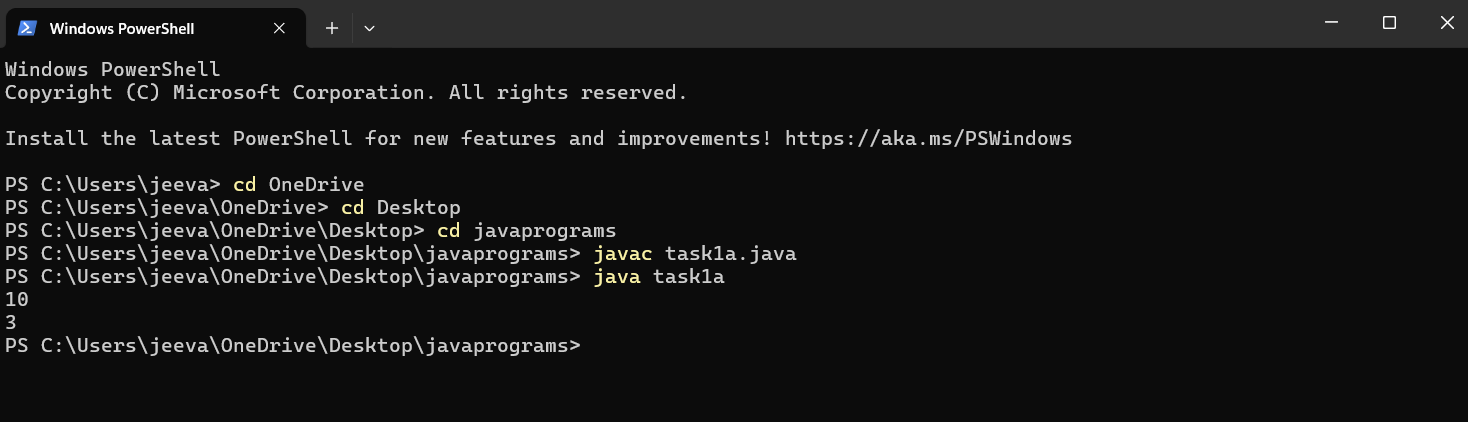
**TASK 1 – MATHEMATICS – WHY MATHS IN CODING?**

