Create a Linked list by making the last node's next pointer points to the fifth node on the list.

Now write a function to find, whether there is a loop in the LL and if it there what is the node value of the start of the loop node(5th node). ( Hint: use slow ptr, fast ptr )

Examplle:  $L = \{ 4 \ 7 \ 8 \ 6 \ 2 \ 1 \ 9 \ 5 \ 3 \}$ , here the last node's ( data 3 ) next ptr should be linked to 5th node ( data value 2)

Input : 4 7 8 6 2 1 9 5 3 -1 ( read with cin >> till -1 )

Output : 1  $\,$  ( as there is loop ) , in no loop 0 : but here as the LL is constructed with loop you will get output 1.

: 2 ( at the node ( data value 2 ) the loop starts, i,e 5th node )  $\,$ 

Write a function for deleting from list LL, nodes occupying positions indicated in list LL itself.

For instance, if  $L=(1\ 3\ 5\ 7\ 8)$ , then after deletion,  $L=(3\ 7)$ . Explanation: The positions of nodes at 1 , 3, 5 are nodes of 1 , 5, 8 of given original LL are deleted. There is no node at positions 7 and 8 in the original LL. so The original LL will now become as  $L=(3\ 7)$  You should not use another linked lists or arrays, but you have to re-adjust the existing list nodes by using few variables.

You should not use Pointers.

Create a Generic Queue where each element is having varying number of items.

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Example Q = \{ (3, 'N', 9.8, 6), ('N', 8, 'C', 5, 'L', 8.1), (9.7, 5.4, 'B'), (7, 2, 45, 4.5, 9.3,72, 81, 36), ('A', 6, 'C', 7.5, 'D')\}
```

each of are elements of queue.

Implement engueue() , Dequeue() operations on the queue.

Print the contents of the queue after creation and a dequeue operation.

Note: You should not use Pointers.