Madeleine Murphy

004991129

CS31

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Project 1 Report

5. Original with integers that cause it to produce incorrect, unusual, or nonsensical outputs–

To input numbers that may have produced a nonsensical output, I said that there were 100 voters surveyed. Out of those voters, 120 voted for Newsom, and 38 voted for Cox. 120% say they will vote for Newsom. 38% say they will vote for Cox. This is a nonsensical output because there cannot be more than 100% of votes for a candidate. There also cannot be more than 100 people voting because there were only 100 voters surveyed.

6. Logic Error–In line 37, I changed the line “if (forNewsom > forCox)” to “if (forNewsom < forCox)” so that the program still runs but the results are misinterpreted. For example, when I input that 100 voters are surveyed and 60 vote for Newsom and 40 vote for Cox, the program states that 60% votes for Newsom and 40% will vote for Cox but Cox is predicted to win the election. Likewise, if I were to say that 20 voted for Cox and 80 voted for Newsom, it would predict that Cox would win. Thus whoever has less votes is predicted to win, which is a logic error.

7. Compile Error­–To make the program fail to compile correctly, I included two mistakes someone might make. The first error I made was deleting line 12, which said “using namespace std;”, as someone might forget to include this line and thus the whole program will fail to compile because it won’t be able to recognize the identifiers that are in the std namespace, such as “cout.” Additionally, in line 24, I deleted “;” at the end of the line. This simple mistake also causes the program to fail to compile. Some of the errors that came up in g++ were “error: ‘cout’ was not declared in this scope” and “’cin’ was not declared in this scope” because I had deleted “using namespace std;”. In Xcode, error messages stated “Use of undeclared identifier ‘cout’, did you mean ‘std::cout’?” and “Expected ‘;’ after expression.”