Exerecise – Stacks and Queues

 1. **Stack Operations**. Trace the state of the initially empty stack *X* that holds integers through the following operations, assuming the top is on the left:

Instructions	Return Value	State of the Stack X
X.push(4);		
X.push(3);		
X.pop();		
X.push(7);		
X.peek();		
X.push(2);		
X.pop();		

2. **Queue Operations**. Trace the state of the initially empty queue *X* that holds integers through the following operations, assuming the front is on the left:

Instructions	Return Value	State of the Queue X
X.enqueue(4);		
X.enqueue(1);		
X.first();		
X.dequeue();		
X.enqueue(2);		
X.first();		
X.dequeue();		