Upload a Sketch

Engduino®

A Sketch

A program written in Arduino software is called a **Sketch**. It is a simplified version of the "C" programming language.

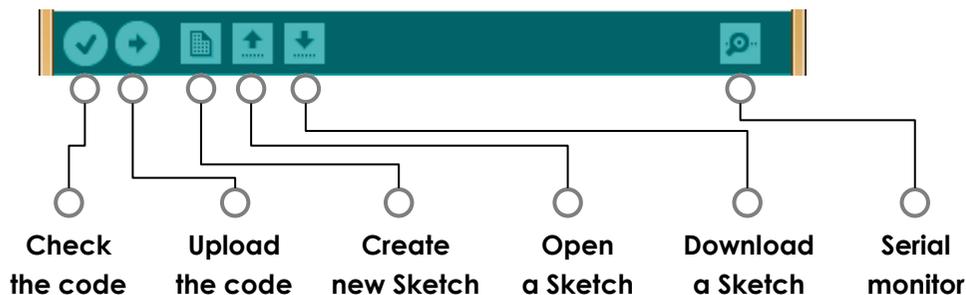The Arduino Sketch must have these main two functions:

- �֎ **void setup() { … }**

In setup(), the code will be run exactly once. You would put the preparation code here,

- ✖ **void loop() { … }**

In loop(), the code will be running in an "infinite loop".   The Engduino will run the first line to the last line in this function, then go back to the first line to run again, until you turn the Engduino off, or something goes wrong with your Engduino!

Arduino Tool bar

| Check the code | Upload the code | Create new Sketch | Open a Sketch | Download a Sketch | Serial monitor |

The **Check** and **Upload** buttons are most frequently used.

Blink (Green LED) Example

Use the menu bar to navigate to File=>Examples=>01.Basics=>Blink.

Engduino and all the Arduino-own devices has this user LED, that allows you to test the device instantly without coding.

In **setup()**, it defines the user LED pin (green light) as an output.

In **loop()**, it turns the LED on, wait for 1 second (1000 Microseconds), turn it off, wait for 1 second and repeat continuously.

Blink

```
void setup  ( )    {
// initialize digital pin 13 as an output.
  pinMode(13, OUTPUT);
}
// the loop function runs over and over again forever
void loop ( ) {
  digitalWrite(13, HIGH);    // turn the LED on (HIGH is the volt-
age level)
  delay(1000);                // wait for a second
  digitalWrite(13, LOW);     // turn the LED off by making the
voltage LOW
  delay(1000);                // wait for a second
```

Use the Toolbar to **Check** and **Upload** the code onto Engduino. Check is not essential, it will tell you if your code to see if there is any error. In fact, Upload will check your code first, translate it into machine code (1s and 0s) and then upload it to the Engduino via the USB serial port.