 , 4 > 4
< 1 , 5 > 4
< 2 , 3 > 5
< 2 , 4 > 6
< 2 , 5 > 7
< 3 , 4 > 8
< 3 , 5 > 9
< 4 , 5 > 3

Edges:
1 , 2 > ::2
4 , 5 > ::3
1 , 3 > ::4
1 , 4 > ::4
1 , 5 > ::4
2 , 3 > ::5
2 , 4 > ::6
2 , 5 > ::7
3 , 4 > ::8
3 , 5 > ::9
```

C:\Users\Soni's\Documents\Q2.exe

Edges:

1 , 2 > ::2
4 , 5 > ::3
1 , 3 > ::4
1 , 4 > ::4
1 , 5 > ::4
2 , 3 > ::5
2 , 4 > ::6
2 , 5 > ::7
3 , 4 > ::8
3 , 5 > ::9

***** THE MINIMUM SPANNING TREE IS*****The edge included in MST is :: < 1 , 2 >

The edge included in MST is :: < 4 , 5 >

The edge included in MST is :: < 1 , 3 >

The edge included in MST is :: < 1 , 4 >

Edge < 1 , 5 > is not included as it forms a cycle

Edge < 2 , 3 > is not included as it forms a cycle

Edge < 2 , 4 > is not included as it forms a cycle

Edge < 2 , 5 > is not included as it forms a cycle

Edge < 3 , 4 > is not included as it forms a cycle

Edge < 3 , 5 > is not included as it forms a cycle

Process exited after 16.44 seconds with return value 0

Press any key to continue . . .

Q3

```
C:\Users\Soni's\Downloads\Q#.exe

Enter number of elements to be sorted:
5

Enter 5 elements to be sorted:
3
4
2
6
7

Enter the sorting technique to be used
1. Bubble Sort
2. Selection Sort
3. Insertion Sort
4. Merge Sort
5. Quick Sort
```

```
C:\Users\Soni's\Downloads\Q#.exe

Enter number of elements to be sorted:
5

Enter 5 elements to be sorted:
3
4
2
6
7

Enter the sorting technique to be used
1. Bubble Sort
2. Selection Sort
3. Insertion Sort
4. Merge Sort
5. Quick Sort
1

Sorted array:2 3 4 6 7
Comparisions : 5
-----
Process exited after 99.25 seconds with return value 0
Press any key to continue . . .
```

```
C:\Users\Soni's\Downloads\Q#.exe

Enter number of elements to be sorted:
5

Enter 5 elements to be sorted:
3
4
2
6
7

Enter the sorting technique to be used
1. Bubble Sort
2. Selection Sort
3. Insertion Sort
4. Merge Sort
5. Quick Sort
2

Sorted array is:2 3 4 6 7
Comparisions : 5
-----
Process exited after 8.625 seconds with return value 0
Press any key to continue . . .
```

```
C:\Users\Soni's\Downloads\Q#.exe

Enter number of elements to be sorted:
5

Enter 5 elements to be sorted:
4
3
2
7
6

Enter the sorting technique to be used
1. Bubble Sort
2. Selection Sort
3. Insertion Sort
4. Merge Sort
5. Quick Sort
3

Sorted array is: 2 3 4 6 7
No of Comparisions : 4
-----
Process exited after 12.84 seconds with return value 0
Press any key to continue . . .
```



```
C:\Users\Soni's\Downloads\Q#.exe

Enter number of elements to be sorted:
5

Enter 5 elements to be sorted:
3
2
4
7
8

Enter the sorting technique to be used
1. Bubble Sort
2. Selection Sort
3. Insertion Sort
4. Merge Sort
5. Quick Sort
4

sorted array is:
2 3 4 7 8
Total number of comparisons are: 7
-----
Process exited after 10.08 seconds with return value 0
Press any key to continue . . .
```

```
C:\Users\Soni's\Downloads\Q#.exe

Enter number of elements to be sorted:
5

Enter 5 elements to be sorted:
3
4
5
9
1

Enter the sorting technique to be used
1. Bubble Sort
2. Selection Sort
3. Insertion Sort
4. Merge Sort
5. Quick Sort
5

sorted array is:
1 3 4 5 9
Total number of comparisons are: 4
-----
Process exited after 11.07 seconds with return value 0
Press any key to continue . . .
```