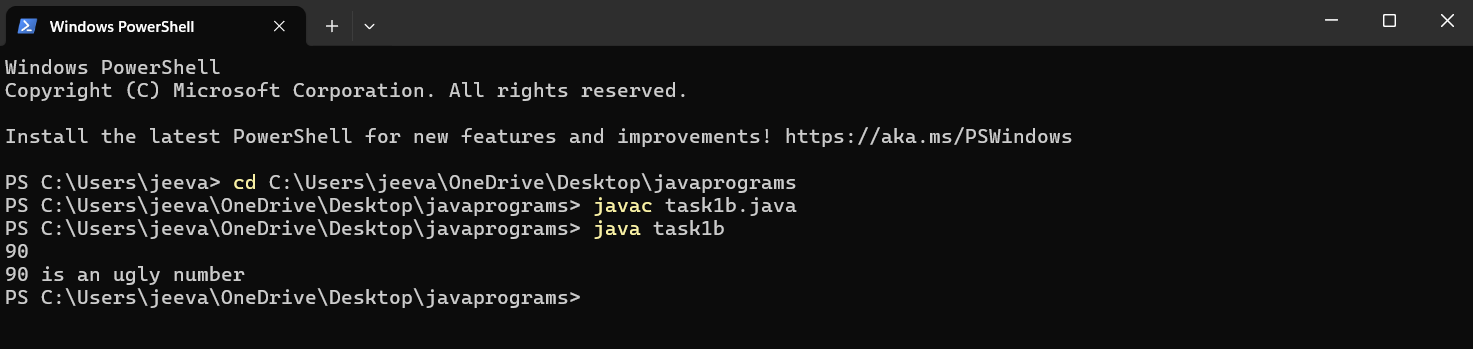
**1.A**

**OUTPUT:**

****

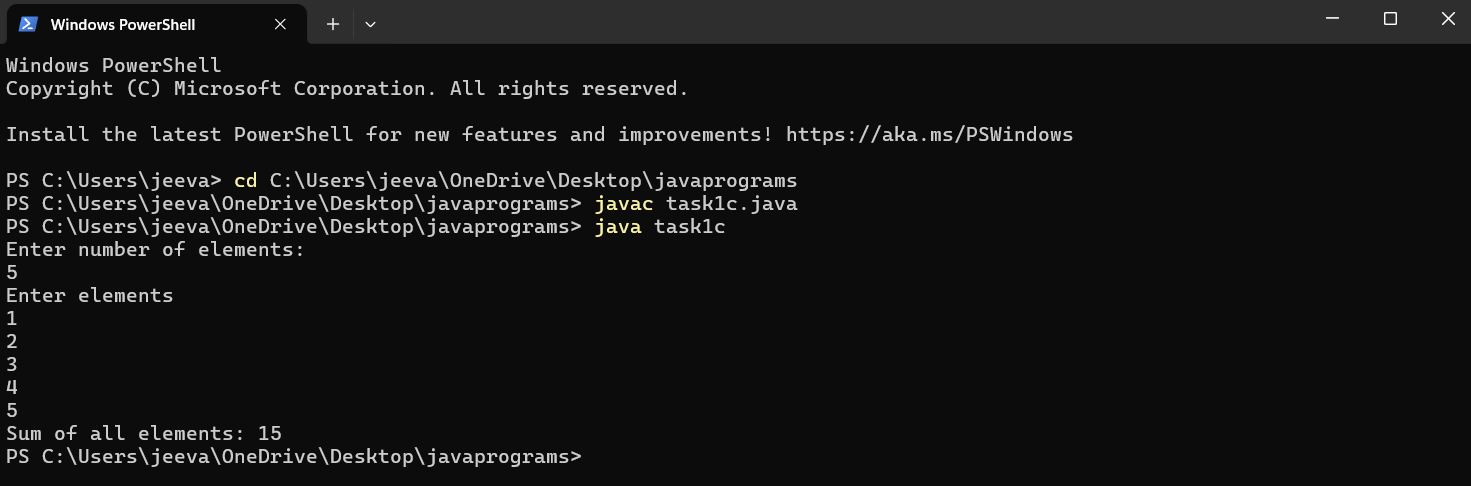
**1.B**

**OUTPUT:**

****

**1.C**

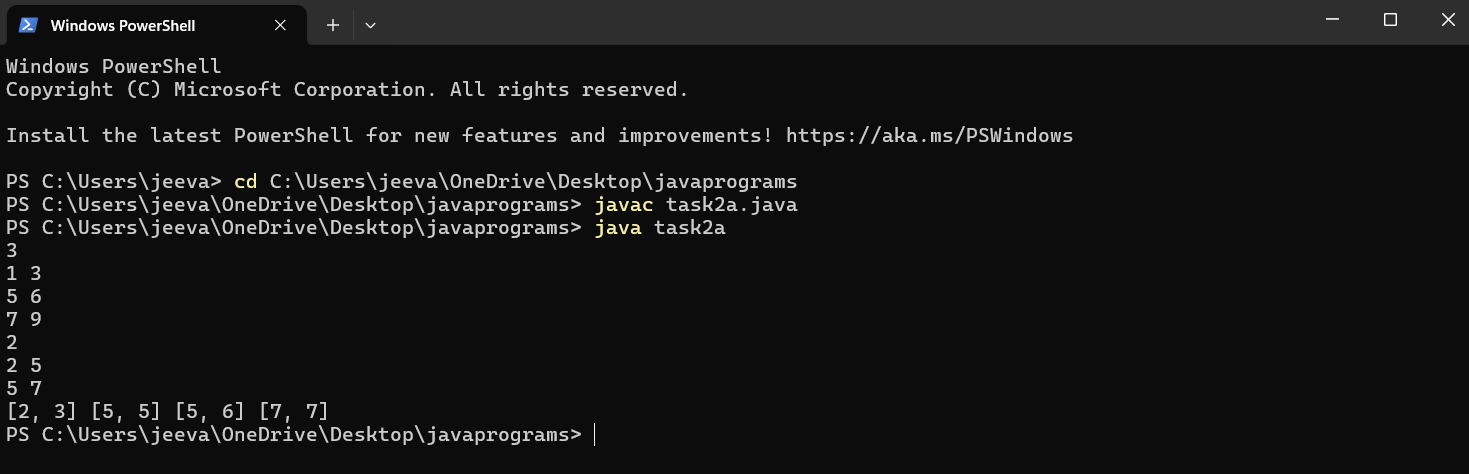
**OUTPUT:**

****

**TASK NO: 2 :- ADVANCED CONCEPTS ON ARRAY :**

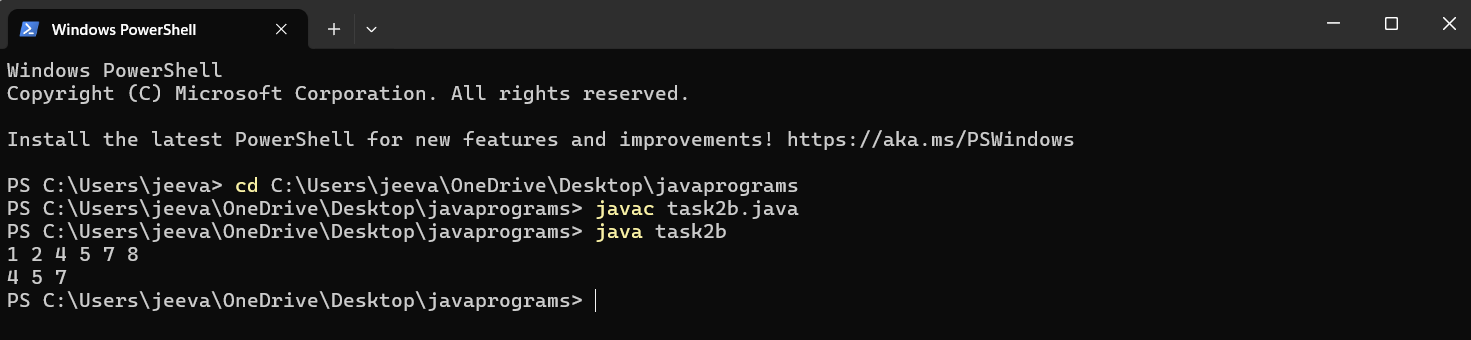
