



The image shows the Eclipse IDE interface. The main editor displays a C++ file named `H34086149_hw12_1.cpp`. The code includes functions for calculating average grades, sorting them, and outputting the results. The console at the bottom shows the execution output, including a table of student grades and their averages.

```
37     studentGrades[i][tests] = average(studentGrades[i], tests);
38     studentGrades[i][tests+1] = i + 1;
39 }
40 insertSort(studentGrades);
41 outputGrades(studentGrades, students, tests + 1);
42 return 0;
43 }
44 double average(const double setOfGrades[], const int gradeCount)
45 {
46     int total = 0;
47     for(int grade = 0; grade < gradeCount; grade++)
48         total += setOfGrades[ grade ];
49     return static_cast<double> (total) / gradeCount;
50 }
51 }
52 void insertSort(double grade[][tests+2])
53 {
54     for(int i = 1; i < students; i++)
55     {
56         for(int j = i; j > 0; j--)
57         {
58             if(grade[j][tests] < grade[j-1][tests])
59             {
60                 for(int k = 0; k < tests + 2; k++)
61                 {
62                     swap(grade[j][k], grade[j-1][k]);
63                 }
64             }
65             else break;
66         }
67     }
68 }
69 void outputGrades(const double grades[][tests+2], int nunits, int exams)
```

Problems Tasks Properties Console

<terminated> (exit value: 0) H34086149_hw12_1.exe [C/C++ Application] C:\Users\user\eclipse-workspace\H34086149_hw12_1\Debug\H34086149_hw12_1.exe (2019/12/10 下午10:27)

				Average	
Student	6	78	87	65	76.6667
Student	9	76	72	84	77.3333
Student	5	83	65	85	77.6667
Student	7	85	75	83	81
Student	2	68	87	90	81.6667

Writable Smart Insert 57:10

```
test1.cpp  H34086149_hw12_2.exe  H34086149_hw12_1.cpp  H34086149_hw12_2.cpp
10 using namespace std;
11
12 int main()
13 {
14     string str;
15     int ctr = 0; //連續幾個字母
16     while(true)
17     {
18         getline(cin, str);
19         if(str.empty()) //讀到空字串就break
20             break;
21         for(int i = 0; i < str.size(); i++) //跑過整個字串
22         {
23             if( ('a' <= str[i] && str[i] <= 'z') || ('A' <= str[i] && str[i] <= 'Z') ) //if大寫OR小寫
24                 ctr++;
25             else
26             {
27                 if(ctr == 4)
28                 {
29                     if('A' <= str[i-4] && str[i-4] <= 'Z') //判斷第一個字母是不是大寫
30                         str[i-4] = 'L';
31                     else
32                         str[i-4] = 'l';
33
34                     str[i-3] = 'o';
35                     str[i-2] = 'v';
36                     str[i-1] = 'e';
37                 }
38                 ctr = 0;
39             }
40         }
41     }
42     if(ctr == 4)
```

H34086149_hw12_2.exe [C/C++ Application] C:\Users\user\eclipse-workspace\H34086149_hw12_2\Debug\H34086149_hw12_2.exe (2019/12/10 下午10:30)

```
I hate you, you dodo!
I love you, you love!
John will run home.
Love love run love.
```