

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.