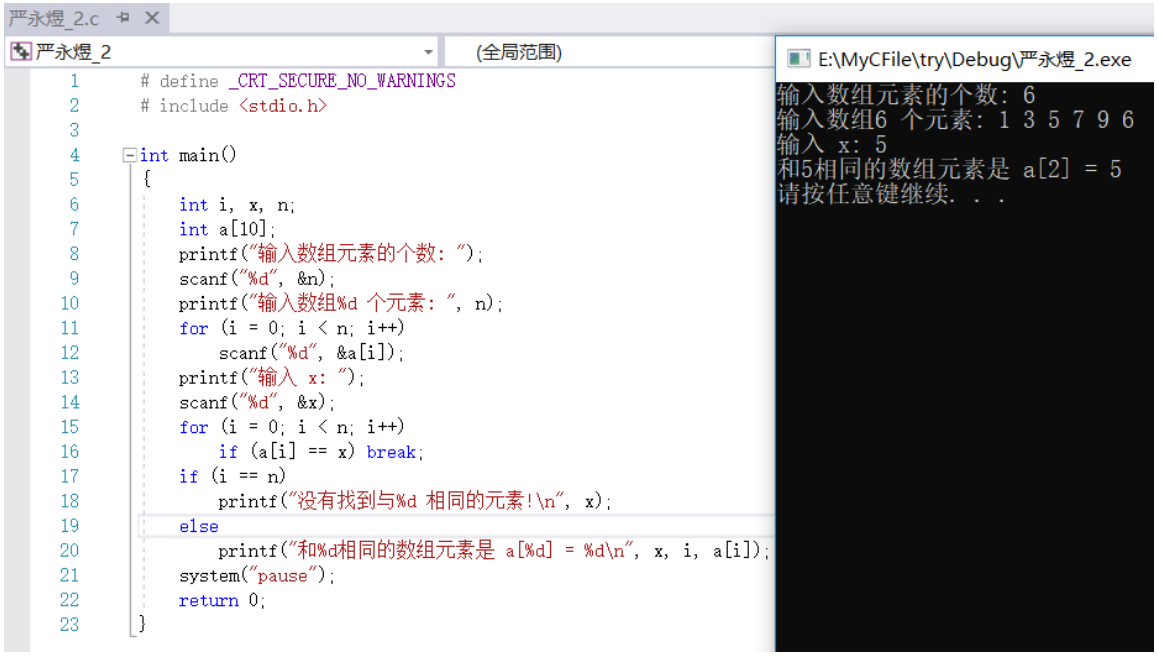
四．实验结果与分析

2

源程序：

```
# include <stdio.h>
int main()
{
    int i, x, n;
    int a[10];
    printf("输入数组元素的个数: ");
    scanf("%d", &n);
    printf("输入数组%d  个元素: ", n);
    for (i = 0; i < n; i++) scanf("%d", &a[i]);
    printf("输入  x: ");
    scanf("%d", &x);
    for (i = 0; i < n; i++)
        if (a[i] == x) break;
    if (i == n) printf("没有找到与%d  相同的元素!\n", x);
    else printf("和%d 相同的数组元素是  a[%d] = %d\n", x, i, a[i]);
    return 0;
}
```



(1) 0 error(s) 0 warning(s)

(2) 错误

(3) 方法：根据 debug 判断程序语法与逻辑错误。

错误行号：11 正确语句：scanf("%d", &a[i]);

