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Week 1 Research

What is git? Why is it useful? What is the git workflow?

Git is a program used for version control for a project(s). It is useful because you can do things like revert to a previous version (or commit) if you found out that your latest push ended up breaking something. You can also use it as a way for multiple users to remotely work on the same project. Plus you have the added benefit of being able to use it as an offsite backup for your project. The git workflow could go something like this, clone the central repository, so that you have it on a local branch. Now you can work on and commit changes to that local branch, then when you are ready you can merge your changes back into the central repository. The great thing about this is that multiple people can do the same thing, and work on that central repository all at the same time.

<https://www.atlassian.com/git/tutorials/comparing-workflows#:~:text=A%20Git%20workflow%20is%20a,in%20how%20users%20manage%20changes.>

What are the 8 primitive data types in Java? What makes them each unique? What values can they hold?

The 8 primitive data types in Java are: byte, short, int, long, float, double, boolean, and char. A byte can store whole numbers between -128 to 127. A short can store whole numbers from -32,768 to 32,767. An int can store whole numbers from -2,147,483,648 to 2,147,483,647. A long can store whole numbers from -9,223,372,036,854,775,808 to 9,223,372,036,854,775,807. A float stores fractional numbers, up to 6 to 7 digits. A double stores fractional numbers up to 15 decimal digits. A boolean just stores 1 bit, true or false. And a char stores a single character. By knowing the primitive data types you can better optimize the amount of memory your program uses if you know the absolute max/min a variable will become. You could for example use a 'short' instead of a 'long', and end up using 4 times less data to store that variable.

https://www.w3schools.com/java/java_data_types.asp#:~:text=Primitive%20data%20types%20-%20includes%20byte,float%20%2C%20double%20%2C%20boolean%20and%20char