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

Git is open-source version control software that can be used to save and monitor changes to a collection of documents while preserving each saved version and allowing the smooth integration of changes. It can be used both on the desktop and/or remotely and allows multiple people to work on a project at one time. A collection of documents, usually code related, is called a repository. Once a new repository is created, documents can be added through a two-step process. First the documents are given a ‘staging’ status where they are identified as files to save using the command “git save”. Then the command “git commit” is used to add the files to the repository. Git can then track changes from the originals and those changes can be staged and committed. You can create branches in git to develop something in parallel to the main project. Then those branched items can be maintained separately or merged back into the main project. Git has a remote version called Git Hub that allows multiple people to work on the project from their own computers and merge their work in with the main repository. Files and changes are sent to Git Hub using the “git push” command. Each person can then “pull” the most recent version of the project to their computer and their changes can be “merged” into the main repository.

Sources:

https://www.freecodecamp.org/news/what-is-git-and-how-to-use-it-c341b049ae61/

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

Java has eight primitive data types: byte, short, int, long, float, double, boolean, and char. The first four are used to hold whole numbers, or integers. The ‘int’data type is the most commonly used and can hold a number within the range of -2,147,483,648 to 2,147,483,647. The data type ‘long’ can hold a number between -9,223,372,036,854,775,808 and 9,223,372,036,854,775,807. And for times when space may be more limited, ‘byte’ and ‘short’ can be used; able to hold a number between -128 to 127 and -32,768 to 32,767 respectively. The types ‘float’ and ‘double’ are used to hold fractional numbers that include a decimal point. ‘double’ is the most commonly used and can hold a number with up to 15 places after the decimal. ‘float’ can contain a number with 6-7 digits after the decimal point. The last two data types, ‘char’ and ‘boolean’ are not numeric. ‘char’ can hold a single character like a letter, space, number, punctuation mark, or expression. ‘boolean’ holds the value ‘true’ or ‘false’ and is usually used in conditional statements.

Sources:

https://docs.oracle.com/javase/tutorial/java/nutsandbolts/datatypes.html

https://www.javatpoint.com/boolean-keyword-in-java