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.