## 2088 Box of Bricks

### 一、题目

#### 问题描述

Little Bob likes playing with his box of bricks. He puts the bricks one upon another and builds stacks of different height. “Look, I’ve built a wall!”, he tells his older sister Alice. “Nah, you should make all stacks the same height. Then you would have a real wall.”, she retorts. After a little consideration, Bob sees that she is right. So he sets out to rearrange the bricks, one by one, such that all stacks are the same height afterwards. But since Bob is lazy he wants to do this with the minimum number of bricks moved. Can you help? img

#### 输入数据

The input consists of several data sets. Each set begins with a line containing the number n of stacks Bob has built. The next line contains n numbers, the heights hi of the n stacks. You may assume 1≤n≤50 and 1≤hi≤100.

The total number of bricks will be divisible by the number of stacks. Thus, it is always possible to rearrange the bricks such that all stacks have the same height.

The input is terminated by a set starting with n = 0. This set should not be processed.

#### 输出数据

For each set, print the minimum number of bricks that have to be moved in order to make all the stacks the same height.

Output a blank line between each set.

#### 输入样例

6

5 2 4 1 7 5

0

#### 输出样例

5

#### 题目来源

HDU 2088 http://acm.hdu.edu.cn/showproblem.php?pid=2088

### 二、题解

#### 解题思路

#### 读入数据，算出每堆应放砖块（平均值），只要把每堆的数量减去平均值即可，低于平均值忽略

#include <stdio.h>  
#include <stdlib.h>  
int main()  
{  
 int n,a[101],i,b,c,t=0;  
 while(~scanf("%d",&n)&&n!=0) / 当n为0时终止/  
 {  
 if(t>0)printf("\n");  
 b=0;  
 for(i=0;i<n;i++)  
 {  
 scanf("%d",&a[i]);  
 b+=a[i];  
 }  
 b=b/n;c=0; /算平均数，不用考虑能否整除/  
 for(i=0;i<n;i++)  
 {  
 if(a[i]<b) c+=b-a[i];  
 }  
 printf("%d\n",c);t++;  
 }  
 return 0;  
}

#### 复杂度分析

最多遍历一次，O（n）

#### 编程技巧

无