

Week 1: Research

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

The 8 types of primitive data include: **int**, **long**, **short**, **double**, **float**, **byte**, **char**, and **Boolean**, with each one having a distinct type of variable values. The **int** data type indicates a whole number (from -2,147,483,648 to 2,147,483,647). Some examples include using it to count, and for quantities. A **long** data type is similar to *int*, however, it is able to store a higher range of whole numbers (from -9,223,372,036,854,775,808 to 9,223,372,036,854,775,807) and is used when the range of numerical data is higher than what *int* can store. A **short** data type is a smaller range of whole numbers than *int* (from -32,768 to 32,767) (W3Schools, n.d.)

A **double** data type specifies numbers with decimals; stores up to 15 decimal digits (e.g. 23.127993202). A **float** has a smaller range than *double* to store decimals (storing only up to 6 to 7 digits). They're both used when a number with decimals is needed. The **Boolean** data type specifies a true or false value; used for yes-or-no type of answers. **Char** data types specify single characters, wrapped in single quotes (e.g. 'A' or 'd'). Can be used to indicate grades. **Byte** data types value range from -128 to 127 and are used to save memory in large batches. (GeeksforGeeks, 2022)

2. What is your favorite thing you learned this week?

My favorite thing that I've learned has been learning Git. I find it fascinating how I am able to upload and download my work into repositories. I find it very fulfilling creating repositories, typing the code into the terminal, and seeing it function. It is fun to continuously learn more efficient ways to work with Git – whether it be shortcut commands, or learning the different functions it provides. I am excited to begin using it for more complex projects.

References

GeeksforGeeks. (2022, August 5). *Data types in Java*. Retrieved September 6, 2022, from <https://www.geeksforgeeks.org/data-types-in-java/>

W3Schools. (n.d.). *Java Data Types*. Retrieved September 6, 2022, from https://www.w3schools.com/java/java_data_types.asp