

Lab Notebook Guide

*"-But even the hacker who works alone," said Master Foo,
"collaborates with others, and must constantly communicate
clearly to them, lest his work become confused and lost."
"-Of what others do you speak?" the Prodigy demanded.
Master Foo said: "-All your future selves."
Upon hearing this, the Prodigy was enlightened.
<http://www.catb.org/esr/writings/unix-koans/prodigy.html>*

Lab notebooks are often just as important in bioinformatics as they are for bench work. Every time working on a project, create entries in your lab notebook. It can be GitHub repository, Google Document, Jupyter Notebook, or other medium - you just must be able to keep track of your commands and share your results. Create a separate entry for each day you do the work, Include the project title, date, and a short descriptive phrase about the project in each entry title.

Lab notebooks are worth up to 2 extra points to your Lab Report grade. You can provide it along with your Lab Report. If you have entries but they don't meet the guidelines, you'll get 1 point, and if you meet the guidelines above, you'll get 2 points (it's 10 point max per project anyway).

At bare minimum, your lab notebook should include commands and code you enter into terminal, and the results of those commands if they are easily pasteable (don't paste more than 20 or so lines of text).

For commands and code, include commands and scripts that fail or don't do what you want them to, this is so that you can keep a record of what does and doesn't work. You only need to include commands and code that process or analyze the data; we don't need to know that you printed your working directory or cd'd into a parent folder, or moved something around.

For results, include results as directed by the lab project instructions, and any additional observations, like unusual software behavior. Please include at least enough information so that when you are writing your lab report, you can rely on your lab notebook for the data, and won't have to re-run your analyses.

In addition to commands and results, include informal text that explains, in your own words, what the commands are doing and what the results are. An outside reader should be able to understand and reconstruct your analysis.

Feel free to include your own running commentary on what you think is going on, as well as tips on usage and syntax. It will be very useful as a future reference.