File   Edit   Source   Refactor   Navigate   Search   Project   Run   Window   Help

Quick Access

test1.cpp | H34086149_hw6_... | H34086149_hw9_... | H34086149_hw9_... | H34086149_hw9_... | H34086149_hw1... | H34086149_hw1... | H34086149_hw1... | H34086149_hw1... | H34086149_hw1...

```cpp
 4  // Version     :
 5  // Copyright    : Your copyright notice
 6  // Description : Hello World in C++, Ansi-style
 7  //============================================================================
 8
 9  #include <iostream>
10  using namespace std;
11
12  int tripleByValue(int);
13  int tripleByReference(int &);
14  int main() {
15      int x;
16      cout << "please input a number\n";
17      cin >> x;
18      tripleByValue(x);
19      cout << "Call by value:\n";
20      cout << "The value of x = " << x << '\n';
21      tripleByReference(x);
22      cout << "Call by reference:\n";
23      cout << "The value of x = " << x << '\n';
24      return 0;
25  }
26  int tripleByValue(int x)
27  {
28      x = 3 * x;
29      return x;
30  }
31  int tripleByReference(int &x)
32  {
33      x = 3 * x;
34      return x;
35  }
```

Problems | Tasks | Properties | Console

<terminated> (exit value: 0) H34086149_hw10_1.exe [C/C++ Application] C:\Users\user\eclipse-workspace\H34086149_hw10_1\Debug\H34086149_hw10_1.exe (2019/11/26 下午7:33)

```
10
Call by value:
The value of x = 10
Call by reference:
The value of x = 30
```

承澤 [工概第十組]

File   Edit   Source   Refactor   Navigate   Search   Project   Run   Window   Help

```cpp
//============================================================================
// Name        : H34086149_hw10_2.cpp
// Author      : mr.NTD
// Version     :
// Copyright   : Your copyright notice
// Description : Hello World in C++, Ansi-style
//============================================================================

#include <iostream>
using namespace std;

template <typename T>
T minimum(T x, T y)
{
    return x > y ? y : x;
}

int main() {
    int int1, int2;
    char char1, char2;
    double double1, double2;
    cout << "Please input 2 integers\n";
    cin >> int1 >> int2;
    cout << "The minimum is " << minimum(int1,int2) << '\n';
    cout << "Please input 2 characters\n";
    cin >> char1 >> char2;
    cout << "The minimum is " << minimum(char1,char2) << '\n';
    cout << "Please input 2 floating numbers\n";
    cin >> double1 >> double2;
    cout << "The minimum is " << minimum(double1,double2) << '\n';
    return 0;
}
```

Problems   Tasks   Properties   Console

<terminated> (exit value: 0) H34086149_hw10_2.exe [C/C++ Application] C:\Users\user\eclipse-workspace\H34086149_hw10_2\Debug\H34086149_hw10_2.exe (2019/11/26 下午7:33)

Please input 2 characters
M A
The minimum is A
Please input 2 floating numbers
1.03 5.2
The minimum is 1.03

File Edit Source Refactor Navigate Search Project Run Window Help

```cpp
//------------------------------------------------
#include <iostream>
#include <ctime>
using namespace std;

int Q1, Q2;
int question();// retrun the answer
int main() {
    srand((unsigned int) time(NULL));

    int answer;
    int input;
    while(true)
    {
        answer = question();
        cout << "How much is " << Q1 << " * " << Q2 << " ?\n";
        while(cin >> input && input != answer)
        {
            cout << "No! Please try again!\n";
            cout << "How much is " << Q1 << " * " << Q2 << " ?\n";
        }
        cout << "Very good!\n";
    }
    return 0;
}
int question()
{
    Q1 = rand() % 10;
    Q2 = rand() % 10;
    return Q1 * Q2;
}
```

Problems Tasks Properties Console

H34086149_hw10_3.exe [C/C++ Application] C:\Users\user\eclipse-workspace\H34086149_hw10_3\Debug\H34086149_hw10_3.exe (2019/11/26 下午7:31)

```
No! Please try again!
How much is 6 * 4 ?
24
Very good!
How much is 0 * 4 ?
1
```