**2.A**

**OUTPUT:**

****

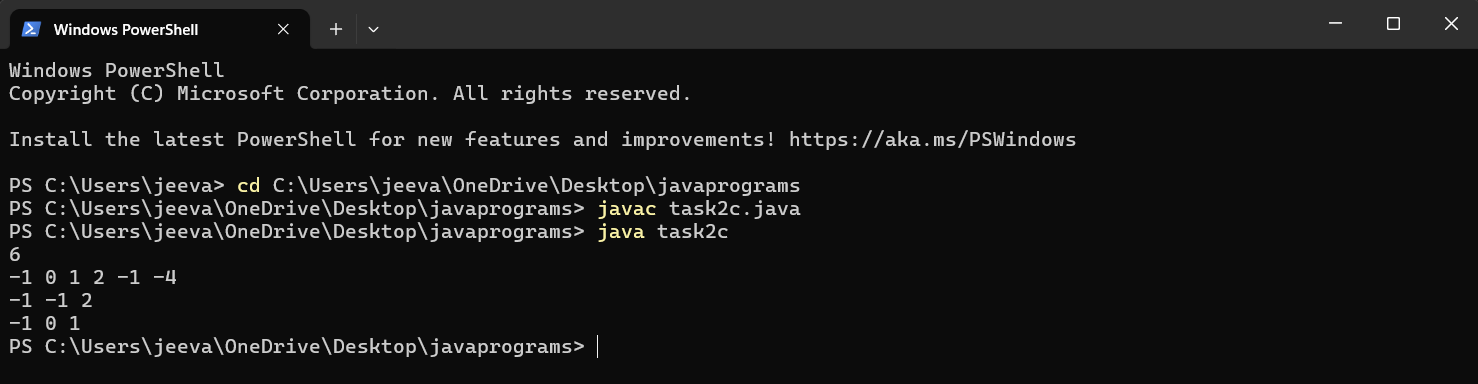
**2.B**

**OUTPUT:**

****

**2.C**

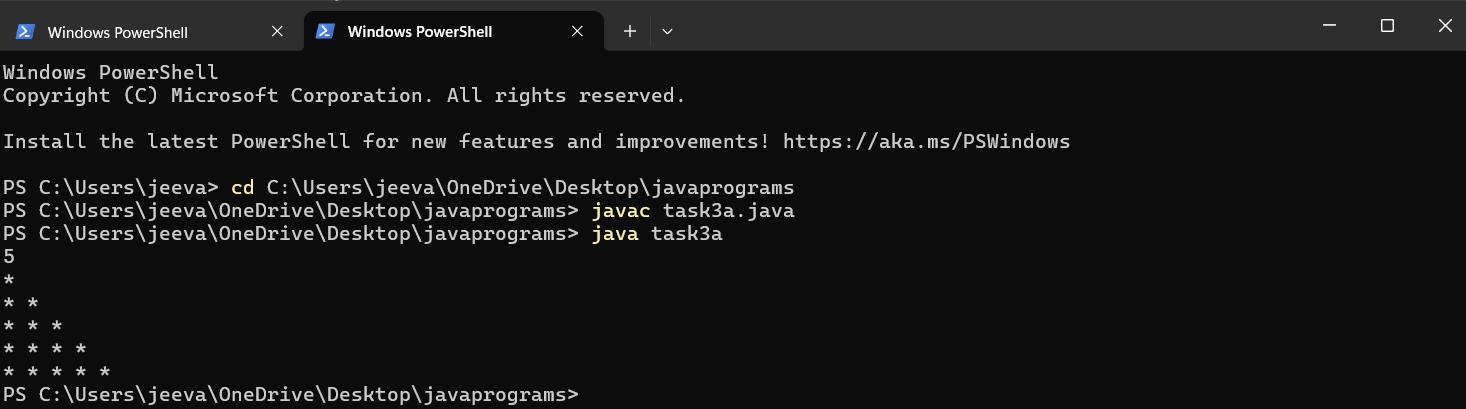
**OUTPUT:**

****

**TASK 3 : ADVANCED CONCEPTS ON STRINGS**

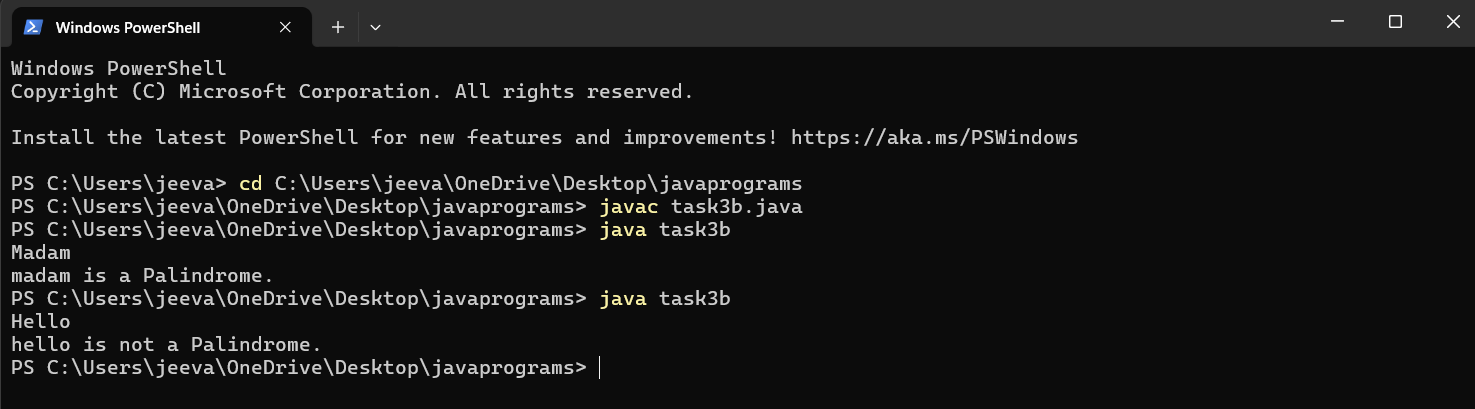
**3.A**

**OUTPUT:**

****

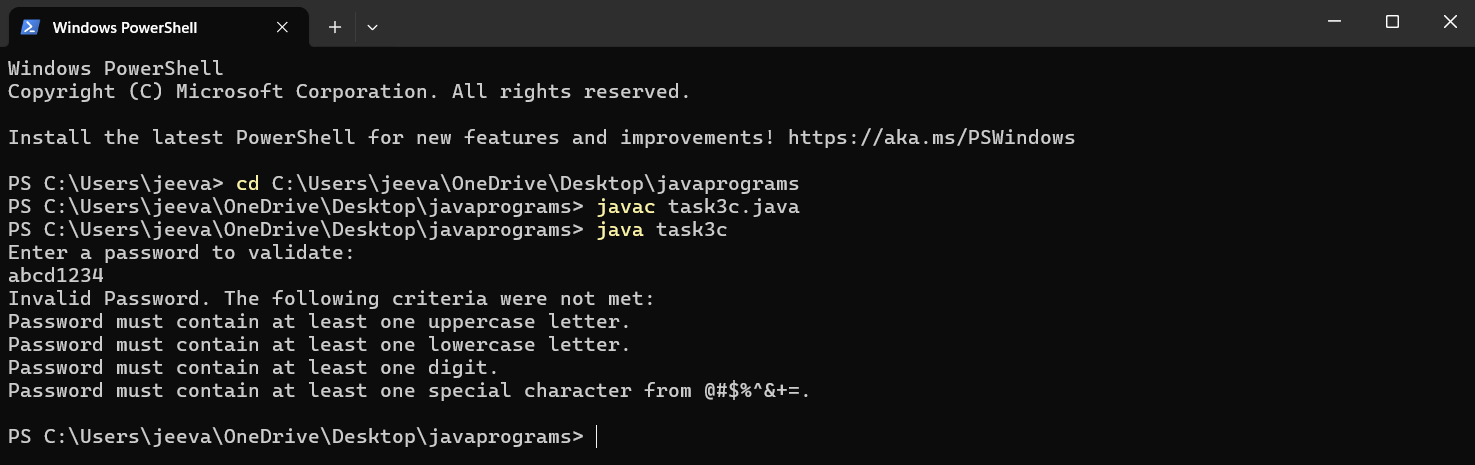
