

Writeup for Lab1 CPS 171 J. Remen

This lab is for experimentation of output and input formats in C++.

Copy the file **T:\class\cps\cps171\labs\lab1.cpp** from the shared area of the network onto your H: drive. A printout of this file is attached. Note that lines 30 - 40 are commented out.

Your task is to do some experimenting and fill in the results on the attached table to be handed in.

Part I - output formatting

1. Compile and run the program as it is now and examine the spacing of the values on the output. Fill in the first row of the attached table to hand in, being sure that you show blank spaces precisely.
2. Change the **setw** widths in all places of lines 23 – 26 to be **setw(7)**. Compile and run again, and use the output to fill in the next row of the table.
3. Repeat Step 2 with **setw(1)**. Experiment with any other values you want to try.
4. Change line 25 to use **setprecision(2)**. Fill in the next row of the table.
5. Use appropriate **setprecision** expressions on lines 25 and 26 so that the cost is printed with 1 decimal place and the tax is printed with 2 decimal places. Fill in the missing code in the table.

Part II - format of input data

Remove the **/*** on line 30 and the ***/** on line 40 and put the **setprecision** expressions on lines 25 and 26 to be **setprecision(2)**.

Compile and run the program, entering the following line as data values when you are prompted:
27B3.5 4.7

Look at the output and fill in the values in each of the variables in the first row of the table for Part II.

Run the program several more times using the following data sets (note the spacing) and fill in the rest of the table to show the contents of the variables after each run. Which ones work correctly? Can you explain what happens?

82 P1.2 3.4

431

C 2.1Q 4.7

.5 D 5.6 8.1

99 7.8 .4

Part I

Output	123456789012345678901234567890
Original program	num= ch= cost= tax=
With setw(7)	num= ch= cost= tax=
With setw(1)	num= ch= cost= tax=
With setprecision(2)	num= ch= cost= tax=
Line 25: Line 26:	cout << ?cost= ? << _____ << setw(1) << cost << endl; cout << ?tax= ? << setw(1) << _____ << tax << endl;

Part II

Input	num	ch	cost	tax
27B3.5 4.7				
82 P1.2 3.4				
431 C 2.1Q 4.7				
.5 D 5.6 8.1				
99 7.8 .4				

Explanation: