

OUTPUTS

1. Implementation of quicksort to implement the ith order statistic

```
PS C:\Users\pooja\CSE 5311> java OrderStatistic
>>
Enter the number of elements: 8
Enter the elements of the array:
32 3 66 7 8 10 2 100
Enter the order statistic (k-th smallest element): 3
The 3-th smallest element is 10
```

2. Stack

```
PS C:\Users\pooja\CSE 5311> java Stack
Enter stack capacity: 5

1. Push 2. Pop 3. Peek 4. Exit
Choose an option: 1
Enter value to push: 23

1. Push 2. Pop 3. Peek 4. Exit
Choose an option: 1
Enter value to push: 45

1. Push 2. Pop 3. Peek 4. Exit
Choose an option: 1
Enter value to push: 6

1. Push 2. Pop 3. Peek 4. Exit
Choose an option: 1
Enter value to push: 66

1. Push 2. Pop 3. Peek 4. Exit
Choose an option: 1
Enter value to push: 78

1. Push 2. Pop 3. Peek 4. Exit
Choose an option: 1
Enter value to push: 34
Stack Overflow

1. Push 2. Pop 3. Peek 4. Exit
Choose an option: 2
Popped value: 78

1. Push 2. Pop 3. Peek 4. Exit
Choose an option: 3
Top value: 66

1. Push 2. Pop 3. Peek 4. Exit
Choose an option: 4
```

3. Queue

```
PS C:\Users\pooja\CSE 5311> java Queue
Enter queue capacity: 5
1. Enqueue 2. Dequeue 3. Front 4. Exit
Choose an option: 1
Enter value to enqueue: 23
1. Enqueue 2. Dequeue 3. Front 4. Exit
Choose an option: 1
Enter value to enqueue: 55
1. Enqueue 2. Dequeue 3. Front 4. Exit
Choose an option: 1
Enter value to enqueue: 2
1. Enqueue 2. Dequeue 3. Front 4. Exit
Choose an option: 1
Enter value to enqueue: 67
1. Enqueue 2. Dequeue 3. Front 4. Exit
Choose an option: 1
Enter value to enqueue: 8
1. Enqueue 2. Dequeue 3. Front 4. Exit
Choose an option: 1
Enter value to enqueue: 9
Queue Overflow
1. Enqueue 2. Dequeue 3. Front 4. Exit
Choose an option: 2
Dequeued value: 23
1. Enqueue 2. Dequeue 3. Front 4. Exit
Choose an option: 3
Front value: 55
1. Enqueue 2. Dequeue 3. Front 4. Exit
Choose an option: 4
PS C:\Users\pooja\CSE 5311> █
```

4. Singly linked list

```
PS C:\Users\pooja\CSE 5311> java SinglyLinkedList
Enter list capacity: 5
```

1. Insert
2. Print
3. Exit

Choose an option: 1

Enter value to insert: 99

1. Insert
2. Print
3. Exit

Choose an option: 1

Enter value to insert: 55

1. Insert
2. Print
3. Exit

Choose an option: 1

Enter value to insert: 65

1. Insert
2. Print
3. Exit

Choose an option: 1

Enter value to insert: 23

1. Insert
2. Print
3. Exit

Choose an option: 1

Enter value to insert: 7

1. Insert
2. Print
3. Exit

Choose an option: 1

Enter value to insert: 2

List is full

1. Insert
2. Print
3. Exit

Choose an option: 2

7 -> 23 -> 65 -> 55 -> 99 -> NULL

1. Insert
2. Print
3. Exit

Choose an option: 3

PS C:\Users\pooja\CSE 5311> █