# Homework 2

1. Run **my\_first\_jupyter\_notebook.ipynb** in Jupyter notebook (or Jupyter lab). *You do not have to understand what the code is doing yet!* Just tell me (in a Word doc): what is the output of the code?
2. Run **dice.py** using either the command line or Spyder. What is the output of the code?
3. Write down the steps of a manual procedure for processing a paragraph of text and replacing gender-specific words with gender-neutral ones. Assuming that you’ve been given a list of gender-specific words and their gender-neutral replacements (e.g. replace “wife” or “husband” with “spouse”; replace “man” or “woman” with “person”; replace “daughter” or “son” with “child”; and so on), explain the procedure you might use to read through a paragraph of text and manually perform these replacements. How might your procedure generate a strange term like “woperchild” and how might you modify your procedure to avoid this possibility? (When this is all done, pat yourself on the back: you just wrote an algorithm!)
4. A crucial concept in data science studies is “reproducibility,” which helps others (and you!) reproduce your results. Research reproducibility, and list some best practices to achieve reproducible results in scientific studies; be sure to discuss the part that Jupyter notebooks can play in reproducibility. You can use bullet points rather than long paragraphs. Also, I don’t expect formal (APA, MLA, etc.) citations, but I do want a list of sources with enough information to find them (links if they’re online, title/author if you use printed materials) and expect that there will be at least three different sources.
5. Read chapter 2 of the textbook. **Write down any questions you have about the reading or anything you find interesting about it, to discuss in class.**