File   Edit   Source   Refactor   Navigate   Search   Project   Run   Window   Help

```cpp
1  //============================================================================
2  // Name        : H34086149_hw10_3.cpp
3  // Author      : mr.NTD
4  // Version     :
5  // Copyright   : Your copyright notice
6  // Description : Hello World in C++, Ansi-style
7  //============================================================================
8
9  #include <iostream>
10 #include <ctime>
11 using namespace std;
12
13 int Q1, Q2;
14 int question();// retrun the answer
15 void goodMessage();
16 void badMessage();
17 int main() {
18     srand((unsigned int) time(NULL));
19
20     int answer;
21     int input;
22     while(true)
23     {
24         answer = question();
25         cout << "How much is " << Q1 << " * " << Q2 << " ?\n";
26         while(cin >> input && input != answer)
27         {
28             badMessage();
29             cout << "How much is " << Q1 << " * " << Q2 << " ?\n";
30         }
31         goodMessage();
32     }
```

Problems Tasks Properties Console

H34086149_hw10_4.exe [C/C++ Application] C:\Users\user\eclipse-workspace\H34086149_hw10_4\Debug\H34086149_hw10_4.exe (2019/11/26 下午7:34)

```
How much is 9 * 7 ?
63
Excellent!
How much is 0 * 1 ?
1
Wrong. try once more!
How much is 0 * 1 ?
```

File   Edit   Source   Refactor   Navigate   Search   Project   Run   Window   Help

Run   H34086149_hw10_4.exe   Quick Access

test1.cpp   H34086149_hw6_...   H34086149_hw9_...   H34086149_hw9_...   H34086149_hw9_...   H34086149_hw1...   H34086149_hw1...   H34086149_hw1...   H34086149_hw1...   H34086149_hw1...

```cpp
25          cout << "How much is " << Q1 << " * " << Q2 << " ?\n";
26          while(cin >> input && input != answer)
27          {
28              badMessage();
29              cout << "How much is " << Q1 << " * " << Q2 << " ?\n";
30          }
31          goodMessage();
32      }
33      return 0;
34  }
35  int question()
36  {
37      Q1 = rand() % 10;
38      Q2 = rand() % 10;
39      return Q1 * Q2;
40  }
41  void goodMessage()
42  {
43      switch(rand() & 3)//等於rand() % 4, 位元運算加速
44      {
45      case 1:
46          cout << "Very good!\n";
47          return ;
48      case 2:
49          cout << "Excellent!\n";
50          return ;
51      case 3:
52          cout << "Nice work!\n";
53          return ;
54      default:
55          cout << "Keep up the good work!\n";
56          return ;
```

Problems   Tasks   Properties   Console

H34086149_hw10_4.exe [C/C++ Application] C:\Users\user\eclipse-workspace\H34086149_hw10_4\Debug\H34086149_hw10_4.exe (2019/11/26 下午7:34)

```
How much is 9 * 7 ?
63
Excellent!
How much is 0 * 1 ?
1
Wrong. try once more!
How much is 0 * 1 ?
```

File   Edit   Source   Refactor   Navigate   Search   Project   Run   Window   Help

Quick Access

```cpp
45          case 1:
46              cout << "Very good!\n";
47              return ;
48          case 2:
49              cout << "Excellent!\n";
50              return ;
51          case 3:
52              cout << "Nice work!\n";
53              return ;
54          default:
55              cout << "Keep up the good work!\n";
56              return ;
57      }
58  }
59  void badMessage()
60  {
61      switch(rand() & 3)//等於rand() % 4
62      {
63          case 1:
64              cout << "No. Please try again!\n";
65              return ;
66          case 2:
67              cout << "Wrong. try once more!\n";
68              return ;
69          case 3:
70              cout << "Dont't give up!\n";
71              return ;
72          default:
73              cout << "No. Keep trying!\n";
74              return ;
75      }
76  }
77
```

Problems   Tasks   Properties   Console

H34086149_hw10_4.exe [C/C++ Application] C:\Users\user\eclipse-workspace\H34086149_hw10_4\Debug\H34086149_hw10_4.exe (2019/11/26 下午7:34)

```
How much is 9 * 7 ?
63
Excellent!
How much is 0 * 1 ?
1
Wrong. try once more!
How much is 0 * 1 ?
```

