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Programming Assignment 1 Getting Started with C++

Step 5:

In step 5 of the assignment, the program output a nonsensical result when I inputted 20 for the number of Electoral College electors, 25 for Republican party candidate votes, and -5 for Democratic party candidate votes. The program output “125.0% of the 20 electors voted for the Republican party candidate. -25.0% of the 20 electors voted for the Democratic party candidate. Looks like the Republican party candidate won!” This does not make sense because you can’t have a negative number of votes. When I ran the program again, this time inputting numbers for Republican votes and Democratic votes that did not add up to the number of inputted Electoral College electors, the program output “Looks like some of these data values don’t make sense” as an additional statement at the end.

Step 6:

In step 6, we were required to introduce a source of error that, while not preventing a successful build, causes the program when it runs to produce incorrect results from reasonable input. The error I introduced was in lines 20 and 21 of the source code. I simulated a person forgetting to multiply the republicanVotes and democraticVotes values by 100 in order to get a percentage value for pctRepub and pctDemoc. When I run the code and input 50 for the number of Electoral College electors, 25 for Republican party candidate votes, and 25 for Democratic party candidate votes, the program outputs “0.0% of the 50 electors voted for the Republican party candidate. 0.0% of the 50 electors voted for the Democratic party candidate.” Since the variables pctRepub and pctDemoc are doubles, and 25/50 < 1, the value associated with these variables is zero.

Step 7:

In step 7, we were required to introduce 2 distinct types of mistakes that someone might make, each which would cause the program to fail to compile to correctly. The first mistake was introduced in line 13. I simulated a person forgetting to add a semicolon to the end of the line. This causes error codes E0065 (expected a ‘;’) and C2146 (syntax error: missing ‘;’ before identifier ‘cin’”). The second mistake was introduced in line 25. I simulated somebody making a typo, writing “end” instead of what should be “endl.” This results in error code E0349 (no operator “<<” matches these operands).