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Step 5

The first inputs that I provided to original.cpp were 100 total students with 50 of them preferring the quarter system and 50 of them preferring the semester system. While this gave the correct percentages, the output stated that more students preferred the semester system, which is obviously not true because the exact same amount of students prefer each system.

I also input numbers that were greater than the total number of students for each system. I input 100 total students with 500 of them preferring the quarter system and 600 of them preferring the semester system. The output stated that 500% of the students prefer the quarter system, which is illogical because more than 100% of the students can not have a response. Furthermore, it stated that 600% of the students prefer the semester system, which is also illogical for the same reason.

Step 6

For the logic error in logic\_error.cpp, inside of the if statement, I put (preferQuarter < preferSemester) rather than (preferQuarter > preferSemester). When running the code with a reasonable input (such as 100 total students, 60 preferring the quarter system and 40 preferring the semester system), the code outputs that more students prefer the semester system when more students were input for preferring the quarter system, and vice versa. This gives an illogical output for a reasonable response, with the code still compiling.

Step 7

For the errors in compile\_error.cpp, first I removed semicolons from the end of the cout statements in the if and else statements. For the second error, I changed the “<<” operands in the first cout line into “>>” operands. Both of these errors caused the program to fail to compile.