```c
//uva10931
#include <stdio.h>

int main(){
    int n;
    scanf("%d", &n);

    while (n != 0){
        int n1=n, i=0, sum=0;
        char bstr[32]={'\0'};    //顯示二進位字串
        int nbin[32];            //儲存二進位結果
        while (n>0){
            if (n%2==1){
                nbin[i]=1;
                sum+=1;
                n /= 2;
                i++;
            }
            else{
                nbin[i]=0;
                n /= 2;
                i++;
            }
        }
        for (int j=i-1,k=0; j>=0; j--, k++){ //將二位元結果轉換為二位元字串
            bstr[k]= nbin[j]+48;
        }
        printf("%s %d\n", bstr, sum);
        scanf("%d", &n);

    }
    return 0;
}
```