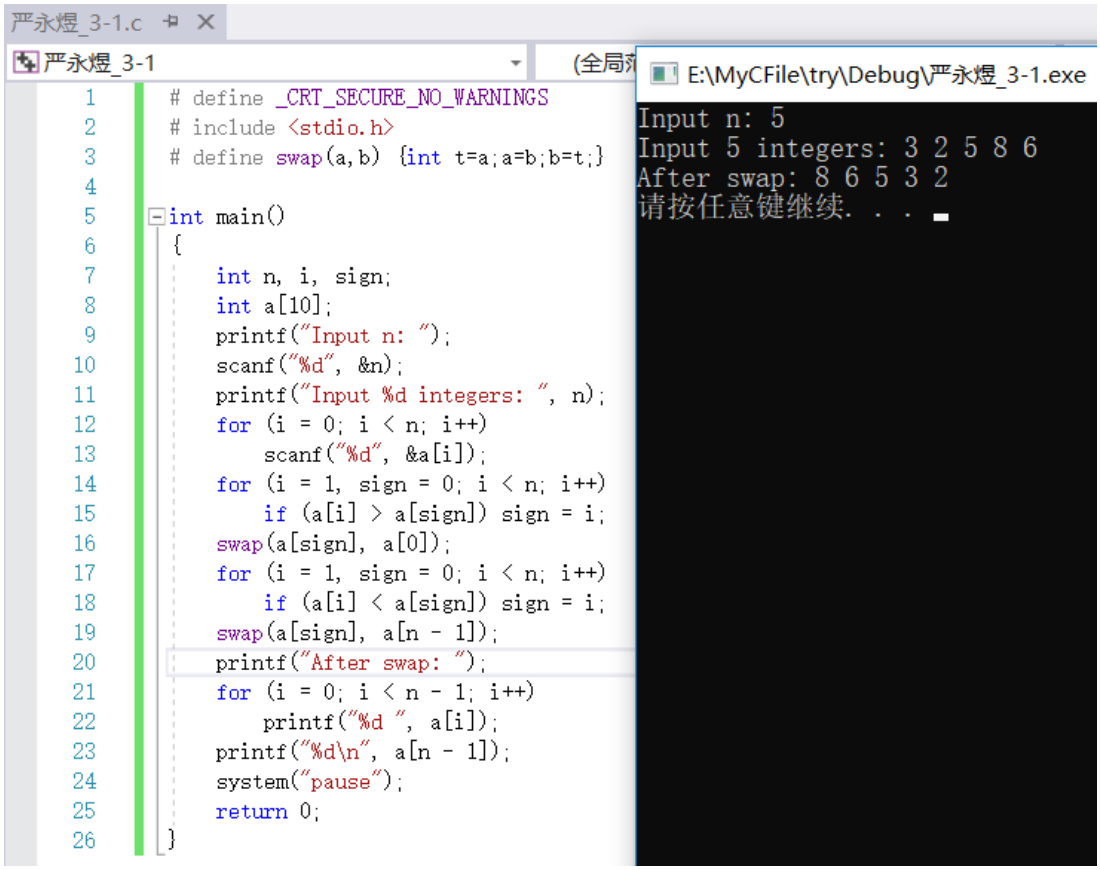
错误行号：15 正确语句：if (a[i] == x) break;

错误行号：16 正确语句：if (i == n)

3-1

源程序：

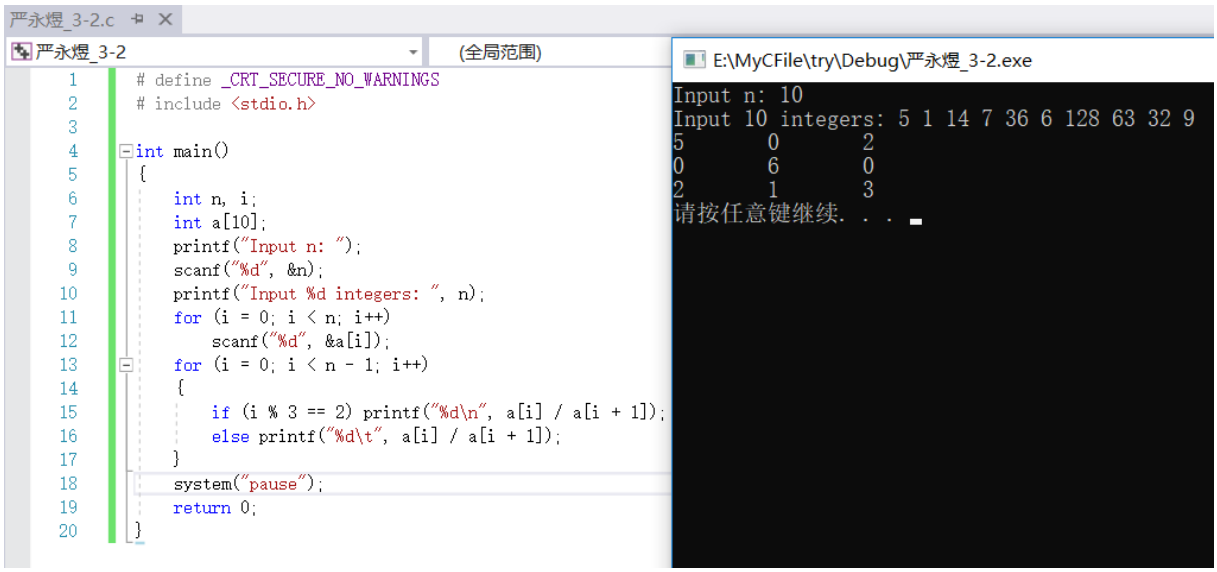
```
# include <stdio.h>
# define swap(a,b) {int t=a;a=b;b=t;}
int main()
{
    int n, i, sign;
    int a[10];
    printf("Input n: ");
    scanf("%d", &n);
    printf("Input %d integers: ", n);
    for (i = 0; i < n; i++) scanf("%d", &a[i]);
    for (i = 1, sign = 0; i < n; i++) if (a[i] > a[sign]) sign = i;
    swap(a[sign], a[0]);
    for (i = 1, sign = 0; i < n; i++) if (a[i] < a[sign]) sign = i;
    swap(a[sign], a[n - 1]);
    printf("After swap: ");
    for (i = 0; i < n - 1; i++) printf("%d ", a[i]);
    printf("%d\n", a[n - 1]);
    system("pause");
    return 0;
}
```



