

### Question 1

1(a) s.push("a") → [a  
s.push("b") → [a, b  
s.pop() → [a  
s.push("c") → [a, c  
s.pop() → [a  
s.pop() → []

1(b) s.push("a") → "a" → [1]  
s.push("a") → "b" → "a" → [1]  
s.pop() → "a" → [1]  
s.push("c") → "c" → "a" → [1]  
s.pop() → "a" → [1]  
s.pop() → [1] - head = null  
- linkedList empty.

### Question 2

2(a) q.enqueue("a") → <"a">  
q.enqueue("b") → <"a", "b">  
q.dequeue() → <"b">  
q.enqueue("c") → <"b", "c">  
q.dequeue() → <"c">  
q.dequeue() → <> - empty queue.  
head == null  
tail == null.

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2(b) q.enqueue("a") → a → [1]  
q.enqueue("b") → a → b → [1]  
q.dequeue() → b → [1]  
q.enqueue("c") → b → c → [1]  
q.dequeue() → c → [1]  
q.dequeue() → [1]