Date: Monday May 6, 2019

In part1, part2 and part3, you are going to implement stack functions. At first, you get operation code from user. Depending on the operation code, to do the corresponding operation.

Stack Operations:

1. Print Stack
2. Push
3. Pop

Part1: ***void print stack (Stack *stack)***

This function prints the values in stack. The value at the top must be on the left most side, and so on.

Example:
Operation Code: 1
Stack: (empty)

Example:
Operation Code: 1
Stack: 1 2 3

Part2: ***void push (Stack *stack, int value)***

This function pushes value (>0) to the stack.

Example: (Stack Content: 1 2 3)
Operation Code: 2
Input: 99
Stack: 99 1 2 3

Part3: ***int pop (Stack *stack)***

This function returns value at the top of stack. If stack is empty, this function returns -1.

Example: (Stack Content: 99 1 2 3)
Operation Code: 3
Output: 99
Stack: 1 2 3

Example: (Stack Content: (empty))
Operation Code: 3
Output: -1
Stack: (empty)

In part4, part5 and part6, you are going to implement basic queue functions. At first, you get operation code from user. Depending on the operation code, to do the corresponding operation.

Stack Operations:

4. Print Queue
5. Enqueue
6. Dequeue

Part4: ***void print queue (Queue *queue)***

This function prints the values in queue. The value at the beginning must be on the right most side. The value at the end must be on the left most side.

Example:
Operation Code: 4
Queue: (empty)

Example:
Operation Code: 4
Queue: 3 2 1

Part5: ***void enqueue (Queue *queue, int value)***

This function enqueues the value (>0) to the end of queue.

Example: (Queue Content: 3 2 1)
Operation Code: 5
Input: 99
Queue: 99 3 2 1

Part6: ***int dequeue (Queue *queue)***

This function returns the value at the beginning of queue. If queue is empty, this function returns -1.

Example: (Queue Content: 99 3 2 1)
Operation Code: 6
Output: 1
Queue: 99 3 2

Example: (Queue Content: (empty))
Operation Code: 6
Output: -1
Queue: (empty)