3-2

源程序：

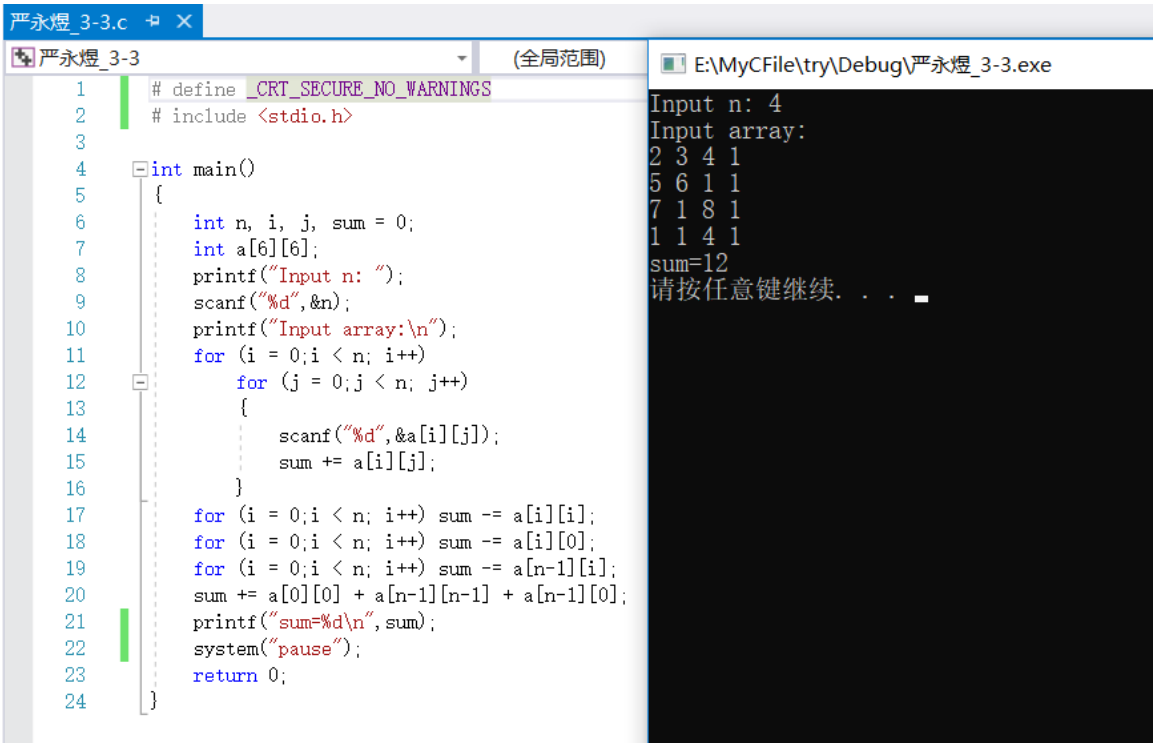
```
# include <stdio.h>
int main()
{
    int n, i;
    int a[10];
    printf("Input n: ");
    scanf("%d", &n);
    printf("Input %d integers: ", n);
    for (i = 0; i < n; i++)
        scanf("%d", &a[i]);
    for (i = 0; i < n - 1; i++)
    {
        if (i % 3 == 2) printf("%d\n", a[i] / a[i + 1]);
        else printf("%d\t", a[i] / a[i + 1]);
    }
    system("pause");
    return 0;
}
```



