# Week 1 Research

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

Git is a widely used tool for teams to manage their code and versions of their code. It is very useful because it allows for teams to work on code simultaneously and not worry about writing over changes that someone else was working on when you submit your changes. It shows and maintains changes to the code in its repositories.

The proper workflow of git for teams is as follows:

1. Create a repository
2. Create a branch
3. Make changes and add commits
4. Create a pull request
5. Review code changes in the pull request
6. Merge your branch with the main branch of the repository

[**https://guides.github.com/introduction/flow/**](https://guides.github.com/introduction/flow/)

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

In Java there are 8 primitive data types that store data for your variables. Primitive number data types are actually separated into two different groups. Integer types store whole numbers and can be both negative and positive. Floating point types are numbers that contain decimal points and can also be both negative and positive.

The 8 data types are as follows:

1. Byte – an integer type 1 byte in size. A byte can range from -128 to 127.
2. Short – an integer type 2 bytes in size. A short can range from -32,768 to 32,767.
3. Int – an integer type 4 bytes in size. An int ranges from -2,147,483,648 to 2,147,483,647
4. Long – an integer type 8 bytes in size. Largest number range
5. Float – floating point type 4 bytes in size. Floats can hold up to 7 decimal points.
6. Double – floating point type 8 bytes in size. Doubles can hold up to 15 decimal points
7. Boolean – Stores true or false. 1 bit in size
8. Char – 2 bytes in size and holds a single character.

It is wise to code efficiently but use the appropriate data types. An example is when to use a float and a double. If you are certain that your number’s accuracy doesn’t need to exceed 6 or 7 decimal points than a float is appropriate because your code will be leaner. But is you are needing more accurate representation than a double is more appropriate.

<https://www.w3schools.com/java/java_data_types.asp>