Problem I. Alluka Fall in Love

TimeLimit:	1 second
MemoryLimit:	256 megabytes

Alluka likes reading romance comics.

She is addicted to a type of comics that everyone knows will hurt their hearts, yet they still cannot stop reading:

- A cold black-haired young CEO

- A warm golden-haired puppy-like boy

- One girl between them (Alluka's imagines herself)

The black-haired CEO always wears a sharp suit and keeps a calm, serious expression. He does not talk much, but becomes gentle when he is with the girl. A quiet "Come here" feels like the whole world fades away, leaving only her.

The golden-haired puppy-like boy is bright and friendly, his smile always shines like sunlight. He never hides his affection and stays close to the girl. With just one line like "I worked hard today too" he can completely melt your heart.

And the girl? She stands between the calm, young CEO and the warm, straightforward puppy-like boy. Every choice she makes leaves everyone holding their breath.

As Alluka keeps reading, one question starts to bother her deeply:

"Did the girl really keep her feelings clearly separated every time? Is it possible that, at some moment, she was dating both of them at the same time?"

To answer this question, Alluka decides to record the girl's relationship status using a string.

At the beginning, the girl is not dating anyone. Once a relationship starts, it continues until it ends. The girl may start and end a relationship with the same person multiple times. If at any moment the girl is dating both the black-haired CEO and the golden-haired puppy-like boy, Alluka will say that the girl cheated, no matter how the story ends.

Your task is to help Alluka decide whether the girl was ever dating both boys at the same time.

Input

The input is a string S — represents the events, each character represents one event in time, events happen in the order from left to right.

Each time 'O' appears, it toggles the relationship status between the girl and the black-haired CEO: If they are not dating, they start dating. If they are dating, the relationship ends.

Each time 'X' appears, it toggles the relationship status between the girl and the golden-haired puppy-like boy: If they are not dating, they start dating. If they are dating, the relationship ends.

- $1 \leq |S| \leq 10^6$

- S contains only the characters 'O' and 'X'.

Output

Print "Bad girl" if there exists any moment when the girl is dating both the black-haired CEO and the golden-haired puppy-like boy at the same time.

Otherwise, print "Good end".

Examples

standard input	standard output
OOOOXX	Good end
OXXO	Bad girl