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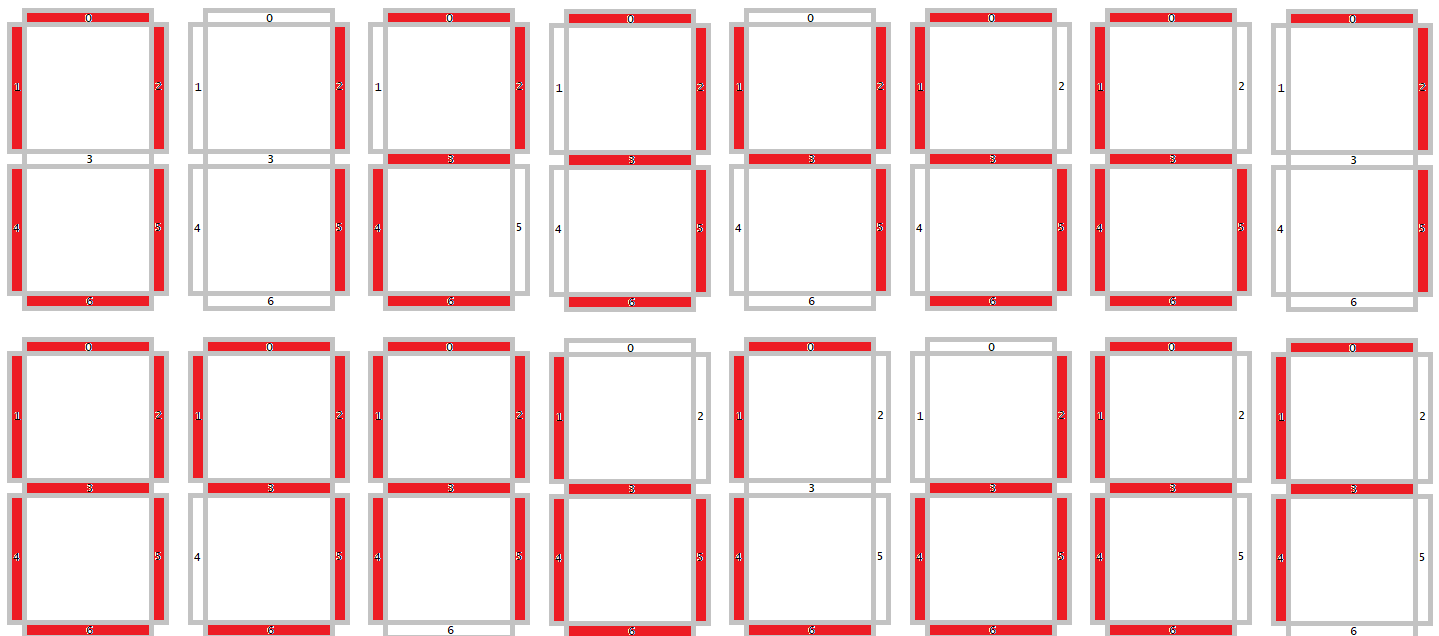


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M • 7 Segments You Say?

A seven segment LCD display provides a mechanism to display a hexadecimal digit by turning on some combination of *segments* to form the digits as shown below by the **RED** segments.



The image above represents the entire hexadecimal character set [0-9, AbCdEF] for this particular seven segment display. Note that the digits 'b' and 'd' appear as lower-case letters to avoid the ambiguity with the digit 8 and 0 respectively. A *special character* where no segments are on can be used as a space.

Each segment is numbered 0 through 6 as shown above by the small numbers in each segment. So, for example, the digit 3 has segments 0, 2, 3, 5 and 6 turned on. Each segment can be represented by 1 bit (0 if the segment is not on and 1 if the segment is on). Each digit is represented by 7 bits. The low order bit corresponds to segment 0 and the high order bit corresponds to segment 6. For the digit 3, the bit string is “**1101101**”. For this problem, you will read a string of bits and display the seven segment output representation scaled in size by some factor.