**3.B**

**OUTPUT:**

****

**3.C**

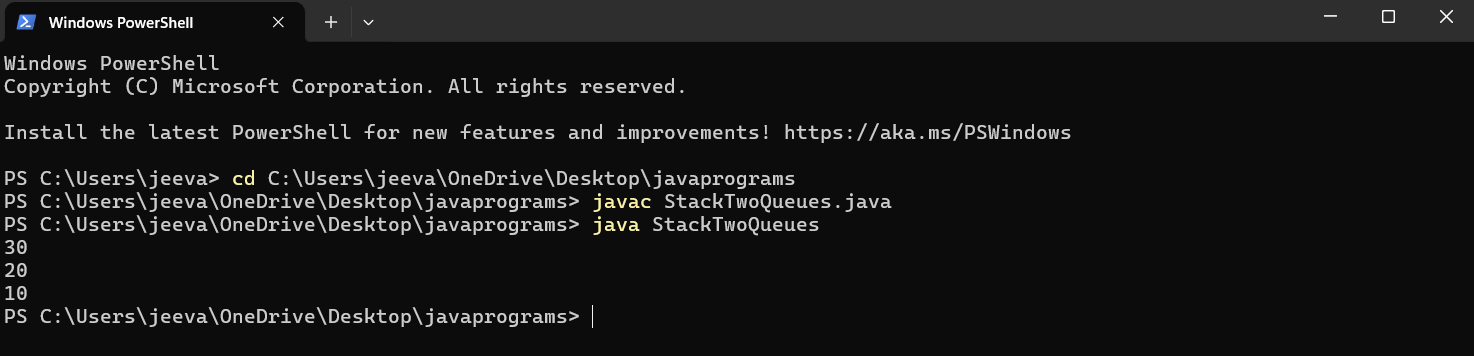
**OUTPUT:**



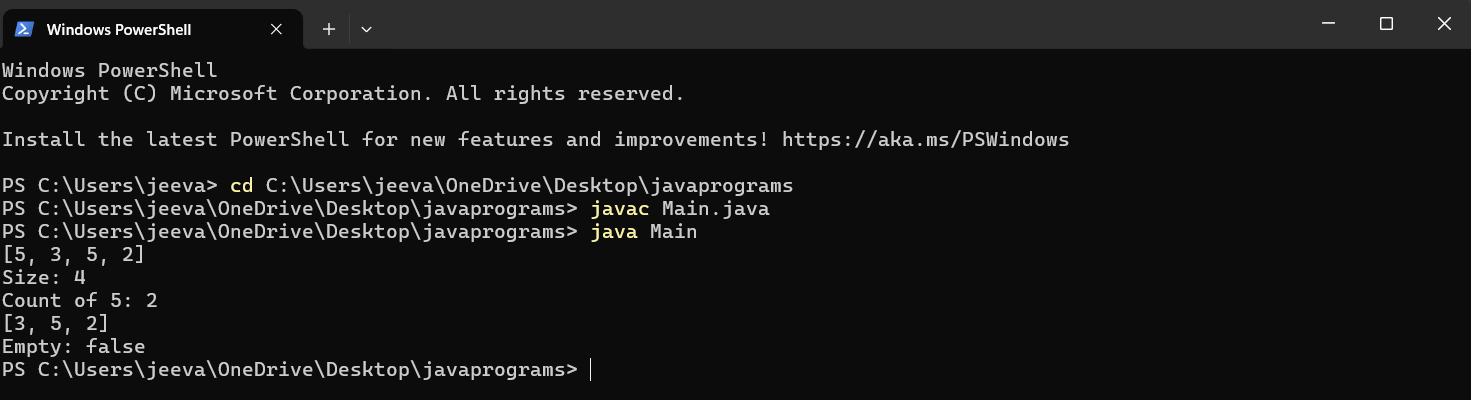
**TASK 4 : STACK AND QUEUES**

**4.A**

**OUTPUT:**



**4.B**

**OUTPUT:**

**4.C**

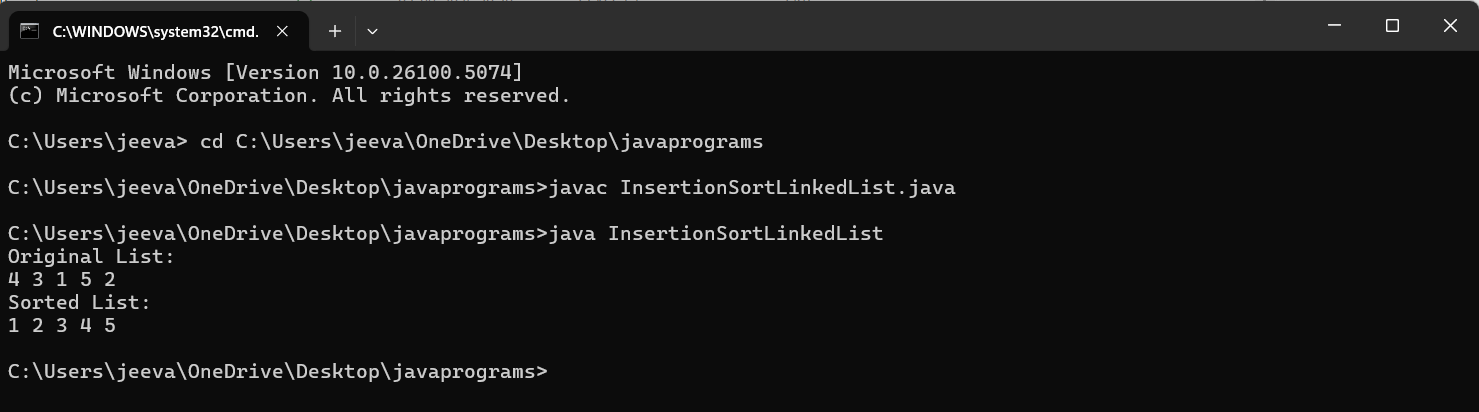
**OUTPUT:**



**Task 5: Linked List-Single linked list, Doubly liked list, operations on linked list.