Joonwon (Eric) Lee

UID: 305389904

**Project 1 Report**

1. For step 5, I inputted values so that the computer would return incorrect, unusual, or nonsensical output. For example, I inputted that 12 people were surveyed. I would then input 6 people preferred the quarter system and input 6 people preferred the semester system. The percentage values were correct for both quarter and semester system. Yet the program would return that more students prefer the semester system to the quarter system. This is incorrect because the sensical output should have been “an equal number of students prefer the semester and the quarter system.

I also inputted that 12 people were surveyed. I would then input 20 for “how many of them prefer the quarter system” and 7 for “how many of them prefer the semester system”. This would result in the program returning an output that was above a 100% (166.7% to be exact) regarding the percentage of students preferring the quarter system. This is nonsensical because the percentage cannot be bigger than a 100, as the total number of voters cannot be smaller than who prefers the quarter system or the semester system. The program instead should have outputted that the user may have inputted wrong values.

1. For step 6, I changed the 100 to a 10 when pctLike Quarter was calculated

double pctLikeQuarter = 100.0 \* preferQuarter / numberSurveyed;

to

double pctLikeQuarter = 10.0 \* preferQuarter / numberSurveyed;

This change would now cause a logical error as now the program would output the percentage of the people preferring the quarter system the tenth of what it should be. For example, if I inputted the value 12 for “how many students were surveyed”, 5 for “how many of them prefer the quarter system” the percentage of people who prefer the quarter system is now a 4.2% when it should be 41.7%.

The second change I made was

if (preferQuarter > preferSemester)

to

if (preferQuarter < preferSemester)

This change would also cause a logical error as now the program would output the less preferred system to be the preferred system. For example, if I inputted the value 12 for “how many students were surveyed”, 5 for “how many of them prefer the quarter system”, and 7 for “how many of them prefer the semester system” the program outputs that more students prefer the quarter system to the semester system when in fact it should state that more students prefer the semester system to the quarter system.

1. The first compile error change I made was getting rid of the semicolon after

double pctLikeSemester = 100.0 \* preferSemester / numberSurveyed;

to

double pctLikeSemester = 100.0 \* preferSemester / numberSurveyed

This caused the compiler to throw an error message as it expected ‘;’ at end of declaration in line 29.

The second compile error change I made was getting rid of the } bracket for int main().

This also caused the compiler to throw an error message as it expected a bracket to match the bracket { in line 9.

The last compile error change I made was getting rid of the line using namespace std;

This caused the compiler to not recognize any of the cout, cin, endl throwing out error messages asking if I meant to type an std:: in front all of them.