大数相加修改与注意

**这是某位同学原来的代码。尝试debug一下？**

#include <stdio.h>

#include <stdlib.h>

#include <string.h>

#include <math.h>

#define N 50

void Calculate(char num1[],char num2[],char result[],int lenmax,int lenmin,int value);

int main()

{

char num1[N]={0},num2[N]={0},result[N]={0};

int len1,len2,value;

printf("subject No.7 - program No.1\n");

scanf("%s%s",num1,num2);

len1=strlen(num1);

len2=strlen(num2);

value=fabs(len2-len1);

if (len1>=len2)

{

Calculate(num1,num2,result,len1,len2,value);

}

else if (len2>len1)

{

Calculate(num2,num1,result,len2,len1,value);

}

return 0;

}

void Calculate(char nummax[],char nummin[],char result[],int lenmax, int lenmin,int value)

{

int i,a=0,len;

for (i=lenmax-1;i>=lenmax-value-1;i--)

{

nummin[i]=nummin[i-value];

}

for (i=lenmax-value-2;i>=0;i++)

{

nummin[i]=0;

}

for (i=lenmax-1;i>=0;i--)

{

result[i]=nummax[i]+nummin[i-value]+a;

a=0;

if (result[i]>=10)

{

a=1;

result[i]=result[i]-10;

}

len=lenmax-1;

}

if (a==1)

{

for (i=lenmax;i>0;i--)

{

result[i]=result[i-1];

}

result[0]=1;

len=lenmax;

}

for (i=0;i<=len;i++)

{

printf("%d",\*(result+i));

printf("%d\n",strlen(result));

}

}

**Debug过程与结果：**

#include <stdio.h>

#include <stdlib.h>

#include <string.h>

#include <math.h>

#define N 50

/\*严重问题：程序出现非法内存访问！输入数据后没反应，等一会儿后出现

Process returned -1073741819 (0xC0000005)，这是明显的非法内存访问错误\*/

void Calculate(char num1[],char num2[],char result[],int lenmax,int lenmin,int value);

int main()

{

char num1[N]={0},num2[N]={0},result[N]={0};

int len1,len2,value;

printf("subject No.7 - program No.1\n");

scanf("%s%s",num1,num2);

len1=strlen(num1);

len2=strlen(num2);

//value=fabs(len2-len1);

value=abs(len2-len1);

//整数取绝对值只要用abs()就好了

if (len1>=len2)

{

Calculate(num1,num2,result,len1,len2,value);

}

else if (len2>len1)

{

Calculate(num2,num1,result,len2,len1,value);

}

return 0;

}

void Calculate(char nummax[],char nummin[],char result[],int lenmax,int lenmin,int value)

{

int i,a=0,len;

//for (i=lenmax-1;i>=lenmax-value-1;i--)

for (i=lenmax-1;i>value-1;i--)

{

nummin[i]=nummin[i-value];

}

/\*我没理解错的话，你这里应该是在做一个数位的对齐，并把原来位置上的元素变成'0'\*/

//for (i=lenmax-value-2;i>=0;i++)

//i++？？你干啥呢？且循环进入条件有误！

for (i=value-1;i>=0;i--)

{

//nummin[i]=0;

nummin[i]='0';

}

for (i=lenmax-1;i>=0;i--)

{

//result[i]=nummax[i]+nummin[i-value]+a;

result[i]=nummax[i]+nummin[i]+a-96;

//思考：为什么要减去96？

a=0;

if (result[i]>=10)

{

a=1;

result[i]=result[i]-10;

}

//len=lenmax-1;

}

len=lenmax-1;

if (a==1)

{

for (i=lenmax;i>0;i--)

{

result[i]=result[i-1];

}

result[0]=1;

len=lenmax;

}

for (i=0;i<=len;i++)

{

//printf("%d",\*(result+i));

printf("%d",result[i]);

//result不是指针，不能采取上面方式调用

//printf("%d\n",strlen(result));

}

}