

```
○ PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\OneDrive\Desktop\Paras-DSA"
} ; if ($?) { .\16 }
7      16      10
```

```
● PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\OneDrive\
  } ; if ($?) { .\20 }
Original Customer IDs:
1034 1001 1056 1023 1045
Sorted Customer IDs (Ascending Order):
1001 1023 1034 1045 1056
```

```
○ PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\OneD
    } ; if ($?) { .\14 }
7      12      10      16      NULL
12     NULL
```

```
● PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\OneD
10no } ; if ($?) { .\10no }
Enter two integers: 10 12
The GCD of 10 and 12 is: 2
```

```
PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\OneDrive\D
} ; if ($?) { .\24 }
Quick Sort Execution Time: 0.001000 seconds
Merge Sort Execution Time: 0.001000 seconds
Heap Sort Execution Time: 0.001000 seconds
Sorted Array (Quick Sort first 10 elements): 6 6 6 7 7 10 10 12 13 18
Sorted Array (Merge Sort first 10 elements): 6 6 6 7 7 10 10 12 13 18
Sorted Array (Heap Sort first 10 elements): 6 6 6 7 7 10 10 12 13 18
```

```
PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\User
} ; if ($?) { .\19 }
```

- Original array: 64 25 12 22 11
Sorted array: 11 12 22 25 64

```
○ PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\OneDrive\De
} ; if ($?) { .\12 }
Move disk 1 from A to C
Move disk 2 from A to B
Move disk 1 from C to B
Move disk 3 from A to C
Move disk 1 from B to A
Move disk 2 from B to C
Move disk 1 from A to C
```

```
PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\OneDrive
} ; if ($?) { .\15 }
Doubly Linked List: 5    15    10    20
After deleting front: 15    10    20
After deleting end: 15  10
After deleting middle node: 15
```



```
○ PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\OneDrive\  
  } ; if ($?) { .\17 }
```

Stack Operations:

10 pushed to stack

20 pushed to stack

30 pushed to stack

Stack: 30 -> 20 -> 10 -> NULL

Popped element: 30

Stack: 20 -> 10 -> NULL

Queue Operations:

5 enqueued to queue

15 enqueued to queue

25 enqueued to queue

Queue: 5 -> 15 -> 25 -> NULL

Dequeued element: 5

Queue: 15 -> 25 -> NULL

```
PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\OneDrive\Desktop\Paras-DSA"
} ; if ($?) { .\23 }
Quick Sort Execution Time: 0.001000 seconds
Merge Sort Execution Time: 0.001000 seconds
Sorted Array (Quick Sort first 10 elements): 3 5 6 7 11 19 24 31 34 35
Sorted Array (Merge Sort first 10 elements): 3 5 6 7 11 19 24 31 34 35
```

```
○ PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\OneD
} ; if ($?) { .\22 }
Merge Sort Execution Time: 0.003000 seconds
Sorted Array (first 10 elements): 0 3 6 10 13 15 17 18 18 24
```

```
PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\OneDrive\Desktop\Paras-DSA"
} ; if ($?) { .\21 }
Original Array:
78 92 45 67 89 34 99 23 55 71
Sorted Array using Shell Sort:
23 34 45 55 67 71 78 89 92 99
Sorted Array using Bubble Sort:
23 34 45 55 67 71 78 89 92 99

Execution Step Comparison:
Shell Sort Steps: 16
Bubble Sort Steps: 45
```

```
● PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\OneDrive\Desktop\Paras-DSA"
} ; if ($?) { .\18 }
Original array:
64 34 25 12 22 11 90
Sorted array:
11 12 22 25 34 64 90
● PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA>
```

```
PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA\Paras-Lab> cd "c:\Users\ASUS\OneDrive\Desktop\Paras-DSA\Paras-Lab"
11.c -o 11 } ; if ($?) { .\11 }
The largest element is: 9
```

```
● PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\OneDrive\Desktop\Paras-DSA"
no } ; if ($?) { .\8no }
Factorial of 5 = 120
```

```
○ PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\OneD
} ; if ($?) { .\13 }
Inserted 5 at position 0.
Inserted 15 at position 1.
Inserted 10 at position 1.
Inserted 20 at position 3.
Inserted 2 at position 0.
List elements: 2 5 10 15 20
Deleted element at position 0.
Deleted element at position 3.
Deleted element at position 1.
List elements: 5 15
Element 15 found at position 1.
```



```
● PS C:\Users\ASUS\OneDrive\Desktop\Paras-DSA> cd "c:\Users\ASUS\OneD
no } ; if ($?) { .\9no }
Enter the term (n): 5
Fibonacci series up to 5-th term:
0 1 1 2 3 5
```

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