Problem 1: check the number of occurrence of a string

Program code

#include<iostream>

#include <string>

using namespace std;

void count(const char s[], int counts[]);

int main()

{

char s[80];

int counts[26];

gets(s);

count(s, counts);

return 0;

}

void count(const char s[], int counts[])

{

int i,j;bool check;

for(i=0;i<=25;i++)

{

counts[i]=0;

} // 把counts都变成0

char character[26];

for (i=0;i<=25;i++)

{

character[i]='A'+i;

}

int ascll[26];

for(i=65;i<=90;i++)

{

ascll[i-65]=(i-65);

}//把ascll 以此变成0,1,2，....25

for(i=0;i<=80;i++)

{

check=false;

for (j=0;j<=25;j++)

{

if ((s[i]-'A')==j || (s[i]-'A')==(j+32))

check=true;

}

if (check==false)

break;

for (j=0;j<=25;j++)

{

if ((s[i]-'A')==j || (s[i]-'A')==(j+32))

counts[j]++;

//得出[s]的ascll码，然后做比较

}

}

int k;

k=0;

for(i=0;i<=25;i++)

{

cout<<counts[i]<<" ";//如果那个个数不为0，输出那个个数

k++;

if(k%10==0)

cout<<endl;

}

cout<<endl;

}

Program analysis

1. using ASCLL code to check which character the char array refer to .
2. create several array to store the sequential letter
3. using two loop statement to count the number of occurrence.

Program result

Problem 2: find the maximum and minimum of an array of int, and find the localtion

Program code

#include<iostream>

using namespace std;

int main()

{

int s[8];

for (int i=0;i<=7;i++)

{

cin>>s[i];

}

int m,loacl1;

m=0;

for (i=0;i<=7;i++)

{

if(s[i]>m)

m=s[i];

}

for ( i=0;i<=7;i++)

{

if(s[i]==m)

{

loacl1=i;

break;

}

}

int n,loacl2;

n=s[1];

for (i=0;i<=7;i++)

{

if(s[i]<n)

n=s[i];

}

for ( i=0;i<=7;i++)

{

if(s[i]==n)

{

loacl2=i;

break;

}

}

cout<<"The maximun is "<<m<<" and the loacaltion of the maximum is "<<loacl1+1<<endl;

cout<<"The minimun is "<<n<<" and the loacaltion of the minimum is "<<loacl2+1<<endl;

return 0;

}

Program analysis

Using two loop statement to find the result

Program result

Problem 3:

Find the initial of a n\*n matrix

Program code

#include<iostream>

#include <string>

using namespace std;

int main()

{

int n,c;

c=1;int i,j;

cin>>n;

int sum=1;

for( i=1;i<=n;i++)

{

for (j=1;j<=i;j++)

{

cout<<sum<<" ";

sum++;

}

for (j=i+1;j<=n;j++)

{

cout<<"0"<<" ";

}

cout<<endl;

}

sum=1;

for( i=1;i<=n;i++)

{

for (j=1;j<=n-i;j++)

{

cout<<"0"<<" ";

}

for (j=n-i+1;j<=n;j++)

{

cout<<sum<<" ";

sum++;

}

cout<<endl;

}

return 0;

}

Program analysis

Using two similar double loop the output the number

Program result