**

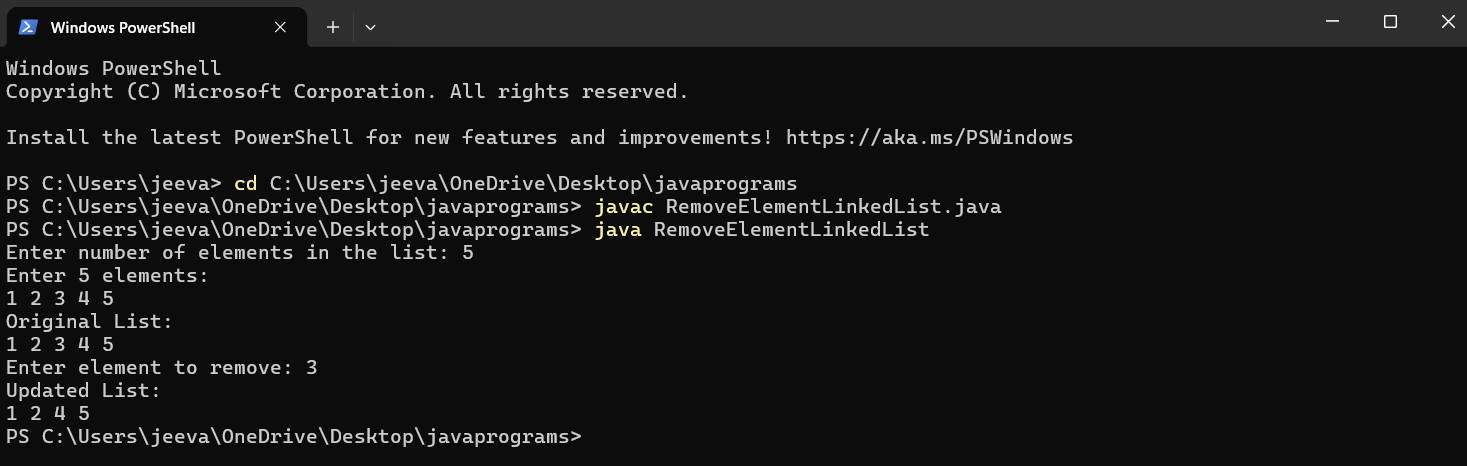
**5.a**

**OUTPUT:**



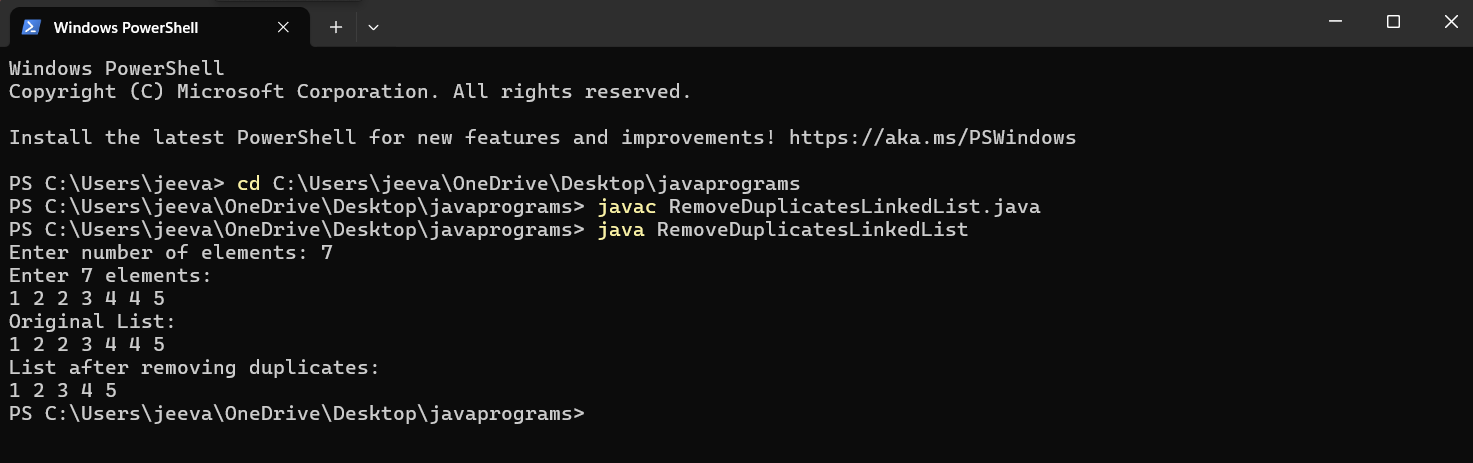
**5.B**

**OUTPUT:**



**5.C**

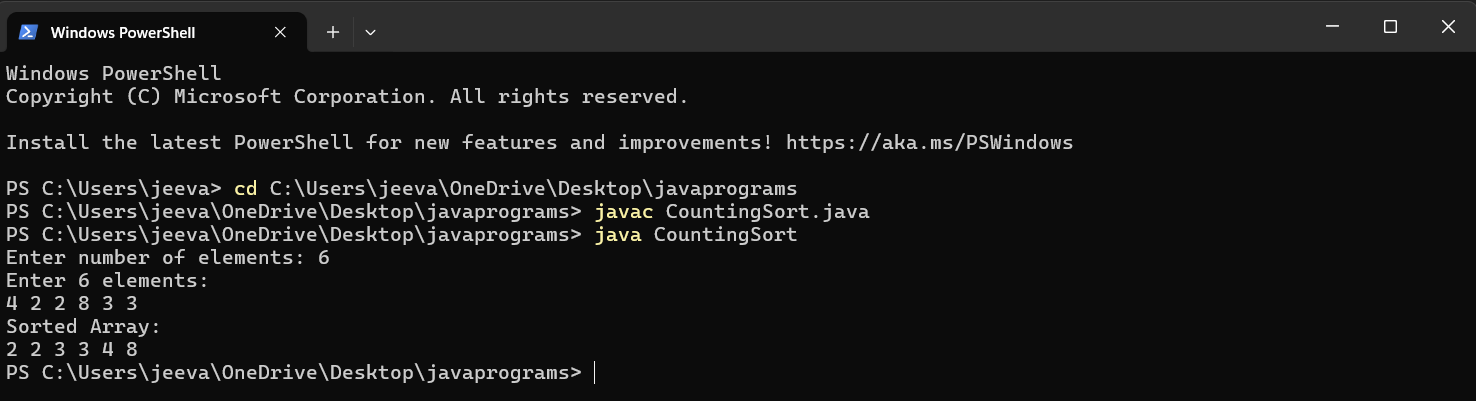
**OUTPUT:**



**Task 6: Sorting- Counting sort, Radix sort, Heap sort, Bucket sort**

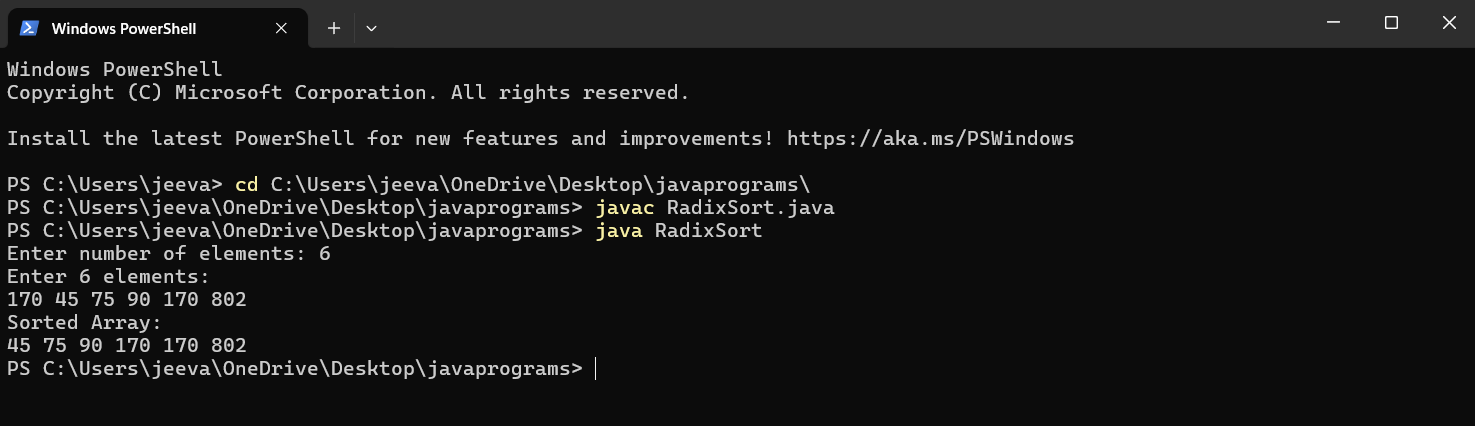
