

1.quick sort

OUTPUT:

```
Unsorted Array
8 7 2 1 0 9 6
Sorted array in ascending order:
0 1 2 6 7 8 9
```

Merge sort

OUTPUT:

```
Array Before MergeSort
6 5 12 10 9 1
Sorted array:
1 5 6 9 10 12
```

2.

OUTPUT:

```
Sorted array:1 2 2 3 3 4 8
```

3.

OUTPUT:

```
1. Insertion    2. Deletion
3. Traverse     4. Exit
Enter your choice:1
Enter the element to insert:78
```

```
1. Insertion    2. Deletion
3. Traverse     4. Exit
Enter your choice:1
Enter the element to insert:90
```

```
1. Insertion    2. Deletion
3. Traverse     4. Exit
Enter your choice:1
Enter the element to insert:45
```

```
3. Traverse     4. Exit
Enter your choice:1
Enter the element to insert:80
```

```
1. Insertion    2. Deletion
3. Traverse     4. Exit
Enter your choice:1
Enter the element to insert:08
```

```
1. Insertion    2. Deletion
3. Traverse     4. Exit
Enter your choice:3
```

```
Enter your choice:3
8 45 78 80 90
```

```
1. Insertion    2. Deletion
3. Traverse     4. Exit
Enter your choice:2
Enter the element to delete:90
```

```
1. Insertion    2. Deletion
3. Traverse     4. Exit
Enter your choice:3
8 45 78 80
```

```
1. Insertion    2. Deletion
3. Traverse     4. Exit
Enter your choice:4
PS C:\Users\10582\Desktop\KMCLU_ACADEMIC\5
```

4.

#### OUTPUT:

ENTER THE NUMBER OF ELEMENTS:4

ENTER THE ELEMENTS:

62

87

17

66

THE ROOT NODES ARE:-

17

MENU:-

1)INSERT AN ELEMENT

2)EXTRACT THE MINIMUM KEY NODE

3)DECREASE A NODEKEY

4)DELETE A NODE

5)QUIT

1

ENTER THE ELEMENT TO BE INSERTED:59

NOW THE HEAP IS:

THE ROOT NODES ARE:-

59-->17

INSERT MORE(N/Y)=

N

MENU:-

1)INSERT AN ELEMENT

2)EXTRACT THE MINIMUM KEY NODE

3)DECREASE A NODEKEY

4)DELETE A NODE

5)QUIT

2

EXTRACTING THE MINIMUM KEY NODE

THE EXTRACTED NODE IS 17

NOW THE HEAP IS:

THE ROOT NODES ARE:-

59

EXTRACT MORE(N/Y)

N

MENU:-

1)INSERT AN ELEMENT

2)EXTRACT THE MINIMUM KEY NODE

3)DECREASE A NODEKEY

4)DELETE A NODE





5)QUIT

3

ENTER THE KEY OF THE NODE TO BE DECREASED:66

ENTER THE NEW KEY : 08

INVALID CHOICE OF KEY TO BE REDUCED

Master\*   0  0  0

NOW THE HEAP IS:

THE ROOT NODES ARE:-

59

DECREASE MORE(N/Y)

N

MENU:-

1)INSERT AN ELEMENT

2)EXTRACT THE MINIMUM KEY NODE

3)DECREASE A NODEKEY

4)DELETE A NODE

5)QUIT

4

ENTER THE KEY TO BE DELETED: 87

INVALID CHOICE OF KEY TO BE REDUCED

NODE DELETED SUCCESSFULLY

DELETE MORE(N/Y)

N

ENTER THE KEY TO BE DELETED: 87

INVALID CHOICE OF KEY TO BE REDUCED

NODE DELETED SUCCESSFULLY

DELETE MORE(N/Y)

N

ENTER THE KEY TO BE DELETED: 87

ENTER THE KEY TO BE DELETED: 87

NODE DELETED SUCCESSFULLY

DELETE MORE(N/Y)

N

MENU:-

1)INSERT AN ELEMENT

2)EXTRACT THE MINIMUM KEY NODE

3)DECREASE A NODEKEY

NODE DELETED SUCCESSFULLY

DELETE MORE(N/Y)

N

MENU:-

1)INSERT AN ELEMENT

2)EXTRACT THE MINIMUM KEY NODE

3)DECREASE A NODEKEY

4)DELETE A NODE

5)QUIT

MENU:-

1)INSERT AN ELEMENT

2)EXTRACT THE MINIMUM KEY NODE

3)DECREASE A NODEKEY

4)DELETE A NODE

5)QUIT

5

1)INSERT AN ELEMENT

2)EXTRACT THE MINIMUM KEY NODE

3)DECREASE A NODEKEY

4)DELETE A NODE

5)QUIT

5

5

PS C:\Users\10582\Desktop\KMCLU\_ACADEMIC\5 semester\DAA> █

5.

OUTPUT:

```
($?) { .\I
220
PS C:\User
```

6.

OUTPUT:

```
PS C:\Users\10582\Desktop\KM
.C -o huffmanEncoding } ; if
Char | Huffman code

C | 0
B | 100
D | 101
A | 11
PS C:\Users\10582\Desktop\KM
master* 0 0 0
```

7.

OUTPUT:

```
PS C:\Users\1058
ree.c -o minimum
Edge  Weight
0 - 1    2
1 - 2    3
0 - 3    6
1 - 4    5
PS C:\Users\1058
```

8.

OUTPUT:

```
ngDijkstra Algo.c - Shortest path using  
Vertex Distance from Source  
0          0  
1          4  
2         12  
3         19  
4         21  
5         11  
6          9  
7          8  
8         14  
PS C:\Users\10582\Desktop\KMCLU_ACADEMIC>
```

9.

OUTPUT:

```
Enter the number of vertices: 2  
Enter the edges:  
[0][0]: 89  
[0][1]: 78  
[1][0]: 23  
[1][1]: 12  
The original graph is:  
89 78  
23 12  
The shortest path matrix is:  
89 78  
23 12  
PS C:\Users\10582\Desktop\KMCLU_ACADEMIC\5 semester\DAA>
```

10.

OUTPUT:

```
• ) { gcc StringMatchingAlgorithm.c -o StringMatchingAlgori

Enter two strings :a
a
str1 = str2
• PS C:\Users\10582\Desktop\KMCLU_ACADEMIC\5 semester\DAA>
) { gcc StringMatchingAlgorithm.c -o StringMatchingAlgori

Enter two strings :ert
abt
str1 > str2
• ) { gcc StringMatchingAlgorithm.c -o StringMatchingAlgori

Enter two strings :apl
mpl
str1 < str2
• PS C:\Users\10582\Desktop\KMCLU_ACADEMIC\5 semester\DAA>
```