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In this project folder, there are three project files. The original.cpp file contains the original program that outputs the generation most of the users belong to based on numerical inputs. The logic\_error.cpp file consists of the same program with some mathematical errors that give the wrong output from reasonable input. The program asks for input to three questions- “How many of you were born between 1965 and 1980?”, “How many of you were born between 1981 and 1996?” and “How many of you were born between 1997 and 2010?”. The input to these questions were 3, 1, 2 respectively. The program then outputs to which generation do most of the people belong to. Logically, based on the input most people are born between 1965 and 1980, the output should be “Looks like most of you are GenX.” However, the program output is “Looks like most of you are GenZ.” This anomaly occurred due to the change in the mathematical formula of the program on lines 21, 22, 23. Instead of the denominator of the formula being “genX+ genY+ genZ”, it was changed to “genX-genY-genZ”. This change prompted the incorrect output but still allowed the program to compile correctly.

The compile\_error.cpp file contains the original program with three syntax errors in the program that does not allow the program to compile correctly. The syntax errors are on lines 21, 22, 23. On line 21, instead of defining the data type of pctGenX as double, it was defined as doble. On line 22, instead of defining the data type of pctGenY as double, it was defined as duble. On line 23, instead of defining the data type of pctGenZ as double, it was defined as doubl. Due to these syntax errors the program compile\_error.cpp failed to compile and run.