

Physics 140 – Week of October 29

Python programming bootcamp. No reading this week. Useful resources are the tutorial at <http://docs.python.org/2/tutorial> or, if you're using Python version 3, at <http://docs.python.org/3.3/tutorial>, and the course on Python at <http://www.codecademy.com/tracks/python>.

Problems

The project for the week is to write a program (or a function that can be invoked in the Python interpreter) to multiply two integers, simulating the hardware multiplication algorithm in Harris and Harris §5.2. I will help you convert integers to binary strings, and beyond that you may use the list, control flow, and function capabilities of Python, along with the logical operators AND, OR, XOR, etc., to build a full adder, a ripple-carry adder, and then a multiplier. The code will be due next week and will count as your midterm, or a double problem set.