

Digital Nim

Input file: **standard input**
Output file: **standard output**
Time limit: 1 second
Memory limit: 1024 megabytes

Algosia and Bajtek invented a new game, which they called *Digital Nim*. This game is played by two players, who take turns to make a move. The game requires one pile containing a certain number of stones. In their turn, a player must take from the pile any positive number of stones they choose; however, their options are limited. If there are currently x stones in the pile, then the number chosen by the player cannot exceed the sum of the digits of x in its decimal representation. For example, if there are currently 4257 stones in the pile, one can take between 1 and $4 + 2 + 5 + 7 = 18$ stones. The player who takes the last stone wins.

Your task is to determine who will win if there are initially n stones in the pile, Algosia makes the first move, and both play optimally. Additionally, you need to solve multiple test cases.

Input

The first line of the standard input contains a single integer t ($1 \leq t \leq 10\,000$), indicating the number of test cases.

The following t lines contain descriptions of the test cases. Each of them consists of a single integer n ($1 \leq n \leq 10^{18}$), indicating the initial number of stones in the pile.

For your convenience, all values of n are pairwise different and sorted in increasing order.

Output

Output t lines. The i -th of them should contain one word **Algosia** or **Bajtek**, indicating the winner in the i -th test case.

Example

standard input	standard output
4	Algosia
1	Bajtek
10	Algosia
42	Algosia
190	