import java.io.BufferedReader;

import java.io.IOException;

import java.io.InputStreamReader;

import java.util.ArrayList;

import java.util.List;

import java.util.Scanner;

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public class CharCount{

String frame;

public CharCount(){

frame = "";

}

public CharCount(String frame){

this.frame=frame;

}

public static String senderCharCount(List<CharCount> frameList){

String sendString = "";

for(CharCount frameObj: frameList){

String frame = frameObj.frame;

int length = frame.length();

length = length +1;

String appendBefore = Integer.toString(length);

appendBefore = appendBefore + frame;

sendString = sendString + appendBefore;

}

return sendString;

}

//Wasn't working for 9+ number of characters plus frame so made a few changes

public static String receiverCharCount(String sentString){

List<CharCount> frameList = new ArrayList<CharCount>();

while(sentString.length()!=0){

boolean isANumber = true;

int number = 0;

int addToFrame = 0;

int count = 0;

int i = 0;

while(isANumber == true){

String firstLetter = sentString.substring(i, i+1);

try{

addToFrame = Integer.parseInt(firstLetter);

number = number\*10 + addToFrame;

count++;

i++;

}catch(NumberFormatException e){

isANumber = false;

}

}

//11 takes one extra character than 9 would, thats why number+i-1.

//(i is the number of digits of the string)

String partFrame = sentString.substring(count, number+i-1);

CharCount frame = new CharCount(partFrame);

frameList.add(frame);

sentString = sentString.substring(number+i-1, sentString.length());

}

String receivedString = "";

for(CharCount frameObj: frameList){

String frame = frameObj.frame;

receivedString = receivedString + frame + "\n";

}

return receivedString;

}

public static void main(String args[])throws Exception{

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

System.out.println("Enter the number of frames.");

int numberOfFrames = Integer.parseInt(br.readLine());

List<CharCount> frameList = new ArrayList<CharCount>();

System.out.println("Enter the frames one by one.");

for(int i = 0; i<numberOfFrames; i++){

CharCount frame = new CharCount(br.readLine());

frameList.add(frame);

}

System.out.println("\nCHARACTER COUNT");

String sentString = CharCount.senderCharCount(frameList);

System.out.println("Sent String : "+sentString);

String receivedString = CharCount.receiverCharCount(sentString);

System.out.println("Received String Frame1wsie : \n"+receivedString);

}

}

/\*

Output:

Enter the number of frames.

3

Enter the frames one by one.

abc

ab2123456

asdfghjkl;kjghfdfsfghj

CHARACTER COUNT

Sent String : 4abc10ab212345623asdfghjkl;kjghfdfsfghj

Received String Frame1wsie :

abc

ab2123456

asdfghjkl;kjghfdfsfghj

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