Introduction to Scientific Computing: A Crash Course

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Worksheet 1.2

1. Python has a package management system, pip that allows for easy installing of python software packages.
    a. Use pip to install biopython

    b. What command did you use?

    c. How can you check to see if biopython is installed?

    d. Use pip to install jupyter

    e. What command did you use?

2. Now use your package manager to install git (used for github)
    a. What command did you use?

    b. How can you test to see if git is installed?

3. We are going to install a program called FAST: Analysis of Sequences Toolbox for use in future worksheets.
    a. Find the gihub page for this program, who is the owner of the github?

    b. What is the easiest way to install the FAST toolbox, as stated by the authors?

    c. Install FAST using the CPAN method following the commands on the github page, type one of the commands from the program to check to see if it is installed

4. We are now going to use git to clone a repository from github. The program we want to get is called HISAT2 which is an alignment program.
    a. Who owns the github for HISAT2?

    b. Along the right side of the page you should see a green button that says clone or download. When you click on it, it provides a web address what is it?

    c. Using the command line and the web address you got in part b, clone the HISAT2 repository, what command did you use?

d. This repository was cloned to wherever you are currently in the terminal, what command do you use to check where you are? What command do you use to check if the HISAT2 folder is there?
e. Navigate to the folder that was created when you cloned the git, what command did you use?

f. This is a slightly different installation then we did in question 7, even though both are from source code, why? (Hint look at the contents of the folder)

g. What command do you need to run to install this program?

h. After running the command in part C, you get files that are executable (meaning they are usable by the computer to run the program), what do you need to do to add these tools to your path?

i. Finish installing the program and check to see if it has been installed, what did you do to check for the installation?