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| Drive Full Name | Laure Patera |
| Partner Full Name | Owen Sanchez |
| Student ID | 1925466 |

Reflection

* Objective:
  + This lab intended to give practice with input, output, math, writing algorithms and test cases, and using human computer interaction's usability guidelines for your input and output. After receiving user input, the program would output the future population and whether it had increased or decreased to the user.
* Procedure:
  + First, Owen and I created an algorithm together, and I made an excel file of test cases. Then, we each did half of the coding, testing it out and looking for errors along the way. Finally, we tried each of our test cases to make sure that they matched and double checked everything. In order to solve the problem, we had to use a lot of math in python for the calculations, but the excel test cases done beforehand really helped us to understand and speed up the process. Some of the key concepts we explored involved the importance of integers vs floats, if/elif/else statements, and practicing math using variables.
* Results:
  + Our results matched what we expected to get, and although we did not have any errors that needed fixing, if our results did not match, we would’ve known to fix something. We tried using various test cases in order to test this out and compare results.
* Reflection:
  + The main challenges we encountered were right near the beginning, because our files kept glitching, and would not allow us to commit, push, or pull from each other. I had to redo the excel file about four times, but at least it gave me lots of practice. Once I switched to using my personal computer, luckily, we didn’t have the problem anymore. In order to follow the first 3 rules of programming, Owen and I first started by creating an algorithm and test cases, putting a lot of thought into the design before we started any of the coding. We tried to put detailed comments throughout our code, along with spacing and indentation to make sure that it was human-readable, and not just executable. Finally, we tested everything out multiple times and made sure that our results matched what we expected, otherwise we would know that we had made an error along the way. Overall, I really liked being able to put some of my new coding knowledge I had learned into practice, and although it was frustrating at first, I had fun trouble-shooting our code and trying to overcome some of its glitches. I think I learned what I was meant to, because I got lots of practice, and enjoyed the opportunity to put my knowledge to use. Finally, it was great working with Owen, and I was very happy about this because I had been nervous about working with someone I had never worked with before. We both got along well, and I liked that we planned in advance how to split the tasks of the project evenly. Overall, it went well and I did not have any major issues.