Computer Science — Python — HW #16

Assigned on Mon, 2017-04-24. Complete by Tue, 2017-05-02. (This is the last Tuesday homework.)

1. Read Appendices A & B of ThinkPython, 2nd edition.
2. [Optional] Watch video of Rear Admiral Grace Hopper being interviewed on the David Letterman show.

<https://www.youtube.com/watch?v=1-vcErOPofQ>

In this video, Hopper mentions The Mark I computer. It was built at Harvard by Harvard and IBM from 1939 to 1944. It was 8 feet tall and 51ft long. Transistors, which led to smaller computers, hadn't been invented yet.

1. The nooks & crannies of Python

Don't define functions with [] as a default argument.

How to pass a copy of a list or object to a function.

1. [Turn in] The Smithsonian doesn't just have dusty paintings and fossilized dinosaur bones.
   1. The Smithsonian Libraries have 1.8 million books and manuscripts. They also have some books, journals, and manuscripts online as part of their digital collection. Grace Hopper worked on the Mark I computer, which was followed soon thereafter by the ENIAC computer. Find a link at Smithsonian's website (si.edu) to one of the original ENIAC computer manuals.
   2. API
   3. github: <https://github.com/Smithsonian>
   4. what programming language(s) does the Smithsonian use to manage their digital collections?
   5. What is a Data Librarian? <https://ischool.syr.edu/infospace/2017/02/20/mslis-internship-close-data-librarianship/>
   6. Mobile users: <http://www.dlib.org/dlib/january12/mitchell/01mitchell.html>
   7. Smithsonian Internships: <https://www.smithsonianofi.com/internship-opportunities/>
   8. The Smithsonian Center for Learning and Digital Access (SCLDA) creates models and methods that make the Smithsonian a digital learning laboratory for everyone. SCLDA’s primary audience is learners who connect with us through digital technologies for informal learning experiences, which are linked to formal education. We provide extensive digital access to Smithsonian collections and programs to inspire personal exploration.  Interning at the Smithsonian Learning Lab is a unique opportunity to be part of a new way the Smithsonian is making its resources more accessible and useful to teachers, students, parents, and anyone thrilled by the discovery and exploration of museum resources. As an intern with us, you’ll be a formative part of an inviting educational movement, as we open the doors to the vast resources within the Smithsonian to anyone with an interest to learn. This is not a museum education department or public programs internship, and takes place mostly within an office setting. Students studying new media, digital learning, museum education, and evaluation methods are encouraged to apply.
      * Learn more here: <https://www.learninglab.si.edu/about/internships>
   9. Office of the Chief Information Officer (OCIO)
   10. Native American languages being digitized.
       * <https://www.smithsonianofi.com/digitizing-native-american-languages-for-the-breath-of-life-archival-institute-for-indigenous-languages-bol-internship/>
       * <http://www.museumsandtheweb.com/mw2012/papers/virtual_repatriation_and_the_application_progr>
   11. <https://www.theatlantic.com/technology/archive/2015/01/how-to-build-the-museum-of-the-future/384646/>