

Problem 5—End Of Line

The Master Control Program may be very smart, but he still hasn't figured out what “end of line” means. He uses “end of line” to mean “end of transmission” or “end of file,” since he uses it only once at the end of each message, irrespective of how many lines might have been in the message. You are to help him out by adding all the extra <EOLN>'s that the Master Control Program is reluctant to do.

INPUT SPECIFICATION. Each input case begins with an unsigned decimal integer less than 100, followed by <EOLN>. This represents the width of the output. This is followed by a string of arbitrary positive length, followed by <EOLN>. The last input case will be followed by “0<EOLN>”.

OUTPUT SPECIFICATION. The output cases should appear in the same order as the input. Each output case should begin with “Case c:” where *c* is the case number, followed by two <EOLN>'s. What should then follow is the text of the input string, but with <EOLN>'s inserted where appropriate. Each line should contain as much as the text as will fit, provided that the <EOLN> does not break up a word (i.e. it is not inserted between two non-space characters). There will never be a string of non-space characters exceeding the text width. An inserted <EOLN> replaces all spaces surrounding it; in other words, after an <EOLN> is inserted, all surrounding spaces need to be deleted so that the inserted <EOLN> is not adjacent to a space.

Finally, each line of the output needs to be centered within the text width. If the text cannot be exactly centered due to the amount of leading and trailing whitespace being odd, the extra space should be on the right rather than the left. Although leading spaces need to be printed to ensure that the text is centered, the trailing spaces should not be. An extra <EOLN> should follow each output case.

SAMPLE INPUT.

```
20<EOLN>
All·the·leaves·are·brown·and·the·sky·is·gray··I've·been·for·a·walk·on·a·winter'
s·day··I'd·be·safe·and·warm·if·I·was·in·L.A··California·Dreamin'·on·such·a·win
ter·day.<EOLN>
5<EOLN>
a·aa·aaa·aaaa·aaaaa·aaaa·aaa·aa·a<EOLN>
0<EOLN>
<EOF>
```

SAMPLE OUTPUT.

```
Case·1:<EOLN>
<EOLN>
·All·the·leaves·are<EOLN>
brown·and·the·sky·is<EOLN>
gray··I've·been·for<EOLN>
a·walk·on·a·winter's<EOLN>
·day··I'd·be·safe<EOLN>
and·warm·if·I·was·in<EOLN>
··L.A··California<EOLN>
·Dreamin'·on·such·a<EOLN>
····winter·day.<EOLN>
<EOLN>
Case·2:<EOLN>
<EOLN>
a·aa<EOLN>
·aaa<EOLN>
aaaa<EOLN>
aaaaa<EOLN>
aaaa<EOLN>
```

```
·aaa<EOLN>
aa·a<EOLN>
<EOLN>
<EOF>
```