

## A. Laptops

time limit per test

1 second

memory limit per test

256 megabytes

input

standard input

output

standard output

One day Dima and Alex had an argument about the price and quality of laptops. Dima thinks that the more expensive a laptop is, the better it is. Alex disagrees. Alex thinks that there are two laptops, such that the price of the first laptop is less (strictly smaller) than the price of the second laptop but the quality of the first laptop is higher (strictly greater) than the quality of the second laptop.

Please, check the guess of Alex. You are given descriptions of  $n$  laptops. Determine whether two described above laptops exist.

### Input

The first line contains an integer  $n$  ( $1 \leq n \leq 10^5$ ) — the number of laptops.

Next  $n$  lines contain two integers each,  $a_i$  and  $b_i$  ( $1 \leq a_i, b_i \leq n$ ), where  $a_i$  is the price of the  $i$ -th laptop, and  $b_i$  is the number that represents the quality of the  $i$ -th laptop (the larger the number is, the higher is the quality).

All  $a_i$  are distinct. All  $b_i$  are distinct.

### Output

If Alex is correct, print "Happy Alex", otherwise print "Poor Alex" (without the quotes).

### Examples

#### input

Copy

2

1 2

2 1

#### output

Happy Alex