

Week 1: CLI, Source Control, and Variables Research Prompts

1. What is git? Why is it useful? What is the git workflow? Git is an open source SCM, source control management, that allows you to collaborate on code simultaneously with other programmers. Git is different from other SCM as it takes 'snapshots' of your files that you currently just finished, and will store it as a reference to that snapshot, every time you commit changes to your files. These snapshots are just one of the few actions during the git workflow. The initial step to the git workflow is to pull any changes made, this will bring your workspace up to date with changes made by other programmers. Then, you can begin to make your own changes, stage your changes, and lastly commit your changes. These committed changes made by you can now be pushed to the remote branch, where you can merge it into the master branch. Now any other developers working on the project can pull your changes, so they can begin their git workflow. Git is useful because most operations run in git operate on local files, so no other information is needed from another computer. Git is also useful due to its speed, since pulling code doesn't require much time, since the past data from the project can be found on our local disk. Git also helps in having a backup of your code, and it enables you to experiment with no additions to your code that can be deleted later or merged into your code by using different branches to create many pathways to enhance your end goal while still being able to revert to previous versions of code that you have committed if you feel your current branch has been unsuccessful.

URLs used: <https://git-scm.com/book/en/v2/Getting-Started-What-is-Git%3F>
<https://git-scm.com/doc>

2. What are the 8 primitive data types in Java? What makes them each unique? What values can they hold? The first primitive data type is 'int' which stands for integer, and an integer is essentially whole numbers. Examples on an integer would be: 3, 4, 24, 126. 'Double' and 'float' are going to share similarities in that they are able to carry decimal points such as: 32.33, 36.99, or 88.65; the difference between the two is that float is a precision decimal data type. Next, 'long' and 'short', they share similarities in that they are like an integer, but long contains a larger range of numbers, while short contains less of a number range. 'Byte' is just 8 bits of data, where the limits of this data help clarify your code, and can be more dialed in than int. 'Char' is just a single character such as 'X'. 'Boolean' is one of my favorite data types to say, and along with the unique capability of giving two possible values of true or false.

URLs used: <https://docs.oracle.com/javase/tutorial/java/nutsandbolts/datatypes.html>
https://www.youtube.com/watch?v=xyZmG3g1VC8&ab_channel=PromineoTech