

# Who Are You, Arduino?



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# Well I am...

An open-source electronics prototyping platform.

*Ohkkay... Is this some kind of magic spell or what?*

Well what I mean to say is that all my information like

- How can I be made
- What I am made of
- What languages I understand etc.

Is all out in the open. I'm based on flexible, easy to use Hardware and software. You can build me in your own home.

*COOL... but am I capable enough to even use you?*

If you are an artist, designer, hobbyist, or even someone interested in creating interactive objects or environments then I'm the one for you!



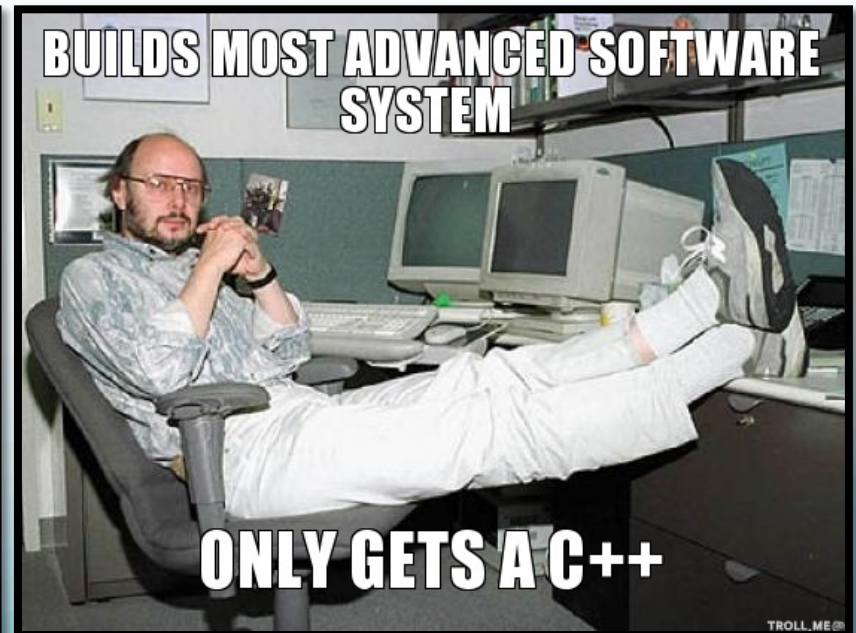
*Please tell me more about you*

Well, you can say I'm made of two parts



**HARDWARE**

**SOFTWARE**



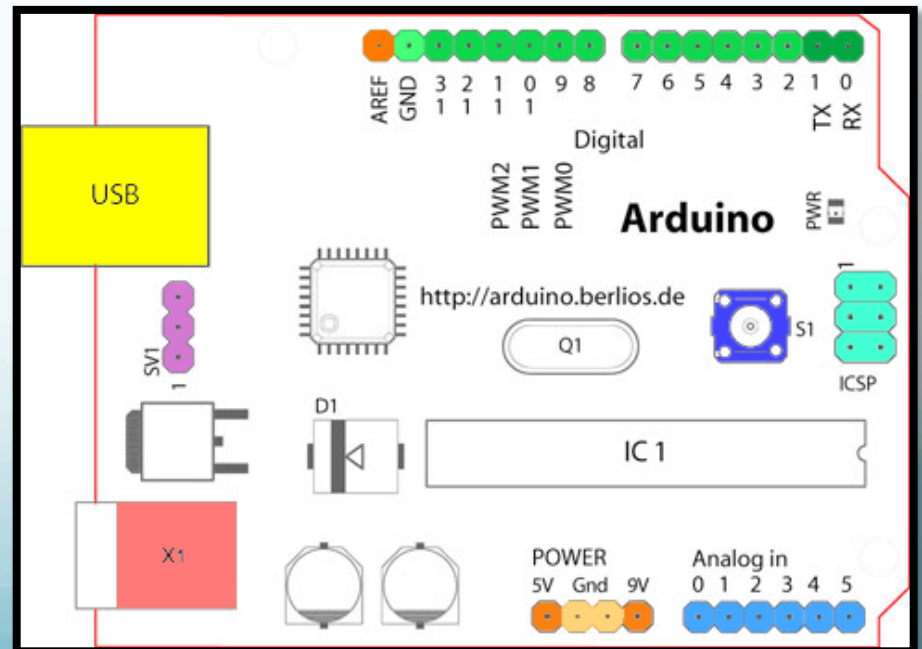
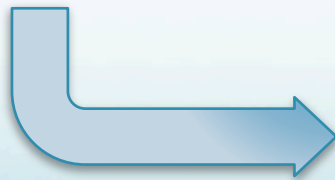
# HARDWARE

Now don't worry let me complete first.  
I come in various shapes and sizes

*Whoa! I'm scared!! How?? And Why??*

I told you let me complete first. Although I have various version  
But my thinking style is the same. I'll tell you about it later, for now  
just consider one of my version named Arduino UNO.

