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/*--- Queue.java ---*/
import java.io.*;
import java.util.*;

public class Queue
{
    private class Node
    {
        public String data;
        public Node next;
        public Node(String d, Node n)
        {
            data = d;
            next = n;
        }
    }

    private Node head, tail, n;
    private boolean first;

    /**
     *Constructor
     */
    public Queue()
    {
        head = new Node(null,null);
        tail = head;
        n = new Node(null,null);
        first = true;
    }

    /**
     *Adds s to the back of the queue
     */
    public void enqueue(String s)
    {
        if(first == true)
        {
            head.data = s;
            head.next = new Node(null, null);
            tail = head.next;
            first = false;
        }
        else
        {
            tail.data = s;
            tail.next = new Node(null, null);
            tail = tail.next;
        }
    }

    /**
     *removes and returns string from the front of the queue
     */
    public String dequeue()
    {
        String s = head.data;
        head = head.next;
        return s;
    }

    /**
     *returns true of the queue is empty
     */
    public boolean empty()
    {
        boolean check;
        if(head.data == null && tail.data == null)
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        check = true;
        else
            check = false;
        return check;
    }
}
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