3-3

源程序：

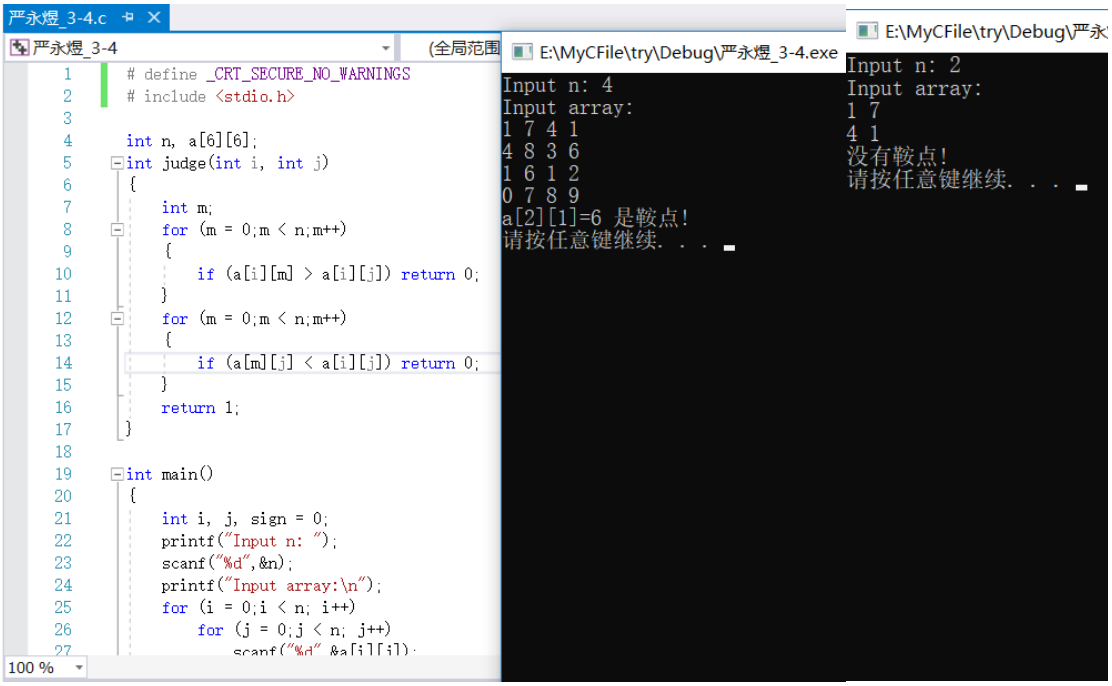
```
# include <stdio.h>
int main()
{
    int n, i, j, sum = 0;
    int a[6][6];
    printf("Input n: ");
    scanf("%d",&n);
    printf("Input array:\n");
    for (i = 0;i < n; i++)
        for (j = 0;j < n; j++)
        {
            scanf("%d",&a[i][j]);
            sum += a[i][j];
        }
    for (i = 0;i < n; i++) sum -= a[i][i];
    for (i = 0;i < n; i++) sum -= a[i][0];
    for (i = 0;i < n; i++) sum -= a[n-1][i];
    sum += a[0][0] + a[n-1][n-1] + a[n-1][0];
    printf("sum=%d\n",sum);
    return 0;
}
```



3-4

源程序：

```
# include <stdio.h>
int n, a[6][6];
int judge(int i, int j)
{
    int m;
    for (m = 0;m < n;m++) if (a[i][m] > a[i][j]) return 0;
    for (m = 0;m < n;m++) if (a[m][j] < a[i][j]) return 0;
    return 1;
}
int main()
{
    int i, j, sign = 0;
    printf("Input n: ");
    scanf("%d",&n);
    printf("Input array:\n");
    for (i = 0;i < n; i++) for (j = 0;j < n; j++) scanf("%d",&a[i][j]);
    for (i = 0;i < n; i++) for (j = 0;j < n; j++) if (judge(i,j) == 1) {
            printf("a[%d][%d]=%d  是鞍点!\n",i,j,a[i][j]);
            sign = 1;
            break;
        }
    }
    if (sign == 0) printf("没有鞍点!\n");
    return 0;
}
```



3-5

源程序：

```
# include <stdio.h>
# include <string.h>
int main()
{
    char a[90];
    int i, j, flag, sign = 0;
    printf("Input a string: ");
    scanf("%[^\n]%*c",a);
    printf("结果是： ");
    for (i = 0; i < strlen(a); i++)
    {
        if (a[i]>='a' && a[i]<='z')
        {
            for (j = 0,flag = 1;j < i;j++) if (a[i] == a[j]) flag = 0;
            if (flag == 1) {printf("%c",a[i]);sign = 1;}
        }
    }
    if (sign == 0) printf("Not Found!");
    printf("\n");
    return 0;
}
```