**Primitive Data Types**

After learning about variable initialization and assignment, you should be aware that data types are serious business. They can determine the success or failure of your project. Therefore, you should know them extremely well. This document should serve as a quick reference guide for the data types we will be using most often in this class. Research each of the terms below and write their definitions in the boxes below

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| **int :** **An integer is four times the size of a byte (It is made up of 32 bits). It is one of the most commonly used data types in Java. It deals with whole number integers.** |
| **double: Double is a data type that is twice the size of a float. It is made up of 64-bit IEEE floating points. It is more precise than int as it also accepts decimal values. It is more precise than a float.** |
| **boolean: The boolean type represents a truth value. There are only two possible values of this type, representing the two boolean states: on or off, yes or no, true or false. Java reserves the words true and false to represent these two boolean values.** |
| **float: Any decimal or fraction value. Floating-point literals are double values by default. To include a float value in a program, follow the number by the character f or F:**  **double d = 6.02E23;**  **float f = 6.02e23f;** |
| **char: The char type represents Unicode characters. To include a character literal in a Java program, place it between single quotes (apostrophes):**  **char c = 'A';** |
| **short: A short is twice the size of a byte. It is made up of 16-bits. You can use a short to save memory in large arrays, in situations where the memory savings actually matters.** |
| **long: A long data type is twice the size of an integer, i.e. It is made up of 64 bits. This data type is used when you need a range of values wider than those provided by int.** |