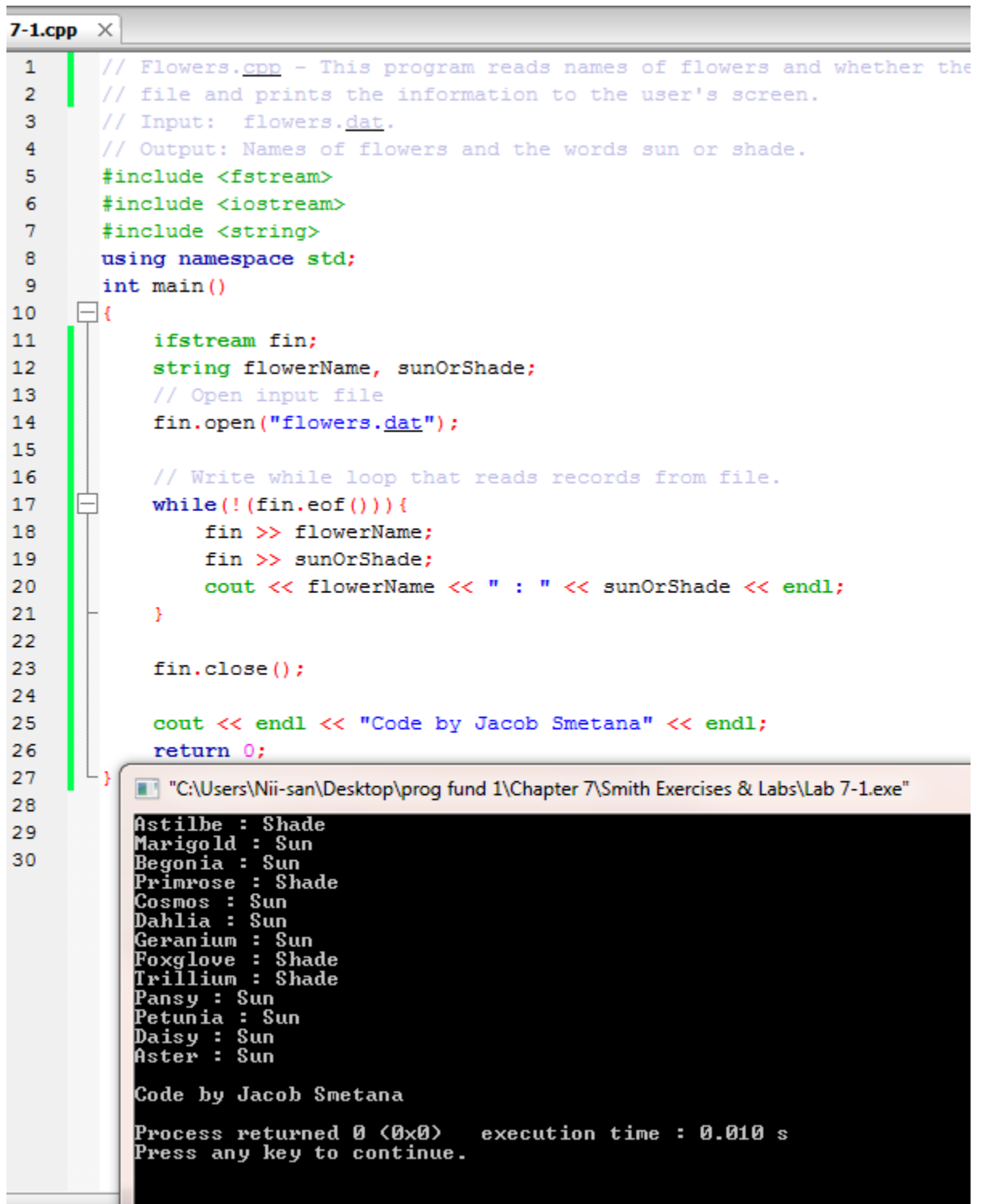


## Chapter 7 Smith Exercises & Labs

### Exercise 7-1.

1. Describe the error on **line 1** and explain how to fix it.  
**ofstream** should be **ifstream**
2. Describe the error on **line 2** and explain how to fix it.  
The path inside the parentheses needs double quotation marks
3. Consider the following data from the input file **myDVDFile.dat**:  
**Fargo 8.00 1A**  
**Amadeus 20.00 2C**  
**Casino 7.50 3B**
  - a. What value is stored in the variable named **dvdName**?  
**1A**
  - b. What value is stored in the variable named **dvdPrice**?  
**8.00**
  - c. What value is stored in the variable named **dvdShelf**?  
**Fargo**
  - d. If there is a problem with the values of these variables, what is the problem and how could you fix it?  
**data\_in >> dvdName** and **data\_in >> dvdShelf** should trade places in the code

Lab 7-1.



