Installation

The first thing you must do is install the Arduino IDE (Integrated Development Environment). The installer can be found [here](#), and the official getting started guide can be found [here](#). Follow the getting started guide through to the end and see the blinking light. Once done, you will be in a position to start learning about how to actually program an Arduino, and what the various commands do.

Program Structure

All Arduino programs have the same structure. First, there is one function that is executed **once** when the hardware is first powered on. Second, there is one function that is executed **repeatedly**, as long as the hardware stays powered on. These functions are called *setup* and *loop*, respectively.

The **setup()** Function

Code in the *setup()* function gets executed exactly once when the hardware is powered on. Some common tasks that are performed in the *setup()* function are:

- Setting pin modes (Input or Output).
- Initializing a serial port.
- Other one-time initialization.

The **loop()** Function

Code in the *loop()* function gets executed repeatedly, as long as the hardware is powered on.

Arduino Program Skeleton

```cpp
// Global Variables

void setup()
{
    // Program Initialization
}

void loop()
{
    // Program Execution
}
```