

Check Of Potential

" Now, our operation is small, but there's a lot of potential for "aggressive" expansion. So, which one of you fine gentlemen would like to join our team? Oh, there's only one spot open right now, so we're gonna have...Tryouts. Make it fast. "

Joker is short of time so he decides to select the thug who can satisfy the following task :

There are n plots in a straight line. The plots having land mines are marked as "B" while the plots not having land mines are marked as "N". A thug is selected if he manages to pass all the plots. The thug can jump from a plot to another (in forward direction only). Also he can jump from plot j to any plot $j+1, j+2, j+3, \dots, j+k$. Print for a given number of plots, n and the jump limit, k if the thug can be selected or not. The thug starts before the first plot and can step on any one - $1, 2, 3, \dots, k$ plot at his first jump.

Input

Input has 2 lines :

1st line denotes number of plots, n ($2 \leq n \leq 10^5$) and the jump limit, k ($1 \leq k \leq 10^5$).

2nd line denotes the plot description.

Output

Print "SELECTED\n" if the thug can pass all the plots.

Print "DIED\n" if the thug cannot pass all the plots.

In last line print the string "KILL BATMAN\n".

Don't print any extra spaces.

Example

Input:

4 2

BNBN

Output:

SELECTED
KILL BATMAN

Input:

4 3

BNBN

Output:

**SELECTED
KILL BATMAN**

Input:

**4 2
BBBN**

Output:

**DIED
KILL BATMAN**