**6.a**

**OUTPUT:**



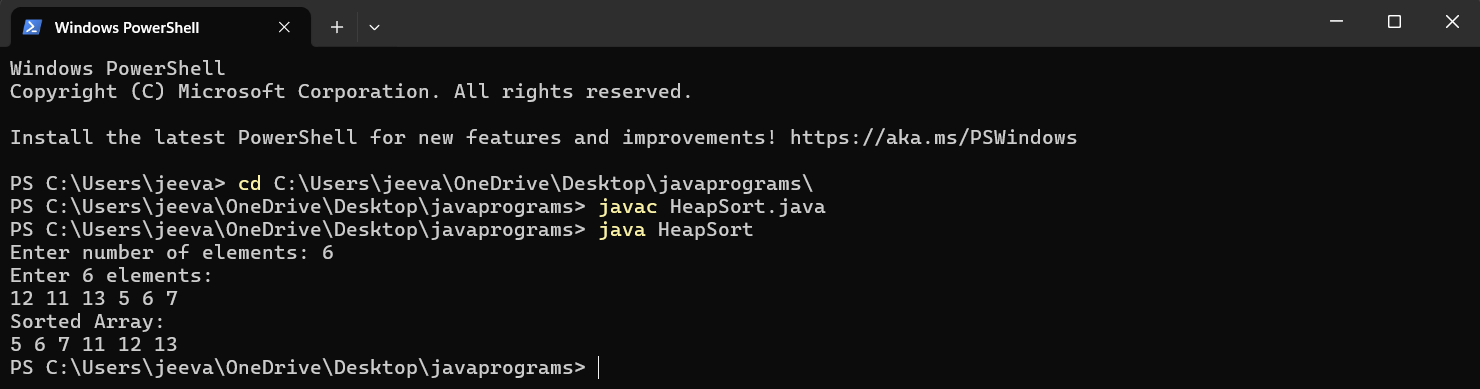
**6.B**

**OUTPUT:**



**6.C**

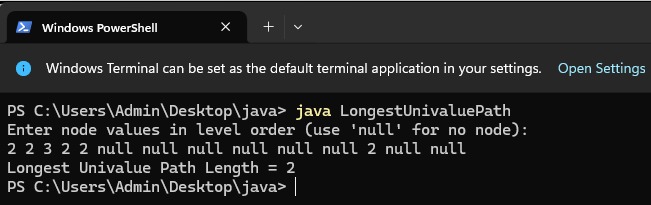
**OUTPUT:**



**Task 7: Introduction, tree traversal (in-order, pre-order, post-order), Binary search tree**

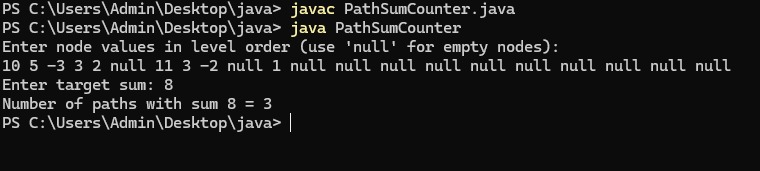
