



ELEEC

A hand-drawn logo on lined paper. The word "ELEEC" is written in blue, blocky capital letters. Above the letter "L" is a red sun-like symbol consisting of a square with rounded corners and several short, radiating lines. A thick orange underline is drawn below the word.

by Omkar
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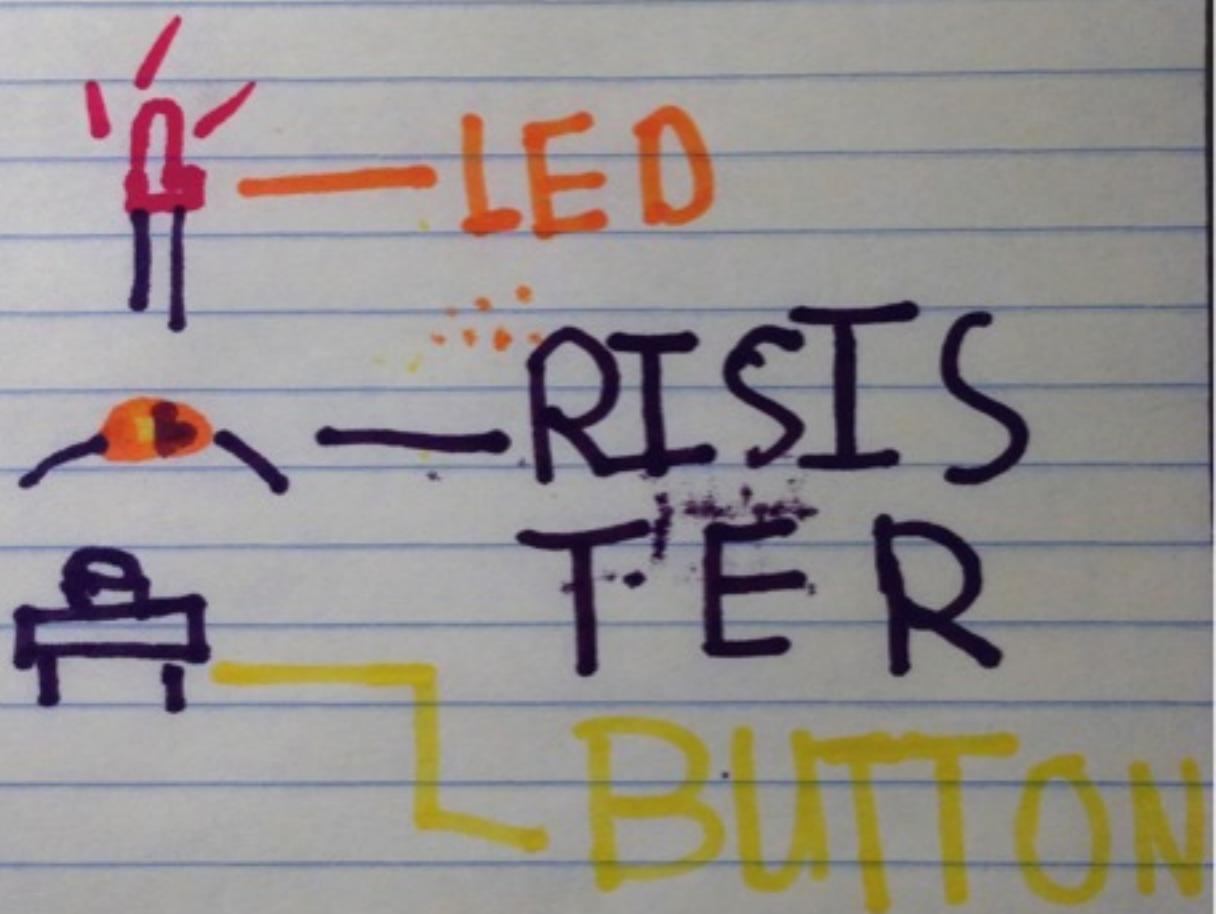
1. What?