Input

Input consists of a single line containing the scaling factor **S**, ($1 \leq S \leq 8$), followed by a single space, followed by a bit string consisting of 1 to 1000 zeroes and ones (0's and 1's). If the bit string length is not a multiple of 7, you must pad it on the left with 0's (zeroes). Every 7 bits represents a single digit to display. Invalid digits should be displayed using the special character.



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Output

Output consists of multiple lines depending on the number of digits to be displayed and the scaling factor. Each digit to be displayed will consist of a display cell that is $S*7$ rows and $S*3$ columns. Each horizontal segment that is **on** shall be composed of S lines of $S*3$ “X” characters and each horizontal segment that is **not on** shall be composed of S lines of $S*3$ space characters. Each vertical segment that is **on** shall be composed of $S*2$ lines of S “X” characters vertically. Each vertical segment that is not **on** shall be composed of $S*2$ lines of S space characters vertically. Vertical segments on the same row should have S space character(s) between them. Multiple digit cells will be placed next to each other leaving $S*2$ spaces between cells. The maximum output line length is 80 columns. Any digit cell that will not completely fit on the output row should be moved to the next line of cells, leaving S blank lines between cells and no **extra** space at the beginning or ends of any rows. Spaces that are part of the seven segment display should always be displayed, even at the end (or beginning) of a line.

Part of this problem is formatting. As such, the output will be strictly checked and must follow the format rules precisely as stated above.

Note: In the samples below, the “**Sample Output**” shows a blue vertical bar, |, to denote the end of each output line. This vertical bar should NOT be shown in the output generated by your program. It is here for illustrative purposes ONLY.

In some of the “**Sample Input**”, it appears that each line is terminated by a single new-line character. In some examples, the single line may not fit in the “**Sample Input**” box, so it is broken into multiple lines. Keep in mind, there are no new-lines in there, only the single new-line at the end of the line of input.

Sample Input	Sample Output
1 1101111111011	<pre> XXX XXX X X X X XXX XXX X X X X X X XXX </pre>



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Sample Input

```
1 1011101001001011101110110101011101101011111101101001011111111101111
011111111110101010011111110010110110011011111011101001001011101101101
010111011010111111011010010111111111011110111111111101010100111111100
101101100110111110111010010010111011101101
```

Sample Output

```
XXX      XXX  XXX      XXX  XXX  XXX  XXX  XXX  XXX      XXX      XXX  XXX |
X X     X   X   X  X X  X   X   X  X X  X X  X X  X   X   X  X  X  X |
X X     X   X   X  X X  X   X   X  X X  X X  X X  X   X   X  X  X  X |
      XXX  XXX  XXX  XXX  XXX      XXX  XXX  XXX  XXX      XXX  XXX  XXX |
X X     X  X     X   X   X  X X  X  X X  X  X X  X X  X   X  X  X  X |
X X     X  X     X   X   X  X X  X  X X  X  X X  X X  X   X  X  X  X |
XXX      XXX  XXX      XXX  XXX      XXX  XXX      XXX  XXX  XXX  XXX |
|
XXX      XXX  XXX      XXX  XXX  XXX  XXX  XXX  XXX  XXX      XXX      XXX  XXX |
X X     X   X   X  X X  X   X   X  X X  X X  X X  X   X   X  X  X  X |
X X     X   X   X  X X  X   X   X  X X  X X  X X  X   X   X  X  X  X |
      XXX  XXX  XXX  XXX  XXX      XXX  XXX  XXX  XXX      XXX  XXX  XXX |
X X     X  X     X   X   X  X X  X  X X  X  X X  X X  X   X  X  X  X |
X X     X  X     X   X   X  X X  X  X X  X  X X  X X  X   X  X  X  X |
XXX      XXX  XXX      XXX  XXX      XXX  XXX      XXX  XXX  XXX  XXX |
|
XXX      XXX  XXX |
X X     X   X   X |
X X     X   X   X |
      XXX  XXX |
X X     X  X     X |
X X     X  X     X |
XXX      XXX  XXX |
```



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Sample Input

```
4 110111111011
```

Sample Output

```
XXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXX |
XXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXX |
XXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXX |
XXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXX |
XXXX XXXX |
XXXX XXXX |
XXXX XXXX |
XXXX XXXX |
XXXX XXXX |
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```