#include <stdio.h>

#include <string.h>

#include <stdbool.h>

char str[100];

int i = 0;

bool S() {

if (str[i] == 'a') {

i++;

if (S()) {

if (str[i] == 'b') {

i++;

return true;

} else {

return false;

}

}

return false;

}

// e (empty) production

return true;

}

int main() {

printf("Enter a string: ");

scanf("%s", str);

if (S() && str[i] == '\0')

printf("String is VALID according to the grammar.\n");

else

printf("String is INVALID according to the grammar.\n");

return 0;

}