Electronics is parts that make lamps, computers, and things like that. Electricity powers these things.



A circuit is parts in a complete way. All circuits needs energy like a battery. A battery has two sides, $+$ and $-$. We will talk about them later. Voltage is how much power a battery has.

Now I will tell you about a simple circuit. It is like when a light turns on and off. A small light is called led. A button stops current to turn things on.



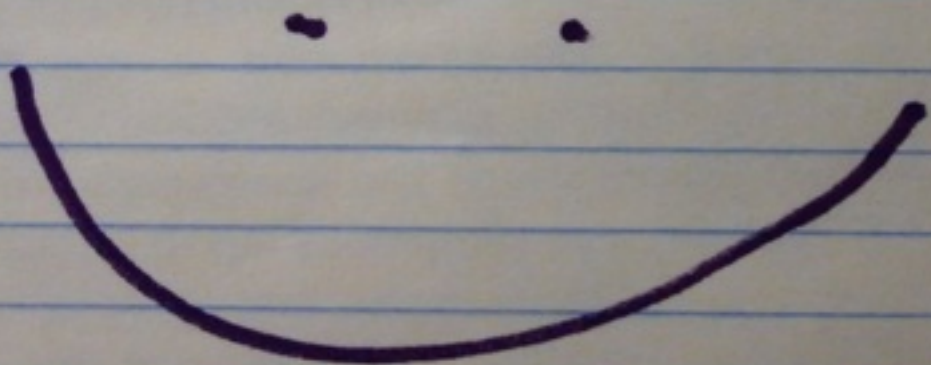
A resistor reduces electricity. It is very important.

We will now show how things
get designed,



That is simple but
you will learn more.

NOW YOU
WILL LEARN
HOW TO
MAKE
CIRCUITS!



2. Lets Begin!

This circuit you can make:

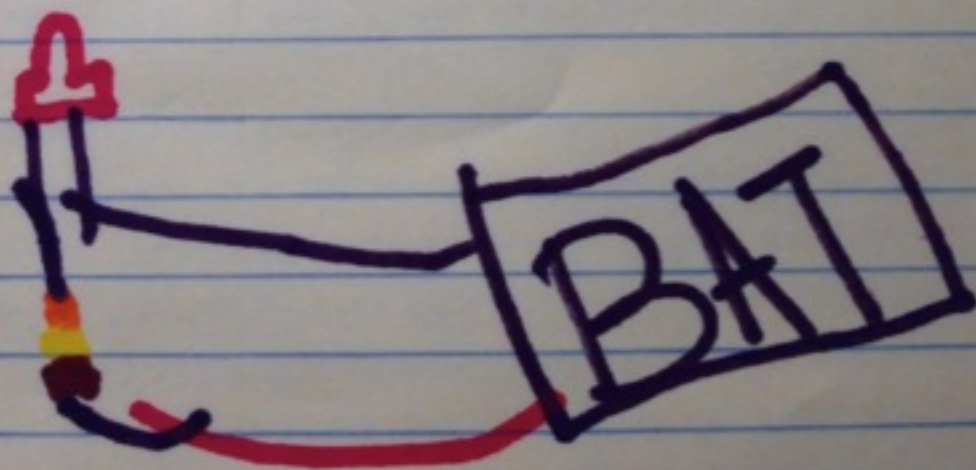
MATERIALS:

1 LED

1 K RESISTER

2 AA BATTERIES

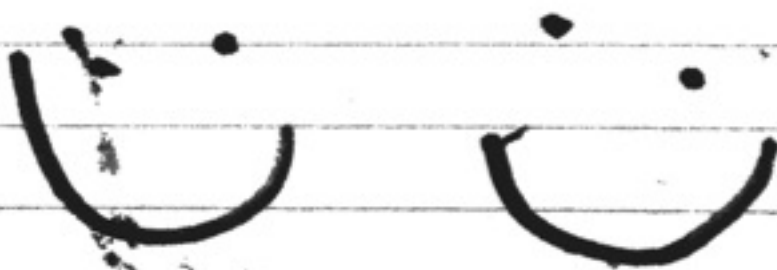
1 BATTERY CASE



THAT

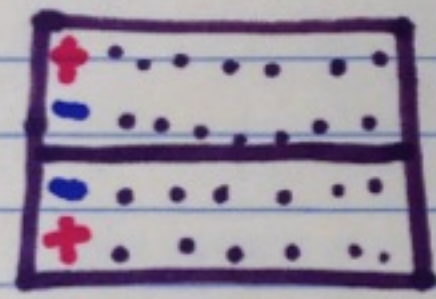
IS

DIY!



3. Better

Now we will talk about bigger circuits. First we will learn about a breadboard, a tool that makes it easy to connect.



→ Bread Board

Big circuit on B.B. ↗



ARE

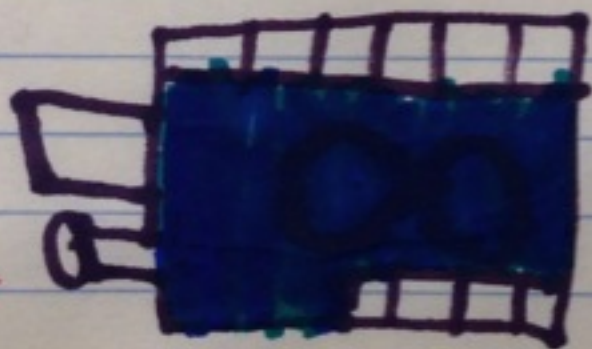
YOU

READY?

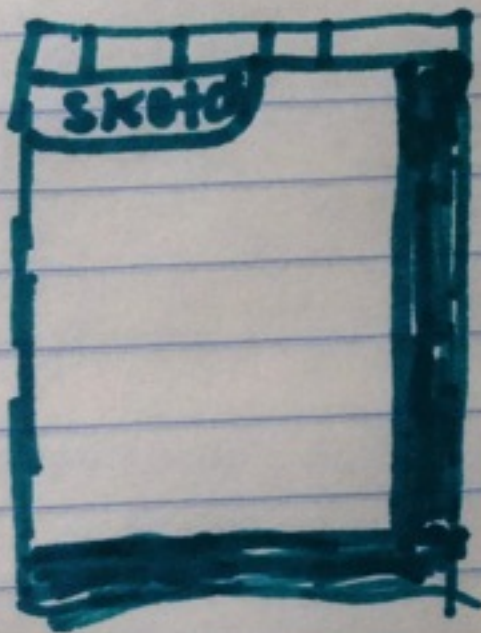
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4. BASIC 4. CODE

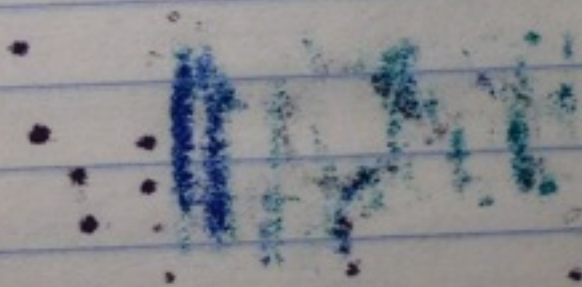
DO you know what programming is? Well it is when you tell electronics to do something, but with a microcontroller. It tells instructions to the electronics. One type of microcontroller is the arduino.



This uses programming type C/C++. Programs are called syntax. What you program is called sketches.



We will learn simple sketches.



