Problem K. Print The Pattern

Time limit	1000 ms
Mem limit	1572864 kB
Code length Limit	50000 B
OS	Linux

$1 : A$

$2 : ABA$

$3 : ABACABA$

$4 : ABACABADABACABA$

$N : ...$

Input

The input file consists of a number N

Output

The output file should only contains the pattern without additional characters (without newline character)

Constraint

$1 <= N <= 15$

Example

Input	Output
4	ABACABADABACABA