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CS31 Project 1 Report

Upon creating the original.cpp file, I input some integers in Step 5 that gave incorrect ratios or analyzed the numbers incorrectly. For example, when I answered the questions regarding people who preferred chocolate over vanilla and vice versa, I input values that summed up to more than the total number of people surveyed, the system gave me wrong percentages (that when summed, exceeded 100.0%). Also, when the number of chocolate lovers and vanilla lovers were equal (for example, 10 total surveyed, 5 prefer chocolate and 5 prefer vanilla), it resulted in output that read “Vanilla is more popular than chocolate.” which is not true because they are equal.

For Step 6, I introduced two logic errors. For the first error, when I assigned an expression in the declaration of the variable pctVanilla, I left out the decimal point in writing “100.0,” so pctVanilla is actually defined as 1000 \* preferVanilla / numberSurveyed. This gave incorrect percentages for the results; for example, if 4 people preferred chocolate while 6 preferred vanilla, the program wrote “40.0% prefer chocolate.” and “600.0% prefer vanilla.” For the second error, I wrote the wrong inequality sign in the if-statement. I wrote “if (preferChocolate < preferVanilla)” so that if preferChocolate was less than preferVanilla, the system would write the opposite: “Chocolate is more popular than vanilla.” which is incorrect/nonsensical.

For Step 7, I introduced a total of three compilation errors, the first of which was located in a console input line; instead of writing arrows pointing to the right, the arrows point to the left, resulting in “cin <<”. In response to this error, the system produced an error message that informed of “Invalid operands to binary expression (‘istream’ (aka ‘basic\_istream<char>’) and ‘int’). The second error was located in the definition of the variable pctVanilla, in which I “forgot” an uppercase letter and used the variable numbersurveyed instead of numberSurveyed. This did not match to any existing declared variable, so the error message wrote “Use of undeclared identifier ‘numbersurveyed’.” For the third error, I removed the semicolon at the end of the very last line after endl, which is incorrect formatting and thus prompted the error message: “Expected ‘;’ after expression.”