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Reflection

In this assignment, we were tasked with building a program that would calculate the expected population change of a country given said country’s current population, the birth, death, and immigration rates, and the desired number of years into the future. We first created an algorithm for what we wanted our program to do, then created test cases for a bunch of expected scenarios to see if our code theory was sufficient, then we got to work building and explaining the python. We really wanted to get our hands a little bit dirty and try to use the math module, so we included that in one of the later stages. Here, the key concepts were working with basic math functions and utilizing if-else statements. In the end, our machine outputted what we expected for the most part. We “experimented” with removing the integer identifier for the input, which ended up breaking the code. In terms of tests cases, they were tame, nothing too out of the ordinary. We followed a standard template for expected use cases, extremes rooted in abnormally high birth, death, and immigration rates. Programming this code was straightforward, and we only really encountered an issue trying to remove the integer conversion function, which we solved by just reimplementing it. A key takeaway I encountered doing this lab was that inputs will always return as a string unless you convert them beforehand in python, so you need to have something to counteract this, hence the integer conversion. I think I learned what I was supposed to for this lab, which was mostly centered around using basic math code to create an understandable calculation of a future population, in addition to using if-else statements to create different outputs for different case scenarios. It was fairly seamless working with my partner in person, as we both just worked on different parts of the project, understanding what we were supposed to do at each turn needing limited interaction.