**Purpose**

The purpose of Unit 01 was to learn the fundamental steps in programming and practice using the steps with basic code on a system platform.

**Concepts**

Modular – The concept of systems that are independent from one another, often portable pieces of code that can be integrated into other software with writing an interface layer between the module and the software. In theory it’s great. In practice, humans exist, and we are not very good at keeping the spaghetti out.

Constants – Variables that are meant to be assigned at compile time and not changed during runtime. They are usually read only, however in some languages (JavaScript) you can define a constant and reassign that constant in the next line. Aren’t interpreted languages fun?

Procedure-Driven – Development of procedures that directs the flow of data and control. Clang works this way. It has defined instructions that are followed in a structured order of execution and must be compiled before execution.

Event-Driven – Development of procedures that is defined by the flow of data and control. Embedded systems are often programmed this way due to there even driven hardware designs. Digital clocks, microwaves, and other common household gadgets are programmed to respond to user interactions. These interactions or events change the output of these devices.

**Implications**

Programming exists as a way for us to interact with and control bits. Higher levels of control indicate a more complex system and give end users the ability to perform highly interactive operations that would be extremely difficult if they were to write instructions by hand. Programmers can directly control the entire capabilities of a system they are developing for by writing highly optimized instructions.