**7.A**

**OUTPUT:**



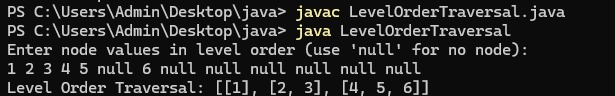
**7.B**

**OUTPUT:**



**7.C**

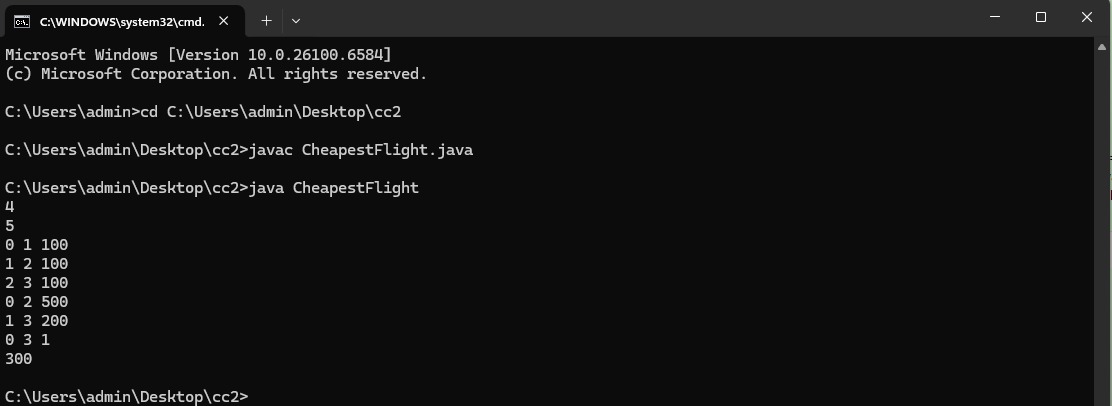
**OUTPUT:**



**Task 8: Graph - Introduction Adjacency Matrix and List, Depth First search, Breadth First Search, Manacher’s algorithm**

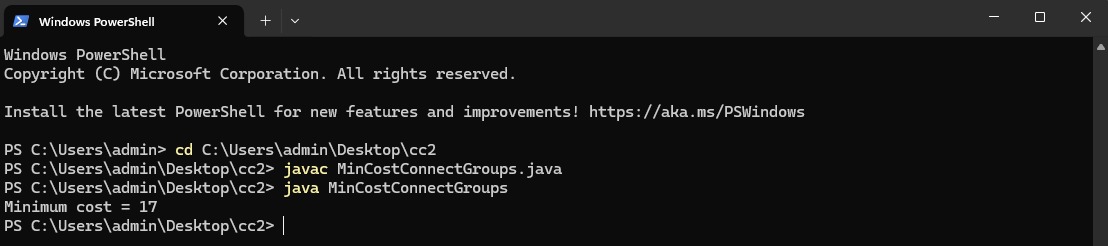