The image shows a C++ IDE with a file named '7-1.cpp' open. The code is a program that reads a file named 'flowers.dat' and prints the names of flowers and whether they prefer sun or shade. The code uses `ifstream` for file input, `string` for text, and `cout` for output. The output window shows the following results:

```
1 // Flowers.cpp - This program reads names of flowers and whether the
2 // file and prints the information to the user's screen.
3 // Input: flowers.dat.
4 // Output: Names of flowers and the words sun or shade.
5 #include <fstream>
6 #include <iostream>
7 #include <string>
8 using namespace std;
9 int main()
10 {
11     ifstream fin;
12     string flowerName, sunOrShade;
13     // Open input file
14     fin.open("flowers.dat");
15
16     // Write while loop that reads records from file.
17     while(! (fin.eof())){
18         fin >> flowerName;
19         fin >> sunOrShade;
20         cout << flowerName << " : " << sunOrShade << endl;
21     }
22
23     fin.close();
24
25     cout << endl << "Code by Jacob Smetana" << endl;
26     return 0;
27 }
28
29 Astilbe : Shade
30 Marigold : Sun
Begonia : Sun
Primrose : Shade
Cosmos : Sun
Dahlia : Sun
Geranium : Sun
Foxglove : Shade
Trillium : Shade
Pansy : Sun
Petunia : Sun
Daisy : Sun
Aster : Sun

Code by Jacob Smetana

Process returned 0 (0x0)    execution time : 0.010 s
Press any key to continue.
```

Exercise 7-2.

1. What is the control break variable?  
**sectionNum**
2. The value of the control break variable should never be changed. True or false?  
False
3. Is **totalSections** being calculated correctly?  
Should be **totalSections = 0**
4. In a control break program, it doesn't matter if the records in the input file are in a specified order. True or false?  
False

## Lab 7-2 Code.

```
7-2.cpp x
1  #include <iostream>
2  #include <string>
3  using namespace std;
4  int main(){
5      const string HEAD1 = "WEEKLY HOURS WORKED";
6      const string DAY_FOOTER = "\t\t\t\t\t\t\t\t\t\tTotal hours for ";
7      const string SENTINEL = "done"; // Named constant for sentinel value.
8      double hoursWorked = 0; // Current record hours.
9      string dayOfWeek; // Current record day of week.
10     double hoursTotal = 0; // Hours total for a day.
11     string prevDay = ""; // Previous day of week.
12     bool notDone = true; // loop control
13
14     cout << endl << endl;
15     cout << "\t\t\t\t\t\t\t\t\t\t" << HEAD1 << endl;
16     cout << endl << endl;
17     // Read first record
18     cout << "Enter day of week or done to quit: ";
19     cin >> dayOfWeek;
20     if(dayOfWeek == SENTINEL){
21         notDone = false;
22     }
23     else{
24         cout << "Enter hours worked: ";
25         cin >> hoursWorked;
26         cout << endl;
27         prevDay = dayOfWeek;
28     }
29
30     while(notDone == true){
31         // Implement control break logic here
32         if(dayOfWeek != prevDay){
33             cout << DAY_FOOTER << prevDay << ": " << hoursTotal << endl;
34             hoursTotal = 0;
35             prevDay = dayOfWeek;
36         }
37         cout << "\t\t\t\t\t\t\t\t\t\t" << dayOfWeek << " " << hoursWorked << endl;
38         hoursTotal += hoursWorked;
39         cout << "Enter day of week or done to quit: ";
40         cin >> dayOfWeek;
41         if(dayOfWeek == SENTINEL){
42             notDone = false;
43         }
44         else{
45             cout << "Enter hours worked: ";
46             cin >> hoursWorked;
47             cout << endl;
48         }
49     }
50     cout << DAY_FOOTER << prevDay << ": " << hoursTotal << endl;
51
52     cout << endl << "Code by Jacob Smetana" << endl;
53     return 0;
```

## Lab 7-2 Execution.

```
"C:\Users\Nii-san\Desktop\prog fund 1\Chapter 7\Smith Exercises & Labs\Lab 7-2.exe"

                                WEEKLY HOURS WORKED

Enter day of week or done to quit: Monday
Enter hours worked: 6

                                Monday 6

Enter day of week or done to quit: Tuesday
Enter hours worked: 2

                                Tuesday 2                Total hours for Monday: 6

Enter day of week or done to quit: Tuesday
Enter hours worked: 3

                                Tuesday 3

Enter day of week or done to quit: Wednesday
Enter hours worked: 5

                                Wednesday 5                Total hours for Tuesday: 5

Enter day of week or done to quit: Wednesday
Enter hours worked: 3

                                Wednesday 3

Enter day of week or done to quit: Thursday
Enter hours worked: 6

                                Thursday 6                Total hours for Wednesday: 8

Enter day of week or done to quit: Friday
Enter hours worked: 3

                                Friday 3                Total hours for Thursday: 6

Enter day of week or done to quit: Friday
Enter hours worked: 5

                                Friday 5

Enter day of week or done to quit: Saturday
Enter hours worked: 7

                                Saturday 7                Total hours for Friday: 8

Enter day of week or done to quit: Saturday
Enter hours worked: 7

                                Saturday 7

Enter day of week or done to quit: Saturday
Enter hours worked: 7

                                Saturday 7

Enter day of week or done to quit: Sunday
Enter hours worked: 0

                                Sunday 0                Total hours for Saturday: 21

Enter day of week or done to quit: done

                                Sunday 0                Total hours for Sunday: 0

Code by Jacob Smetana
Process returned 0 (0x0)   execution time : 59.956 s
Press any key to continue.
```