File   Edit   Source   Refactor   Navigate   Search   Project   Run   Window   Help

```cpp
//============================================================================
// Name        : H34086149_hw10_challenge.cpp
// Author      : mr.NTD
// Version     :
// Copyright   : Your copyright notice
// Description : Hello World in C++, Ansi-style
//============================================================================

#include<bits/stdc++.h>
using namespace std;

int N;
vector<int>in;
vector<int>out;

void counting_sort(vector<int>&arr) //O(N)排序
{
    int max = INT_MIN;
    int min = INT_MAX;
    for(int i = 0; i < arr.size(); i++)
    {
        if(arr[i] < min)
            min = arr[i];
        if(arr[i] > max)
            max = arr[i];
    }
    vector<int>count(max-min+1,0);
    vector<int>ans = arr;
    for(int i = 0; i < arr.size(); i++)
        count[arr[i]-min]++;
    for(int i = 1; i < count.size(); i++)
        count[i] += count[i-1];
```

Console

<terminated> (exit value: 0) H34086149_hw10_challenge.exe [C/C++ Application] C:\Users\user\eclipse-workspace\H34086149_hw10_challenge\Debug\H34086149_hw10_challenge.exe (2019/11/26 下午7:36)

Please input the time each people entry
1 2 9 5 5
Please input the time each people exit
4 5 12 9 12
Max guest = 3 at time = 5

File   Edit   Source   Refactor   Navigate   Search   Project   Run   Window   Help

Run

test1.cpp   H34086149_hw6_...   H34086149_hw9_...   H34086149_hw9_...   H34086149_hw9_...   H34086149_hw1...   H34086149_hw1...   H34086149_hw1...   H34086149_hw1...   H34086149_hw1...

```cpp
28      vector<int>ans = arr;
29      for(int i = 0; i < arr.size(); i++)
30          count[arr[i]-min]++;
31      for(int i = 1; i < count.size(); i++)
32          count[i] += count[i-1];
33      for(int i = arr.size()-1; i >= 0; i--)
34      {
35          ans[count[arr[i]-min]-1] = arr[i];
36          count[arr[i]-min]--;
37      }
38      arr = ans;
39  }
40
41  int main()
42  {
43      int temp;
44      cout << "Please input the number of people\n";
45      cin >> N;
46      cout << "Please input the time each people entry\n";
47      for(int i = 0; i < N; i++)
48      {
49          cin >> temp;
50          in.push_back(temp);
51      }
52      cout << "Please input the time each people exit\n";
53      for(int i = 0; i < N; i++)
54      {
55          cin >> temp;
56          out.push_back(temp);
57      }
58      counting_sort(in);
59      counting_sort(out);
```

Problems   Tasks   Properties   Console

<terminated> (exit value: 0) H34086149_hw10_challenge.exe [C/C++ Application] C:\Users\user\eclipse-workspace\H34086149_hw10_challenge\Debug\H34086149_hw10_challenge.exe (2019/11/26 下午7:36)

```
Please input the time each people entry
1 2 9 5 5
Please input the time each people exit
4 5 12 9 12
Max guest = 3 at time = 5
```

Writable   Smart Insert   18 : 23

File   Edit   Source   Refactor   Navigate   Search   Project   Run   Window   Help

```cpp
52          cout << "Please input the time each people exit(n";
53          for(int i = 0; i < N; i++)
54          {
55              cin >> temp;
56              out.push_back(temp);
57          }
58          counting_sort(in);
59          counting_sort(out);
60          int max_guest = -1, max_time;
61          int guest = 0;
62          for(int i = 0, j = 0; i < N && j < N;)
63          {
64              if(in[i] <= out[j])
65              {
66                  guest++;
67                  if(guest > max_guest)
68                  {
69                      max_guest = guest;
70                      max_time = in[i];
71                  }
72                  i++;
73              }
74              else
75              {
76                  guest--;
77                  j++;
78              }
79          }
80          cout << "Max guest = " << max_guest << ' ';
81          cout << "at time = " << max_time << '\n';
82          return 0;
83      }
84
```

Problems   Tasks   Properties   Console

<terminated> (exit value: 0) H34086149_hw10_challenge.exe [C/C++ Application] C:\Users\user\eclipse-workspace\H34086149_hw10_challenge\Debug\H34086149_hw10_challenge.exe (2019/11/26 下午7:36)

Please input the time each people entry
1 2 9 5 5
Please input the time each people exit
4 5 12 9 12
Max guest = 3 at time = 5