Students:

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1.14 zyLab training: Interleaved input / output

Auto-graded programming assignments have numerous advantages, but have some challenges too. Students commonly struggle with realizing that example input / output provided in an assignment's specification interleaves input and output, but the program *should only output the output parts*. If a program should double its input, an instructor might provide this example:

```
Enter x:
5
x doubled is: 10
```

Students often incorrectly create a program that outputs the 5. Instead, the program should only output the output parts:

```
Enter x:
x doubled is: 10
```

The instructor's example is showing both the output of the program, AND the user's input to that program, assuming the program is developed in an environment where a user is interacting with a program. But the program itself doesn't output the 5 (or the newline following the 5, which occurs when the user types 5 and presses enter).

Also, if the instructor configured the test cases to observe whitespace, then according to the above example, the program should output a newline after `Enter x:` (and possibly after the 10, if the instructor's test case expects that).

The program below *incorrectly* echoes the user's input to the output.

1. Try submitting it for grading (click "Submit mode", then "Submit for grading"). Notice that the test cases fail. The first test case's highlighting indicates that output 3 and newline were not expected. In the second test case, the -5 and newline were not expected.
2. Remove the code that echoes the user's input back to the output, and submit again. Now the test cases should all pass.

LAB ACTIVITY 1.14.1: zyLab training: Interleaved input / output 2 / 2

Load default template

main.cpp

Load default template...

```
#include <iostream>
using namespace std;

int main() {
   int x;

   cout << "Enter x: " << endl;
   cin  >> x;

  // cout << x << endl;  // Student mistakenly is echo'ing the input to output to match example
   cout << "x doubled is: " << 2 * x << endl;

   return 0;
}
```

Develop mode | Submit mode

When done developing your program, press the **Submit for grading** button below. This will submit your program for auto-grading.

Submit for grading

Latest submission - 10:51 PM on 01/09/20 — Submission passed all tests ✓ — Total score: 2 / 2

☐ Only show failing tests — Download this submission

1: Compare output ^ 1 / 1

Input: `3`

Your output:
```
Enter x:
x doubled is: 6
```

2: Compare output ^ 1 / 1

Input: `-5`

Your output:
```
Enter x:
x doubled is: -10
```

Trouble with lab?