

```
#include <stdio.h>
#include <string.h>

int main(){
    char str[1000], newI;

    gets(str);

    int i, freq = 0, len = strlen(str);

    // Count the number of occurrences of the letter I
    for(i = 0; i < len; i++)
        if(str[i] == 'I')
            freq++;

    // If the letter does not appear at all, print the string as is
    if(freq == 0)
        printf("%d\n%s",0,str);
    else{
        // What does I become after the shift?
        newI = ('I' - 'A' + freq) % 26 + 'A';
        for(i = 0; i < len; i++)
            str[i] = (str[i] - 'A' + freq) % 26 + 'A';

        // strchr returns a pointer to the first occurrence of a char
        printf("%d\n%s",freq,strchr(str,newI));
    }
    return 0;
}
```