```
package com.jinglin;

import java.util.ArrayList;
import java.util.Scanner;
import java.io.*;

public class Main {
    private static LinkedList list = new LinkedList();
    private static int promotions = 0;
    private static double discount;

    public static void main(String[] args) throws IOException{
        File myFile = new File("c:/input#3.txt");
        Scanner input = new Scanner(myFile);
        PrintWriter output = new PrintWriter("c:/output#3.txt");

        while(input.hasNext()){
            String[] strArray = input.nextLine().split(" ");
            if(strArray[0].equals("R") && Integer.parseInt(strArray[1]) > 0){
                WidgetNode widget = new WidgetNode(Integer.parseInt(strArray[1]),
                        Double.parseDouble(strArray[2]));
                list.addToEnd(widget);
                output.println("Receive widget " + strArray[1] + " at price $" + strArray[2]);
                output.println();
                output.println("============================================================");
                output.println();
            }else if(strArray[0].equals("P")){
                promotions = 2;
                String discountRate = strArray[1].substring(0, strArray[1].length() - 1);
                discount = 1 - Double.parseDouble(discountRate) / 100;
                output.println("promotion active for next 2 customers with " +
                        strArray[1] + " discount");
                output.println();
                output.println("============================================================");
                output.println();
            }else if(strArray[0].equals("S") && Integer.parseInt(strArray[1]) > 0){
                sales(Integer.parseInt(strArray[1]), output);
            }
        }
        output.flush();
        System.out.println("The program has finished");
        input.close();
        output.close();
    }

    private static void sales(int n, PrintWriter output){
        WidgetNode current = list.getHead();
        ArrayList<String> salesRecord = new ArrayList<String>();
        int totalWidgetsSold = 0;
        double totalSales = 0;
        boolean promotionActivated = false;
        if(promotions != 0){
            promotionActivated = true;
            promotions--;
        }
        while(current != null && n != 0) {
            double price = current.getPrice();
            if(promotionActivated) price *= discount;
            if (n >= current.getWidgets()) {
                n -= current.getWidgets();
                totalWidgetsSold += current.getWidgets();
                salesRecord.add(String.format("%d at   %.2f each    Sales: $%.2f",
                        current.getWidgets(), price, current.getWidgets() * price));
                totalSales += current.getWidgets() * price;
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                current = current.getNext();
                list.removeFront();
            }else if (n < current.getWidgets()) {
                current.setWidgets(current.getWidgets() - n);
                totalWidgetsSold += n;
                salesRecord.add(String.format("%d at   %.2f each    Sales: $%.2f", n,
                        price, n * price));
                totalSales += n * price;
                n = 0;
            }
        }
        output.println(totalWidgetsSold + " Widgets sold");
        for(String str: salesRecord) output.println(str);
        output.printf("                  Total sales: $%.2f", totalSales);
        output.println();
        if(n > 0){
            output.printf("remainder of %d Widgets not available", n);
            output.println();
        }
        output.println();
        output.println("=========================================================");
        output.println();
    }
}
```

```
package com.jinglin;

public class LinkedList {
    private WidgetNode head;
    private WidgetNode tail;

    public WidgetNode getHead() {
        return head;
    }

    public void addToEnd(WidgetNode node){
        if(head == null){
            head = node;
            tail = node;
        }else{
            tail.setNext(node);
            tail = node;
        }
    }

    public void removeFront(){
        WidgetNode temp = head;
        head = head.getNext();
        temp.setNext(null);
    }
}
```

```
package com.jinglin;

public class WidgetNode {
    private int widgets;
    private double price;
    private WidgetNode next;

    public WidgetNode(int widgets, double price) {
        this.widgets = widgets;
        this.price = price * 1.3;
    }

    public int getWidgets() {
        return widgets;
    }

    public double getPrice() {
        return price;
    }

    public WidgetNode getNext() {
        return next;
    }

    public void setNext(WidgetNode next) {
        this.next = next;
    }

    public void setWidgets(int widgets) {
        this.widgets = widgets;
    }
}
```