Supplementary exercises, or for live delivery

Revision Ch 1

1. Show that in cpython more than one variable with value 5 point to the same memory location. Find the reference count for the number 5.
2. Make a variable called len and show that it no longer workd as a function. Use del to remove it and check teh len function is back. Why is this?
3. Show that a string is immutable by trying to change a letter in it, and that a list is mutable.
4. Change a string variable and check whether it changes location (note id() gives location, but only in cpython can't rely on it
5. Use unicode in Python, write c to f and report with degree symbol. Also docstring and a test. \u and chr() or cut/paste
6. Make a list of all square numbers less than 1000 that are divisible by 3. First with a list comprehension, then with map and filter.
7. Use a lambda function to sort a list of names by the last name
8. Use a regular expression to find postcodes in a file, with and without re.verbose
9. Import pycodestyle and run against your code
10. use the operators module to apply add to two lists using map

Types Ch 2

1. Write a function with one parameter that checks that the parameter is a generator (using is instance and the types module) isinstance(a, types.GeneratorType)
2. Write a decorator that times a function (just once, using time module)
3. Write a generator that
4. Use send to make it a coroutine