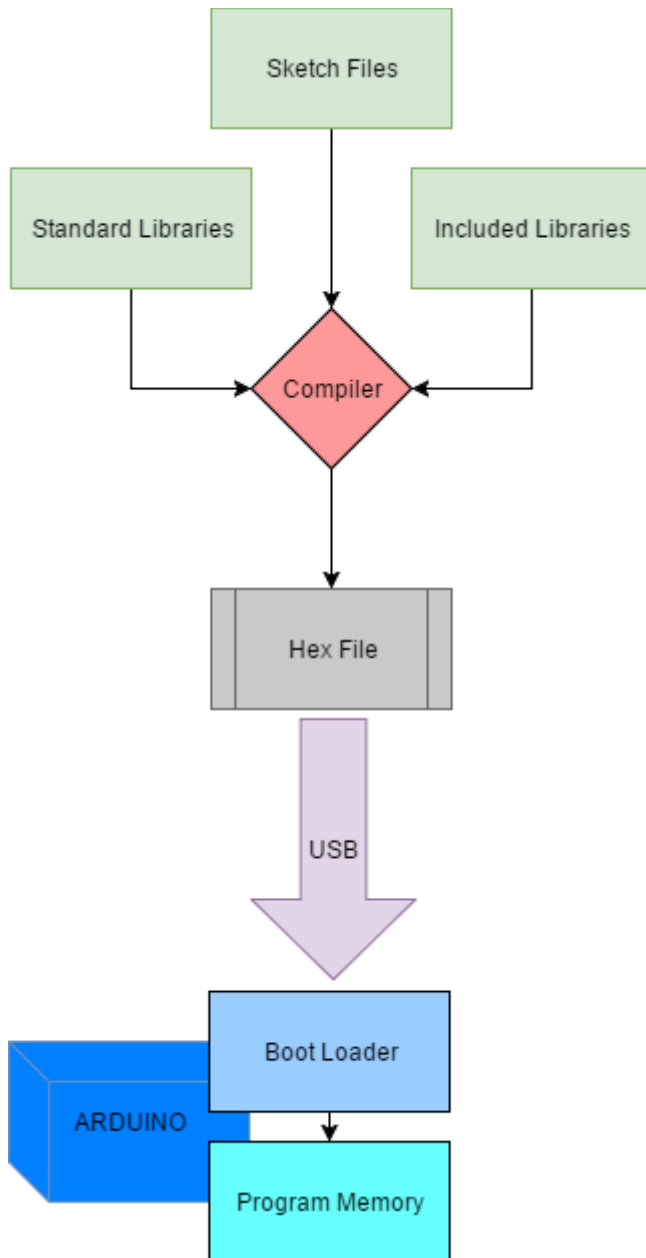


The Arduino Build Process

When we press the 'upload' button, the following process is executed to get the human readable code we've written running on the Arduino.



1) The sketch files, included libraries, and standard libraries are all passed to the compiler. Often sketches are just a single file, but we can spread them out over multiple files if the situation calls for it. The included libraries are the ones we've manually linked into our sketch. The standard libraries are the low level features that are included in every sketch.

2) The compiler checks to make sure there are no errors, and then compiles all of the human readable source files into a single, machine readable hex file.

3) A program called AVR sends the Hex file over the USB connection to the Arduino; with instructions for the Arduino to write this Hex file into program memory

4) Some low level code already running on the Arduino takes that hex file that was sent over USB and writes it to program memory where it will be executed by the Arduino after a reset. The final step is resetting the Arduino so the code begins to run.