**8.A**

**OUTPUT:**



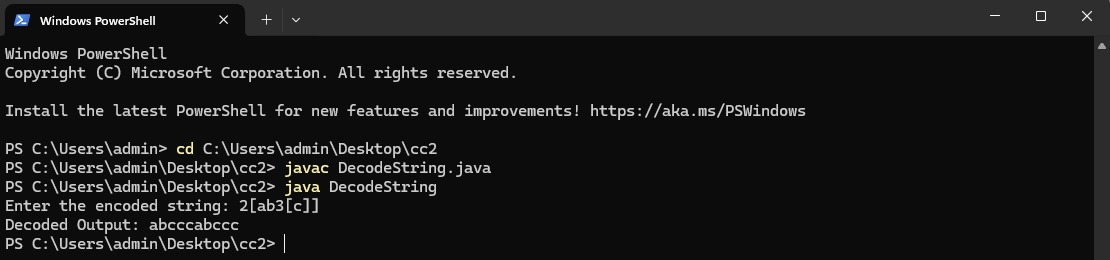
**8.B**

**OUTPUT:**



**8.C**

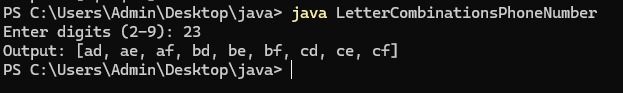
**OUTPUT:**



**Task 9: Backtracking-Introduction, Backtrack vs Divide and Conquer:**

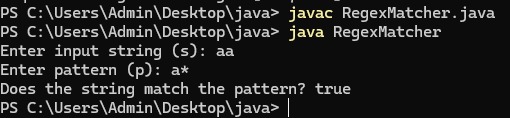
**9A**

**OUTPUT:**



**9.B**

**OUTPUT:**



**9.C**

**OUTPUT:**

