**PROJECT 1: ERRORS REPORT**

**ACTIVITY 5:** The input of the following integer in the given code would lead to an either incorrect, unusual, or nonsensical result:

1. A number greater than or equal to 10000000000 (10 zeros) of reviewed posts: Enter this number skips the input of fake and real items and gives you as result a 100% for both fake and real posts as well as the statement: “It was more real than fake”. (The maximum number allowed as input is 999999999)
2. A large valid number of reviewed posts and a small number of both real and fake posts: This input gives you a 0.0% for both items, since the program only displays 1 decimal digit. (You can try to put 1000000000 reviewed posts, 20 fake items and 30 real item).
3. A negative number in either or all of the 3 variables. This input gives you a negative answer as well.
4. Zero (0) as the number of reviewed posts: This input ends up in a division by 0, thus, the percentage for both variables is inf% and the final text displayed is “It was more real than fake”
5. A number of fake and real posts which sum outnumbers the number of reviewed posts: Nonsensical.
6. A same number of fake and true posts: This incorrect result with this input is the final statement. Since there is no instruction that indicates what happen when both values are equal, it always displays incorrectly the message: “It was more real than fake.”

**LOGIC ERRORS:** I added some lines to create a new variable called ratio and show some of the most common logic error that programmers make.

1. Change 100.0 to 1000.0 (Typo): This typo produces that the percentage of fake posts be always higher than that of real posts, so the program will always display the message ‘‘I was more fake than real’’ even if it is not case. This is a very common error since most programmer type fast without realizing that they added an extra number that can lead to serious miscalculations. (Line 17)
2. Cast double to int: Casting a double to an integer usually leads to loss of data like in this case. (Line 19)
3. / 4. Word order / Operation order: In line 36, the final message is supposed to display the number of real posts for very fake post, however it shows the opposite result. (the number of fake posts for very real post). To correct this, you could just edit the text or you could inverse the division in line 19.

**COMPILE ERRORS:** The errors encountered in this code that prevents the program to compile are the following:

1. Assignment operator: In line 12 a double equal sign is used to initialize the variable instead of the assignment operator **(E0065 Expected a ‘;’)**
2. Semicolon: In line 23 there is a missed semicolon. This is a common Syntax Error. **(E0065 Expected a ‘;’)**
3. Mistyped variable: In line 26, even though the variable “unverifiedPosts” was declared, since it was mistyped as “unverifiedPost” it is considered by the compiler as an undeclared variable. **(E0020 identifier “unverifiedPost” is undefined)**
4. Bitwise left shift operator (<<): In line 45 a single < is used instead of the required << for cout. **(E2140 expression must have integral or unscoped enum type) (E0299 cannot determine which instance of function template “std””endl” is intended”**
5. Undeclared variable: In line number 47 the variable “ratio” was used but is was not declared. One of the most common mistakes. **(E0020 identifier “ratio” is undefined**)