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Problem 5: Case Study of linear data structures Stack and Queues: Use ADT definition to implement the following problems.

1. Write a modular program to create a Stack using arrays and perform the following operations.
2. Traverse the stack
3. Peek an Item from the stack
4. Develop pseudo code algorithms for each operation
5. Compute Time and Space complexity by defining growth function of each algorithm.
6. Write a modular program to create a Queue using arrays and perform the following operations.
7. Traverse the Queue.
8. Insert an Item into the Queue when Queue is in some specific order.
9. Delete an Item from the Queue when item information is given.
10. Develop pseudo code algorithms for each operation
11. Compute Time and Space complexity by defining growth function of each algorithm.

(c) Repeat implementation of (a) and (b) using Doubly/Single Linked data structure