Program 1

Find the int solve for the function a^2+b^2+c^2=1000

Program code

#include<iostream>

using namespace std;

int main()

{

int i,j,k;

for (i=1;i<=1000;i++)

for (j=i+1;j<=1000;j++)

for (k=j+1;k<=1000;k++)

if(i\*i+j\*j+k\*k==1000)

cout<<"另一组合适的解是"<<i<<" "<<j<<" and "<<k<<endl;

return 0;

}

Program analysis

Using exhausted way to find the solve for an equation

Program result

Program 2

If today is 2014.11.9, what’s the day after 1000days is ?

Program code

#include <iostream>

using namespace std;

int main()

{

int mouth[13] = {0,31,28,31,30,31,30,31,31,30,31,30,31};

int t = 0;

int year = 2014,m = 11,day = 9;

while(t<=1000)

{

int ps = 0;

if(m == 2 && year%4==0 && year % 400!=0)

{

ps = 1;

}

while(day<=(mouth[m]+ps))

{

day++;

t++;

if(t>=1000)

break;

}

if(t>=1000)

break;

day = 1;

m++;

if(m==13)

{

year++;

m = 1;

}

}

cout<<year<<" "<<m<<" "<<day<<endl;

return 0;

}

Program analysis

Create an int array to store the days of each month.

Then count the day one by one.

Program result

Program 3

Find a number n, which a^2 and a^3 use all the number from 0-9

Program code

#include <iostream>

using namespace std;

bool solve(int a,int b) ;

int main()

{

for(int i=1;;i++)

{

int pingfang = i\*i;

int lifang= i\*i\*i;

if(solve(pingfang,lifang))

{

cout<<i<<endl;

break;

}

}

return 0;

}

bool solve(int a,int b)

{

int meiyiwei[20]={0};

while(a!=0)

{

meiyiwei[a%10]++;

a=a/10;

}

while(b!=0)

{

meiyiwei[b%10]++;

b=b/10;

}

bool check= true;

for(int i=0;i<10;i++)

{

if(meiyiwei[i]==0)

{

check= false;

break;

}

}

return check;

}

Program analysis

Create an int array meiyiwei, the number equal to n%10 will be count.

Then check the every number

Program result