**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 :**  **Datatype for integers, numbers without a decimal point. Integers can be as large as 2,147,483,647 and as low as -2,147,483,648. They are stored as 32 bits of information. The first time a variable is written, it must be declared with a statement expressing its data type. Subsequent uses of this variable must not reference the data type because Processing will think the variable is being declared again.** |
| **Double:**  **Datatype for floating-point numbers larger than those that can be stored in a float. A float is a 32-bit values that can be as large as 3.40282347E+38 and as low as -3.40282347E+38. A double can be used similarly to a float, but can have a greater magnitude because it's a 64-bit number. Processing functions don't use this datatype, so while they work in the language, you'll usually have to convert to a float using the (float) syntax before passing into a function.** |
| **boolean:**  **s a data type, having two values (usually denoted true and false), intended to represent the truth values of logic andBoolean algebra. It is named after George Boole, who first defined an algebraic system of logic in the mid 19th century.** |
| **float:**  **Float is a term is used in various programming languages to define a variable with a fractional value.** |
| **char:**  **The abbreviation char is used as a reserved keyword in a number of programming languages, such as C, C++, C#, and Java.** |
| **short:**  **he definition of computer science is a branch of engineering science that studies the technology and the principles of computers. The study of computer hardware and software is an example of computer science.** |
| **long:**  **the study of automating algorithmic processes that scale.** |