Outputs of all Practicals

Practical 1A

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS C:\Users\VICTUS\OneDrive\Desktop\DSPD Practical> cd "c:\Users\VICTUS\OneDrive\Desktop\DSPD Practical\" ; if ($?) { gcc Pract_1a.c -o Pract_1a } ; if ($?) { .\Pract_1a }
Enter the number of elements: 7
Enter 7 elements:
7
14
21
28
35
42
49

Sum of numbers at odd positions = 112
Sum of numbers at even positions = 84
PS C:\Users\VICTUS\OneDrive\Desktop\DSPD Practical>
```

Practical 1B

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS C:\Users\VICTUS\OneDrive\Desktop\DSPD Practical> cd "c:\Users\VICTUS\OneDrive\Desktop\DSPD Practical\" ; if ($?) { gcc Pract_1b.c -o Pract_1b } ; if ($?) { .\Pract_1b }
PS C:\Users\VICTUS\OneDrive\Desktop\DSPD Practical> cd "c:\Users\VICTUS\OneDrive\Desktop\DSPD Practical\" ; if ($?) { gcc Pract_1b.c -o Pract_1b } ; if ($?) { .\Pract_1b }
Enter number of elements: 9
Enter 9 sorted elements: 2
4
6
8
10
12
14
16
18
Enter the key to search: 10
Middle value = 10 at index 4
Key 10 found at index 4.
PS C:\Users\VICTUS\OneDrive\Desktop\DSPD Practical>
```

Practical 1C

```
PS C:\Users\VICTUS\OneDrive\Desktop\DSPD Practical> cd "c:\Users\VICTUS\OneDrive\Desktop\DSPD Practical\" ; if ($?) { gcc Pract_1c.c -o Pract_1c } ; if ($?) { .\Pract_1c }
Enter number of students: 4

Enter details of student 1
Enter Name: Krinshn
Enter Year: 2
Enter Section: f
Enter Roll Number: 274
Enter Average Marks: 99

Enter details of student 2
Enter Name: Ram
Enter Year: 2
Enter Section: c
Enter Roll Number: 275
Enter Average Marks: 70

Enter details of student 3
Enter Name: Shyam
Enter Year: 3
Enter Section: a
Enter Roll Number: 276
Enter Average Marks: 80

Enter details of student 4
Enter Name: Radhika
Enter Year: 4
Enter Section: s
Enter Roll Number: 273
Enter Average Marks: 50
```

```
Students sorted by Average Marks (Descending Order):
Student with Position 1
Avg marks: 99.00
 Name: Krinshn
 Year: 2
 Sec: f
 Roll No: 274

Student with Position 2
Avg marks: 80.00
 Name: Shyam
 Year: 3
 Sec: a
 Roll No: 276

Student with Position 3
Avg marks: 70.00
 Name: Ram
 Year: 2
 Sec: c
 Roll No: 275

Student with Position 4
Avg marks: 50.00
 Name: Radhika
 Year: 4
 Sec: s
 Roll No: 273
```

Practical 2

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

                                        > cd "c:\Users\VICTUS\OneDrive\Desktop\DSPD Practical\" ; if ($?) { gcc Pract_2.c -o Pract_2 } ; if ($?) { .\Pract_2 }
1. Push an Element on stack
2. Pop an Element from stack
3. Check Palindrome using Stack
4. Display Status of stack
5. Exit
Enter your choice: 1
Enter element to insert in stack: 12
12 pushed onto stack.
Enter your choice: 1
Enter element to insert in stack: 24
24 pushed onto stack.
Enter your choice: 1
Enter element to insert in stack: 36
36 pushed onto stack.
Enter your choice: 1
Enter element to insert in stack: 48
48 pushed onto stack.
Enter your choice: 1
Enter element to insert in stack: 60
60 pushed onto stack.
Enter your choice: 1
Enter element to insert in stack: 72
Stack Overflow! Cannot push 72
Enter your choice: 2
60 popped from stack.
Enter your choice: 4
Stack elements (top to bottom): 48 36 24 12
Enter your choice: 3
Enter a string to check palindrome: nayan
110 pushed onto stack.
97 pushed onto stack.
121 pushed onto stack.
97 pushed onto stack.
110 pushed onto stack.
nayan is a Palindrome.
Enter your choice: 5
Thnak You!
```

Practical 3

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS                                                    Code

PS C:\Users\VICTUS\OneDrive\Desktop\DSPD Practical> cd "c:\Users\VICTUS\OneDrive\Desktop\DSPD Practical\" ; if ($?) { gcc Pract_3.c -o Pract_3 } ; if ($?) { .\Pract_3 }
1. Insert an Element in Queue
2. Delete an Element from Queue
3. Display the status of Queue
4. Exit
Enter your choice: 1
Enter character to insert: 12
'1' inserted into queue.
Enter your choice: '1' deleted from queue.
Enter your choice: 2
Queue Underflow! No element to delete.
Enter your choice: 3
Queue is empty.
Enter your choice: 1
Enter character to insert: 44
'4' inserted into queue.
Enter your choice: Exiting program.
PS C:\Users\VICTUS\OneDrive\Desktop\DSPD Practical>
```

