

A: Bhai Party!



You have **T-Test** Cases for each Test Case:

Eshaan and Sanskar went to Amul after eating they started fighting over who will pay. You were standing there and being there friend suggested a game. You arranged all the **N numbers** of MNIT coins which both collectively had on a chair and suggested a game.

On each turn Eshaan can remove a coin and Sanskar can add a coin of any evaluation (since he is rich). There are total **K turns**. In the end, after K turns, if the GCD of all the coins is 1 then Eshaan loses and he will pay else Sanskar will pay all the money. You have to tell who will pay.

BOTH play optimally

PS: **Eshaan moves first followed by Sanskar.**

Also, Eshaan has the power to remove the coin from any location.

Input:

T (number of Test Cases)

For each Test case, you have two input lines

N and K (number of coins in the beginning and total number of turns)

N spaced integers i.e A_i (value of the i th coin)

Output:

Single line:

“Eshaan pays” if Eshaan loses or “Sanskar pays” if Sanskar loses without double quotes

Constraints:

$1 \leq T \leq 50$

$2 \leq N \leq 10^5$

$1 \leq K \leq 10^{18}$

$1 \leq A_i \leq 10^9$

The Sum of N over all T test cases is at max 10^5

Sample Test Case:

Input 1

1

3 2

2 4 5

Output:

Eshaan pays

Explanation:

Turn 1: Eshaan removed 2

Turn 2: Sanskar adds 7

Final array after 2 turns: 7 4 5 (GCD=1) therefore Eshaan Loses and he will pay

Input 2

1

3 2

2 4 5

Output:

Sanskar pays

Explanation:

Turn 1: Eshaan removed 5

Turn 2: Sanskar adds 7

Turn 3: Eshaan removed 7

Final array after 2 turns: 2 4 (GCD=2) therefore Sanskar Loses and he will pay