北京大学 PEKING UNIVERSITY
JUDGE ONLINE FOR ACIA/ACPC

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Language: Default ⌄

Fractal

Time Limit: 1000MS   **Memory Limit:** 30000K
Total Submissions: 9948   **Accepted:** 4570

Description

A fractal is an object or quantity that displays self-similarity, in a somewhat technical sense, on all scales. The object need not exhibit exactly the same structure at all scales, but the same "type" of structures must appear on all scales.
A box fractal is defined as below :

- A box fractal of degree 1 is simply
  X
- A box fractal of degree 2 is
  X X
  X
  X X
- If using B(n - 1) to represent the box fractal of degree n - 1, then a box fractal of degree n is defined recursively as following

```
B(n - 1)        B(n - 1)

        B(n - 1)

B(n - 1)        B(n - 1)
```

Your task is to draw a box fractal of degree n.

Input

The input consists of several test cases. Each line of the input contains a positive integer n which is no greater than 7. The last line of input is a negative integer −1 indicating the end of input.
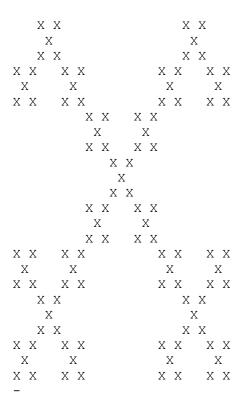
Output

For each test case, output the box fractal using the 'X' notation. Please notice that 'X' is an uppercase letter. Print a line with only a single dash after each test case.

Sample Input

```
1
2
3
4
-1
```

Sample Output

```
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 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 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
   X X                     X X
X X     X X             X X     X X
 X         X             X         X
X X     X X             X X     X X
 –
```

Source

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