Practical 4

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS C:\Users\VICTUS\OneDrive\Desktop\DSPD Practical> cd "c:\Users\VICTUS\OneDrive\Desktop\DSPD Practical\" ; if ($?) { gcc Pract_4.c -o
Enter elements to insert in linked list (Enter 0 to stop):
12
13
14
15
17
18
0

Linked List elements:
12 => 13 => 14 => 15 => 17 => 18 => NULL
Total number of nodes: 6
PS C:\Users\VICTUS\OneDrive\Desktop\DSPD Practical>
```

Practical 5

```
PS C:\Users\VICTUS\OneDrive\Desktop\DSPD Practical> cd "c:\Users\VICTUS\OneDrive\Desktop\DSPD Practical\" ; if ($?) {
Enter number of nodes to insert: 7
Enter 7 node values:
5
4
1
8
6
7
9

Inorder Traversal: 1 4 5 6 7 8 9
Preorder Traversal: 5 4 1 8 6 7 9
Postorder Traversal: 1 4 7 6 9 8 5

Enter element to search:
```

Practical 6

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
1. Insert an element
2. Search an element
3. Delete leaf element
4. Display Inorder Traversal
5. Exit
Enter your choice: 1
Enter value to insert: 8
Element inserted successfully.
Enter your choice: 1
Enter value to insert: 3
Element inserted successfully.
Enter your choice: 2
Enter value to search: 4
NULL
Enter your choice: 1
Enter value to insert: 3
Element inserted successfully.
Enter your choice: 1
Enter value to insert: 1
Element inserted successfully.
Enter your choice: 1
Enter value to insert: 15
Element inserted successfully.
Enter your choice: 1
Enter value to insert: 11
Element inserted successfully.
Enter your choice: 1
Enter value to insert: 17
Element inserted successfully.
Enter your choice: 4
Inorder Traversal: 1 3 8 11 15 17
Enter your choice: 2
Enter value to search: 15
Found
Enter your choice: 3
Enter leaf node value to delete: 1
Leaf node 1 deleted successfully.
Enter your choice: 3
Enter leaf node value to delete: 8
Node 8 is not a leaf node. Cannot delete.
Enter your choice:
```

Practical 7

```
PS C:\Users\VICTUS\OneDrive\Desktop\DSPD Practical> cd "c:\Users\VICTUS\OneDrive\Desktop\DSPD Practical\" ; if ($?) { gcc Pract_7.c -o Pract_7 } ; if

BFS Order: 1 2 4 3 5 6 9 8 7
DFS Order: 1 2 3 6 5 4 9 8 7
PS C:\Users\VICTUS\OneDrive\Desktop\DSPD Practical>
```

Practical 8

```
PS C:\Users\VICTUS\OneDrive\Desktop\DSPD Practical> cd "c:\Users\VICTUS\OneDrive\Desktop\DSPD Practical\" ; if ($?) { gcc Pract_8.c -o Pract_8
Enter number of nodes: 3
Enter adjacency matrix (0 for no edge):
10
0
30
20
10
0
30
0
20
Enter starting node (1 to 3): 2

Shortest distances from node 2:
To node 1 = 20  Path: 1 <- 2
To node 2 = 0   Path: 2 <- 2
To node 3 = 50  Path: 3 <- 1 <- 2
PS C:\Users\VICTUS\OneDrive\Desktop\DSPD Practical>
```

Practical 9

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS C:\Users\VICTUS\OneDrive\Desktop\DSPD Practical> cd "c:\Users\VICTUS\OneDrive\Desktop\DSPD Practical\" ; if ($?) { gcc Pract_9.c -o P
Enter number of keys to insert: 5
Enter 5 keys: 11
22
33
44
55

Final Hash Table:
Slot 0 : Empty
Slot 1 : 22
Slot 2 : 44
Slot 3 : Empty
Slot 4 : 11
Slot 5 : 33
Slot 6 : 55
PS C:\Users\VICTUS\OneDrive\Desktop\DSPD Practical>
```

Practical 10