

评阅人	
-----	--

实验成绩

中南大学

自动化学院本科生实验报告

课程实验报告

专业_____班级_____姓名_____学号_____

预定时间 星期_____节次_____实际实验时间 星期_____节次_____

地点_____台号_____授课教师_____指导教师_____

实验名称_____

--

```
#include <stdio.h>
#include <stdlib.h>
#include <time.h>

#define LMAX 5
#define CMAX 5

int main()
{
    //system("cls");
    srand(time(NULL));
    int a[LMAX][CMAX];
    int i,j,temp;
    for(i=0;i<LMAX;i++)
    {
        for(j=0;j<CMAX;j++)
        {
            a[i][j]=rand()%100;
        }
    }
    printf("This is the original number~~~~~:)\n\n");
    for(i=0;i<LMAX;i++)
    {
        for(j=0;j<CMAX;j++)
        {
            printf("%4d",a[i][j]);
        }
        printf("\n");
    }
    printf("\n");
    for(j=0;j<CMAX;j++)
    {
        temp=a[0][j];
        a[0][j]=a[4][j];
        a[4][j]=temp;
    }
    printf("This is the new number~~~~~:):\n\n");
    for(i=0;i<LMAX;i++)
    {
        for(j=0;j<CMAX;j++)
        {
            printf("%4d",a[i][j]);
        }
        printf("\n");
    }
    printf("\n");

    for(i=0;i<LMAX;i++)
    {
        int max_num =a[i][0];
        int max_column=0;
        for(j=0;j<CMAX;j++)
        {
            if(a[i][j]>max_num)
            {
                max_num=a[i][j];
                max_column=j;
            }
        }
        printf("The max => %d,at %d line ,%d column .\n\n",
            max_num,i+1,max_column+1);
    }

    return 0;
}
```

```
#include <stdio.h>

int f(int a,int b);
int g(int a,int b);
int inNumber();

int main()
{
    int a,b,c,d;
    a=inNumber( );
    b=inNumber( );
    c=f(a,b);
    d=g(a,b);
    printf("The greatest common divisor is %d\n",c);
    printf("The least common multiple is %d\n",d);

    return 0;
}

int f(int a,int b)
{
    int t;
    while(b!=0)
    {
        t=a%b;
        a=b;
        b=t;
    }
    return a;
}

int g(int a,int b)
{
    int t;
    t=(a*b)/f(a,b);
    return t;
}

int inNumber()
{
    int num;
    while (1)
    {
        printf("Please input a number :");
        scanf("%d", &num);
        if (num > 0)
        {
            return num;
        }
        else
        {
            printf("error ! \n");
            while (getchar() != '\n');
        }
    }
}
```

```
C:\Windows\system32\cmd.exe  X  +  v

This is the original number~~~~~:)

40  59  25  21  31
41  66  24  38  89
25  10  60  77  88
33  94  53  15   0
 8  14  46  15  35

This is the new number~~~~~:):

 8  14  46  15  35
41  66  24  38  89
25  10  60  77  88
33  94  53  15   0
40  59  25  21  31

The max => 46,at 1 line ,3 column .

The max => 89,at 2 line ,5 column .

The max => 88,at 3 line ,5 column .

The max => 94,at 4 line ,2 column .

The max => 59,at 5 line ,2 column .

请按任意键继续. . . |
```

```
C:\Windows\system32\cmd.exe  X  +  v

Please input a number :12
Please input a number :18
The greatest common divisor is 6
The least common multiple is 36

请按任意键继续. . . |
```