C++方向编程题答案

第二周

day10

> 题目ID：24992 --井字棋
>
> 链接：https://www.nowcoder.com/practice/e1bb714eb9924188a0d5a6df2216a3d1?tpId=8&&tqId=11055&rp=1&ru=/activity/oj&qru=/ta/cracking-the-coding-interview/question-ranking

```
/*
   井字棋，是一种在3*3格子上进行的连珠游戏，三个相同就代表获胜。
   所以有四种情况表示当前玩家获胜，1代表当前玩家棋子
   1．行全为1， 即行的和为3
   2．列全为1， 列的和为3
   3．主对角全为1， 对角和为3
   4．副对角全为1， 对角和为3
   如果扩展为N*N的话，判断和是否等于N
   下面代码适用任何情况
*/

class Board {
public:
    bool checkWon(vector<vector<int> > board) {
        int row = board.size();
        //检查每一行的和是是否等于row
        int i,j,sum;
        for(i=0;i<row;i++)
            {
            sum = 0;
            for(j=0;j<row;j++)
                {
                sum += board[i][j];
            }
            if(sum==row)
                return true;
        }
        //检查每一列的和是是否等于row
        for(i=0;i<row;i++)
            {
             sum = 0;
            for(j=0;j<row;j++)
                {
                sum += board[j][i];

            }
             if(sum==row)
                 return true;
        }

        //检查主对角线的和是是否等于row
```

```
        sum = 0;
        for(i=0;i<row;i++)
            {
            sum += board[i][i];
        }
             if(sum==row)
                 return true;
        //检查副对角线的和是是否等于row
        sum = 0;
        for(i=0;i<row;i++)
            {
            sum += board[i][row-i-1];
        }
            if(sum==row)
                 return true;
        return false;

    }
};
```

36911-密码强度等级

https://www.nowcoder.com/practice/52d382c2a7164767bca2064c1c9d5361?tpId=37&&tqId=21310&rp=1&ru=/activity/oj&qru=/ta/huawei/question-ranking

```
/*
    对于长度，字母，数字，符号单独判断，最后把所有的单项值相加，输出对应的安全级别

*/
#include<iostream>
#include<string>
using namespace std;
int numChar(string str, int k)
{
    //根据ASCII码判断字母大小写
    int small = 0;
    int big = 0;
    for (int i = 0; i < k; i++)
    {
        if (str[i] >= 65 && str[i] <= 90)
            big++;
        else if (str[i] >= 97 && str[i] <= 122)
            small++;
    }
    if ((small + big) == 0)
        return 0;
    else if (small == k || big == k)
        return 10;
    else if (small > 0 && big > 0)
        return 20;
    return 0;
}
int numNumber(string str, int k)
```

```
{
    //根据ASCII码判断数字个数，减去字符‘0’之后在0~9之间的即为数字
    int num = 0;
    for (int i = 0; i < k; i++)
    {
        if (str[i] - '0' >= 0 && str[i] - '0' <= 9)
            num++;
    }
    if (num == 0)
        return 0;
    else if (num == 1)
        return 10;
    else
        return 20;
}
int numSymbal(string str, int k)
{
    int num = 0;
    for (int i = 0; i < k; i++)
    {
        //除去字母，数字，其它都为符号
        if (!(str[i] >= 65 && str[i] <= 90)
            && !(str[i] >= 97 && str[i] <= 122)
            && !(str[i] - '0' >= 0 && str[i] - '0' <= 9))
            num++;
    }
    if (num == 0)
        return 0;
    else if (num == 1)
        return 10;
    else
        return 25;
}
int main()
{
    string str;
    while (cin >> str)
    {
        int sum1 = 0, sum2 = 0, sum3 = 0, sum4 = 0, sum5 = 0;
        int k = str.size();
        if (k <= 4)
            sum1 = 5;
        else if (k >= 8)
            sum1 = 25;
        else
            sum1 = 10;
        sum2 = numChar(str, k);
        sum3 = numNumber(str, k);
        sum4 = numSymbal(str, k);
        if ((sum2 > 0) && (sum3 > 0) && (sum4 > 0))
        {
            if (sum2 == 10)

                sum5 = 3;
```

```
            else
                sum5 = 5;
        }
        else if (sum2 > 0 && sum3 > 0 && sum4 == 0)
            sum5 = 2;
        if (sum1 + sum2 + sum3 + sum4 + sum5 >= 90)
            cout << "VERY_SECURE" << endl;
        else if (sum1 + sum2 + sum3 + sum4 + sum5 >= 80)
            cout << "SECURE" << endl;
        else if (sum1 + sum2 + sum3 + sum4 + sum5 >= 70)
            cout << "VERY_STRONG" << endl;
        else if (sum1 + sum2 + sum3 + sum4 + sum5 >= 60)
            cout << "STRONG" << endl;
        else if (sum1 + sum2 + sum3 + sum4 + sum5 >= 50)
            cout << "AVERAGE" << endl;
        else if (sum1 + sum2 + sum3 + sum4 + sum5 >= 25)
            cout << "WEAK" << endl;
        else
            cout << "VERY_WEAK" << endl;
    }
    return 0;
}
```