BLINK

```
int LED = 13
```

```
void setup()
```

```
  pinMode(LED, OUTPUT)
```

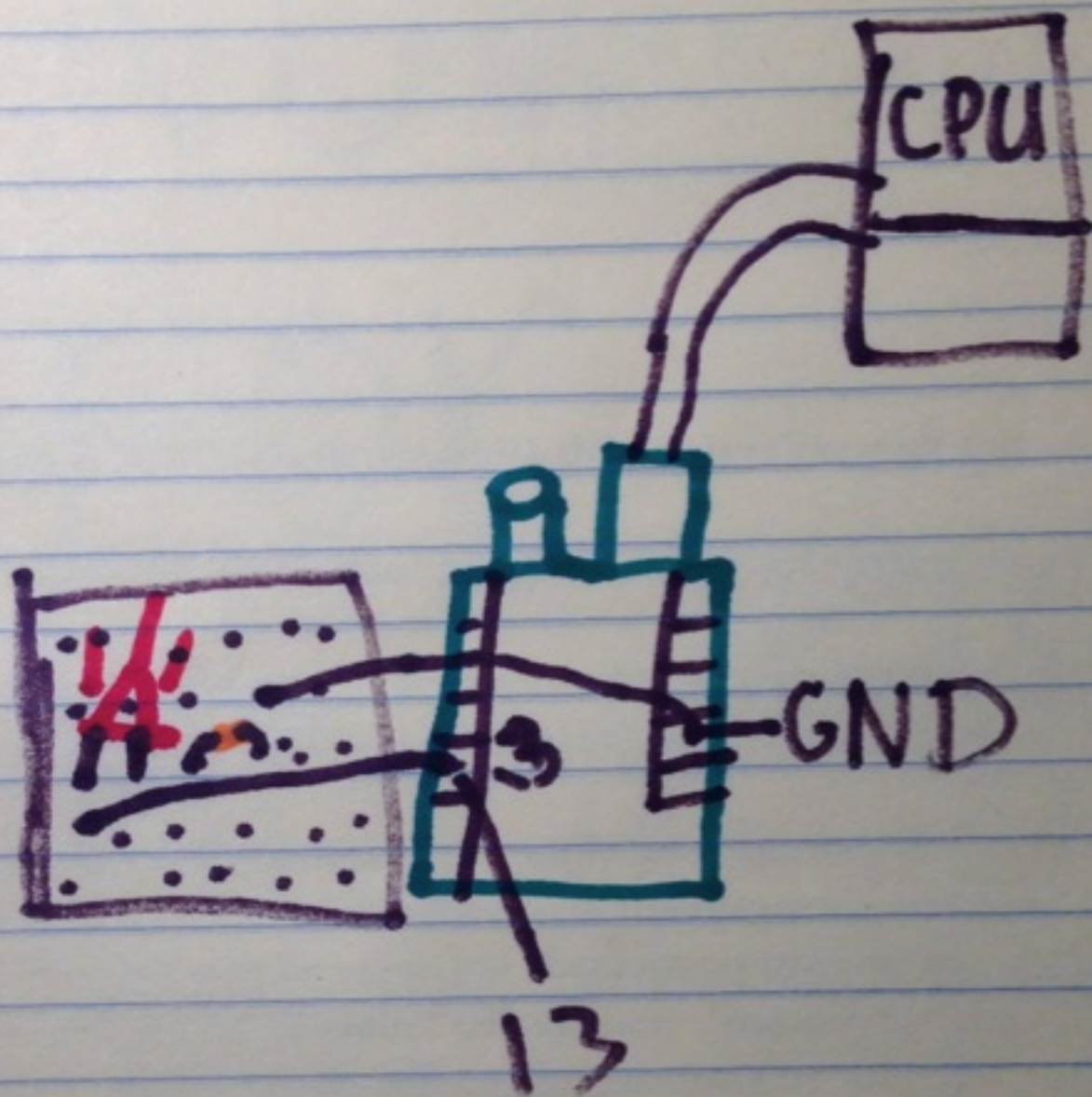
```
  void loop()
```

```
    digitalWrite(LED, HIGH)
```

```
    delay(100)
```

```
    digitalWrite(LED, LOW)
```

```
    delay(100)
```



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