

Square number game

After Van left the room Aayush and Akash stopped playing "The string game". They are now back to number game, but with different rules. They first decide a number N ($1 \leq N \leq 100000$). And in each turn a player must subtract a perfect square from it which is not greater than the number itself. In this problem consider 1 as a perfect square number. Game ends when the number becomes zero. Player who plays the last move wins. Determine who will win the game provided that both of them play perfectly.

Input

First line contains T ($1 \leq T \leq 10000$), the number of test cases. Following T lines contain 1 integer each, the value of N .

Output

For each test case print "Aayush" if Aayush wins else print "Akash".

Example

Input:

2
4
5

Output:

Aayush
Akash