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Reflection

* Objective:
  + What were you supposed to learn/accomplish?

In this lab we were supposed to learn how to create a program which can calculate the population of a country after a certain number of years and indicate if there was population growth or decrease.

* Procedure:
  + What steps were followed and what techniques did you use to solve the problem?

1. User is prompted to enter the number of seconds between birth, number of seconds between death, and immigration in a country.
2. User is prompted to input the current population of a country and the number of years in the future they would like to calculate the population for.
3. Program then calculates the expected number of the population in x number of years in the future.
   * What were the Key concepts explored?

The key concepts explored in this lab were the if/else statements.

* Results:
  + Did your results match what you expected to get?

The results of the program matched the results of the test cases, so yes.

* + Did you try using various test cases, or extreme test cases?

We tried using several test cases, some of which were more normal, and others were more extreme.

* Reflection:
  + What challenges did you encounter?

Figuring out how to actually write the calculations for the program in python were certainly a bit tricky, but not difficult.

* + How did you follow the first 3 rules of programming?

We thought about what we wanted to do and how we would implement it before programming, we made the program readable for humans by including comments and making the variables understandable, and we practiced beforehand with the test cases in order to make sure the calculations would function before actually coding them.

* + Did you overcome them, and how?

We overcame the issue by translating the calculations we had in excel over to python, and carefully testing them as we went to make sure they functioned properly.

* + Any key takeaways?

Definitely use excel for practicing calculations, regardless of what kind of program you are coding. Excel was very useful for us.

* + Do you think you learned what you were supposed to learn for this lab?

I definitely learned how to properly use if/else commands, as well as having a better understanding of how to write calculations in python code.

* + What was it like working with your partner?

Working with Cooper went really well. He completed the parts that I was struggling with, which allowed me to be able to complete my parts with much more ease. Overall, Cooper was really helpful for the lab, and I hope to have a chance to work with him again on a lab.