

Output:

1. Bubble Sort

```
C:\Users\PC\Desktop\b.Dsa\Lab 7\BubbleSort.exe
Enter the number of elements: 6
Enter 6 elements: 8
4
7
6
25
84
Original array: 8 4 7 6 25 84
Sorted array: 4 6 7 8 25 84

-----
Process exited after 7.013 seconds with return value 0
Press any key to continue . . .
```

2. Selection Sort

```
Select C:\Users\PC\Desktop\b.Dsa\Lab 7\Selection Sort.exe
Enter the number of elements: 5
Enter 5 elements: 2
5
4
7
8
Original array: 2 5 4 7 8
Sorted array: 2 4 5 7 8

-----
Process exited after 5.583 seconds with return value 0
Press any key to continue . . .
```

Output:

3.Insertion Sort

```
C:\Users\PC\Desktop\b.Dsa\Lab 7\Insertion Sort.exe
Enter the number of elements: 6
Enter 6 elements: 5
8
7
1
3
9
Original array: 5 8 7 1 3 9
Sorted array: 1 3 5 7 8 9

-----
Process exited after 8.389 seconds with return value 0
Press any key to continue . . .
```

4.Shell sort

```
C:\Users\PC\Desktop\b.Dsa\Lab 7\Shell sort.exe
Enter the number of elements: 7
Enter 7 elements: 56
48
7
1
2
48
569
Original array: 56 48 7 1 2 48 569
Sorted array: 1 2 7 48 48 56 569

-----
Process exited after 11.15 seconds with return value 0
Press any key to continue . . .
```

Output:

5. Merge sort

```
C:\Users\PC\Desktop\b.Dsa\Lab 7\Merge sort.exe
Enter the number of elements: 5
Enter 5 elements: 45
48
15
12
23
Original array: 45 48 15 12 23
Merging: 45 48
Merging: 15 45 48
Merging: 12 23
Merging: 12 15 23 45 48
Sorted array: 12 15 23 45 48

-----
Process exited after 11.34 seconds with return value 0
Press any key to continue . . .
```

6. Quick Sort

```
C:\Users\PC\Desktop\b.Dsa\Lab 7\Quick Sort.exe
Enter the number of elements: 5
Enter 5 elements: 23
12
14
15
16
Original array: 23 12 14 15 16
Partitioning with pivot 16: 12 14 15 16 23
Partitioning with pivot 15: 12 14 15
Partitioning with pivot 14: 12 14
Sorted array: 12 14 15 16 23

-----
Process exited after 6.253 seconds with return value 0
Press any key to continue . . .
```

Output:

7.Heap Sort

i) Min Heap Sort

```
C:\Users\Basant\Desktop\Dsa lab\Lab 7\Heap sort.exe
Enter the number of elements: 4
Enter 4 elements: 56
45
14
12
Choose Sorting Type:
1. Min Heap (Ascending Order)
2. Max Heap (Descending Order)
Enter your choice (1 or 2): 1
Sorted Array (Ascending Order): 56 45 14 12

-----
Process exited after 8.772 seconds with return value 0
Press any key to continue . . .
```

ii) Max Heap Sort

```
C:\Users\Basant\Desktop\Dsa lab\Lab 7\Heap sort.exe
Enter the number of elements: 5
Enter 5 elements: 21
45
78
26
35
Choose Sorting Type:
1. Min Heap (Ascending Order)
2. Max Heap (Descending Order)
Enter your choice (1 or 2): 2
Sorted Array (Descending Order): 78 45 35 26 21

-----
Process exited after 9.462 seconds with return value 0
Press any key to continue . . .
```