Problem1

Write a function to realize the strcmp()

Program code

#include<iostream>

using namespace std;

int funcstrcmp(char a[],char b[]);

int main()

{

char a[50],b[50];

gets(a);

gets(b);

cout<<funcstrcmp(a,b)<<endl;

return 0;

}

int funcstrcmp(char a[],char b[])

{

int len;

if (strlen(a)<=strlen(b))

len=strlen(a);

else len=strlen(b);

int result=0;

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

{

if((a[i])>(b[i]))

{

result=1;

break;

}

if((a[i])<(b[i]))

{

result=-1;

break;

}

}

if (result==0)

{

if(strlen(a)>strlen(b))

result=1;

if(strlen(a)<strlen(b))

result=-1;

}

return result;

}

Program analysis

1. use strlen() to compare the length of the two string;
2. compare the character one by one, if it can get result ,then break
3. if cannot get the result, compare the length of two string again

Program result

Problem2

Change a string like(123)45678-909 to one int like 123 and a long like 45678909

Program code

#include<iostream>

#include<string>

#include <stdio.h>

#include<math.h>

using namespace std;

void change(char \*p, int &q,long &h);

int main()

{

char a[30];

gets(a);

char \*p=a;

int q=0;

long h=0;

change(p,q,h);

cout<<q<<endl;

cout<<h<<endl;

return 0;

}

void change(char \*p, int &q,long &h)

{

char \*str1,\*str2,\*str3,\*str4;

str1=strtok(p,"(");

str2=strtok(str1,")");

str3=strtok(NULL,"-");

str4=strtok(NULL,"-");

q=atoi(str2);

h=atoi(str3)\*pow(10,strlen(str4))+atoi(str4);

}

Program analysis

1. using strtok function to separate the string into several parts
2. using atoi function to change the string into int;

Program result

Problem3

Using struct function to store the number, name and 3score of a student;

Then output the total number and average number.

Program code

#include<iostream>

using namespace std;

const int N=30;

struct student

{

char num[20];

char name[20];

int score[3];

int total;

double average;

};

void gettotal(struct student stu[],int N);

void getaverage(struct student stu[],int N);

int main()

{

int i,j;

struct student stu[N];

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

{

cin>>stu[i].num;

cin>>stu[i].name;

for(j=0;j<3;j++)

{

cin>>stu[i].score[j];

}

}

gettotal(stu,N);

getaverage(stu,N);

cout<<endl;

cout<<endl;

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

{

cout<<stu[i].num<<endl;

cout<<stu[i].name<<endl;

cout<<stu[i].total<<endl;

cout<<stu[i].average<<endl;

}

return 0;

}

void gettotal(struct student stu[],int N)

{

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

{

stu[i].total=stu[i].score[0]+stu[i].score[1]+stu[i].score[2] ;

}

}

void getaverage(struct student stu[],int N)

{

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

{

stu[i].average=stu[i].total/3.0;

}

}

Program analysis

Using struct student stu[] as a struct array to store the datas

Program result