

## Build Your Own Data Logger

### Module 3: Proof of Concept

### Submodule 1 – The Command Line

## Terminology Starter Guide

Video	Lab 1
Serial monitor, Serial Console, Console, Terminal	<p>In this context:</p> <p>A separate pop-up window in the Arduino IDE that allows you to both send messages from your computer to an Arduino board (over USB) and also to receive messages from the Arduino.</p>
Parameter	<p>A special kind of variable that's used to pass information between functions or procedures.</p> <p>A user can set a parameter (or assign it a value) through a command.</p> <p>A variable is a data container that can change its value without changing its name.</p>
Argument	<p>An argument is a value that is passed into a command, function, or routine.</p> <p>Similar to variable value.</p>
Include macro	<p>Macros are special commands in C++ that are interpreted before the compiler starts.</p> <p>They are sometimes referred to as pre-compiler macros and used for special functions.</p> <p>We will only be using <code>#include</code> to include libraries in our code and <code>#define</code> to define constant values in this course.</p>

Command Line (cmdArduino)	In this context:  An Arduino library which allows us to communicate directly with our device from the serial console in Arduino IDE.
Command	Tells the device to do something.
Command Keyword	The first word we enter when issuing a command via the serial console.  Maps to a command function.
Command Function	The function that executes when the command keyword is entered into the serial console.
Command List	A list of the commands that we've written.
Arduino Library Manager	A menu item in the Arduino IDE accessed by Tools > Manager Libraries.  Used to download, install and update libraries.
<b>Video</b>	<b>Lab 2</b>
Integer (int)	A number with no decimal point. Can be positive, negative or zero. eg. 1, 34, 1024.
Floating Point (float)	Floating point number (float) is a number with decimal point that can 'float' or move. eg 34.4, 1.15, 234.02568.
String	A series of characters. Can contain letters, spaces and numbers. eg. "Hello World!", "I'm number 1".
Character	Character (char) is a data type is used to store a single character that could be text, numbers or symbols. Eg. "a" "1" "!"

	<p>With a computer, one character is equal to one byte, which is 8 bits.</p>
Array	<p>A group of related data values (called elements) that are grouped together.</p> <p>All the array elements must be the same data type.</p>
Index	<p>A number used to access a specific element within an array, tells the element's position.</p> <p>Index count starts from 0.</p>
For Loop	<p>A type of loop.</p> <p>A loop statement in programming is one that performs predefined tasks while or until a predetermined condition is met.</p>
<b>Video</b>	<b>Lab 3</b>
Blinking rate	<p>The speed at which the LED blinks. Determined by delay(delayTime).</p>
Hardcode	<p>A hardcode is part of a computer program which cannot be altered except by changing the source code of the program itself.</p>