Problem 2 - Snake

One of the candidates-intern must solve the task - "Snake". He must write a Java code that calculates wheater the snake wins or loses the game.

Here are the rules of the game:

The game starts with a snake length of 1.

We get as input the size of the screen in which our snake moves. The screen is always a square. After that we receive the commands wich represent the directions in wich the snake should move. The snake starts from s-position The commands will be: left/right/up/down. If the snake reaches the side edge of the screen (left or right), it goes to the opposite side of the same row. If the snake reaches the top/bottom edge of the screen it goes on the opposite site of the same column. The possible characters that may appear on the screeen are:

- *- that is a regular square; it does nothing
- **e** represents an enemy.
- f this is the food
- s the place where the game starts

Each time when you eat a piece of food your length increases by one. Keep thrack of the length, because in case you win you have to print it. If you step on an enemy the game is over (the snake stops moving) and you have to print the output as shown in the output section. After executing all of the commands there are 3 possible outcomes:

- you have eaten all the food and you win
- you get killed by an enemy
- there is still some food to be eaten

Print the corresponding output depending on the case.

Input

- Length of the screen side an integer number.
- Commands to move the snake an array of strings separated by ",".

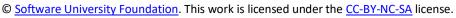
Output

- There are three types of output:
 - o If all of the food is eaten print the following output: "You win! Final snake length is {length}"
 - o If there are no left commands and there is still some food to be eaten: "You lose! There is still {left food} food to be eaten."
 - o If you step on the enemy the game is over and you print "You lose! Killed by an enemy!"

Constraints

- The **input numbers** will be a 32-bit integer in the range [0 ... 2 147 483 647].
- Allowed working time for your program: 0.1 seconds.
- Allowed memory: 16 MB.





















Examples

Input	Output	Comments
5 up, right, right, up **e** ***f* *f*** s**** **e**	You win! Final snake length is 3	After executing all of the commands the snake has eaten all of the food and it it still alive.
right, right, right, right, down, right * s * * * e * * f * f * * * f	You lose! Killed by an enemy!	The snake moves 2 times to the right, then it goes off screen and appears on left side. Then it makes 2 more moves to the right, it goes down, steps on an enemy and the game is over.
6 down, left, left, down, right, right, right, right ****s* *ef*** f**** ***fe* *e**** *****	You lose! There is still 1 food to be eaten.	The snake survived but there is still 1 piece of food that the snake could not eat.















