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Exercise: For Loop Basics

Summary

Practice with some simple for loops.

Deliverables

Your finished repository should have one new script, for.py, that carries out the steps below.

Instructions

Please write a script called for.py that does the following. See demo.py for examples of some of the steps.

- 1. Creates a variable called list1 that consists of the first five odd integers: 1,3,5,7,9.
- 2. Print list1.
- 3. Create an empty list called list2.
- 4. Add a for loop that goes through the elements of list1, squares each value, and then appends that to list2. To square a variable called n you would use n**2.
- 5. Create a variable list3 that uses a list comprehension to do the squaring instead of an explicit for loop. Then print list3. It should be identical to list2.
- 6. Add a print statement printing "Table of Powers:" as a heading for what will come next.
- 7. Create a variable called bases that uses the range() call to build a list of the integers from 1 to 10, inclusive.
- 8. Create a variable called powers that uses range() to build a list of the integers from 0 to 4 inclusive.
- 9. Create a for loop over bases using b as the running variable (the variable name right after for).
- 10. Inside the loop use a list comprehension to build a list called values that is equal to b**p for every p in powers.
- 11. Still inside the loop, print a line consisting of "base",b, "powers:", values.

Submitting

Once you're happy with everything and have committed all of the changes to your local repository, please push the changes to GitHub. At that point, you're done: you have submitted your answer.