Zachary Chang

UID: 805289445

CS 31 Lecture 1

CS 31 Discussion 1G

Programming Assignment 1: Getting Started with C++

Step 5 asks the user to input integers that would still allow the program to run but produce unreasonable output. In response to the question, “How many people were surveyed?” I input 10. After pressing enter, I subsequently input 11 for the number of people in support of impeachment and 19 for the number of people in opposition to impeachment. This would produce unusual output not only because the sum of 11 and 19 is greater than the number of people surveyed, but also because the resultant percentages would be greater than 100%. As expected, the output code is as follows: “110.0% say they support impeachment. 190.0% say they oppose impeachment. More people oppose impeachment than support it.”

Step 6 asks to modify the code to create a logic error that would allow the program to run but still produce incorrect results. In lines 20 and 21, I changed the division signs to multiplication signs so that the program would produce incorrect percentage values. In addition, I changed the “greater than” symbol in line 30 to a “less than” symbol so the program would report that more people support impeachment when, in fact, more people oppose it, and vice versa. For instance, when 10 people are surveyed, 3 people support impeachment, and 7 people oppose impeachment, the output is as follows: “3000.0% say they support impeachment. 7000.0% say they oppose impeachment. More people support impeachment than oppose it.” As seen, the percentages are far greater than 100%, and the output states that more people support impeachment when in reality, more people oppose it.

Step 7 asks to modify the code to create a compiling error that would prevent the program from running at all. In line 9, I omitted the “int” before the variable “numberSurveyed” which made “numberSurveyed” a variable without a type. This same error arose in subsequent uses of “numberSurveyed.” Furthermore, at the end of line 13, I omitted the semicolon so that the “expected semi-colon” error arose. Finally, in line 20, I added an extra “=” in the variable declaration which brought about a syntax error.