This is how I look like

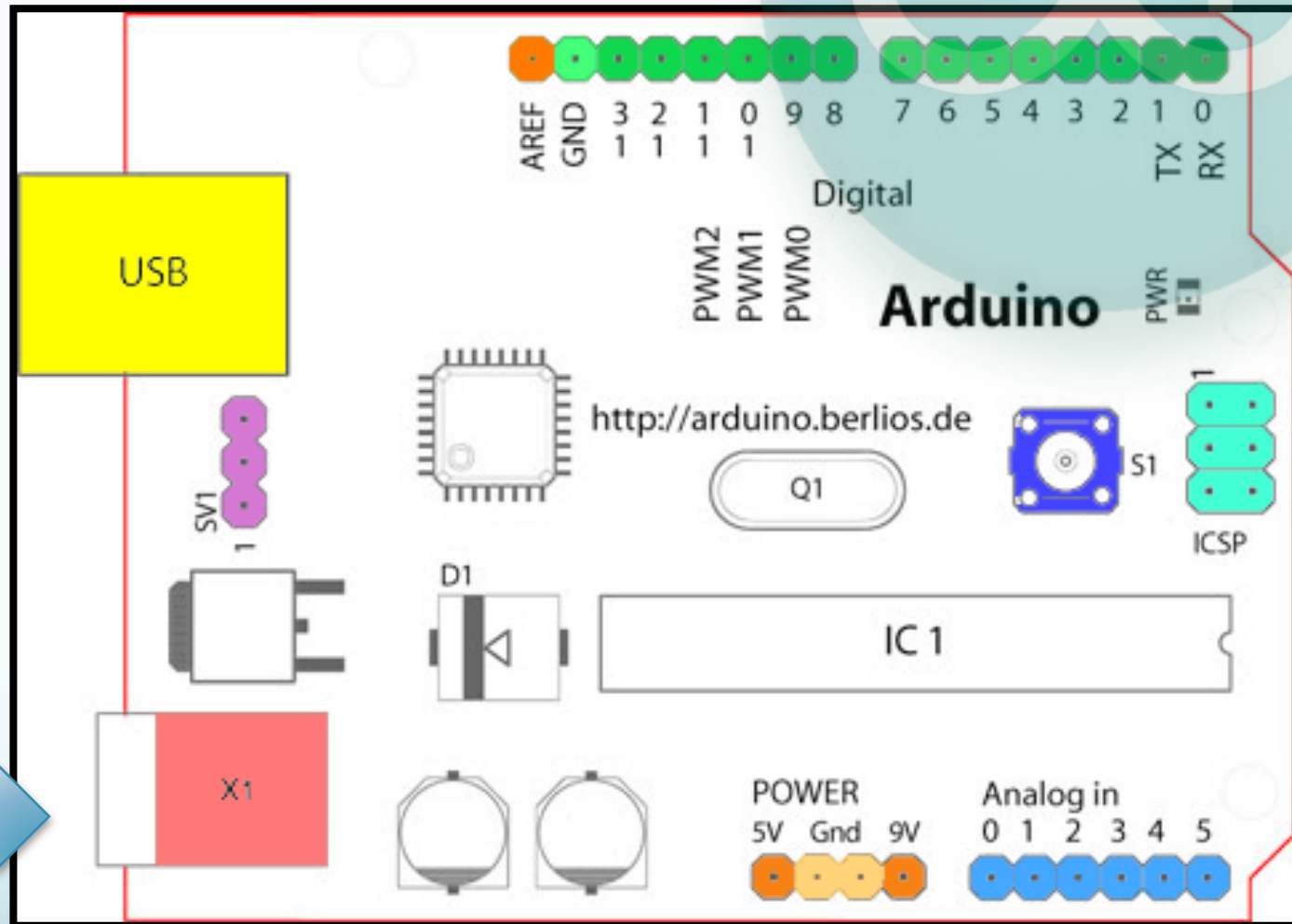


# HARDWARE

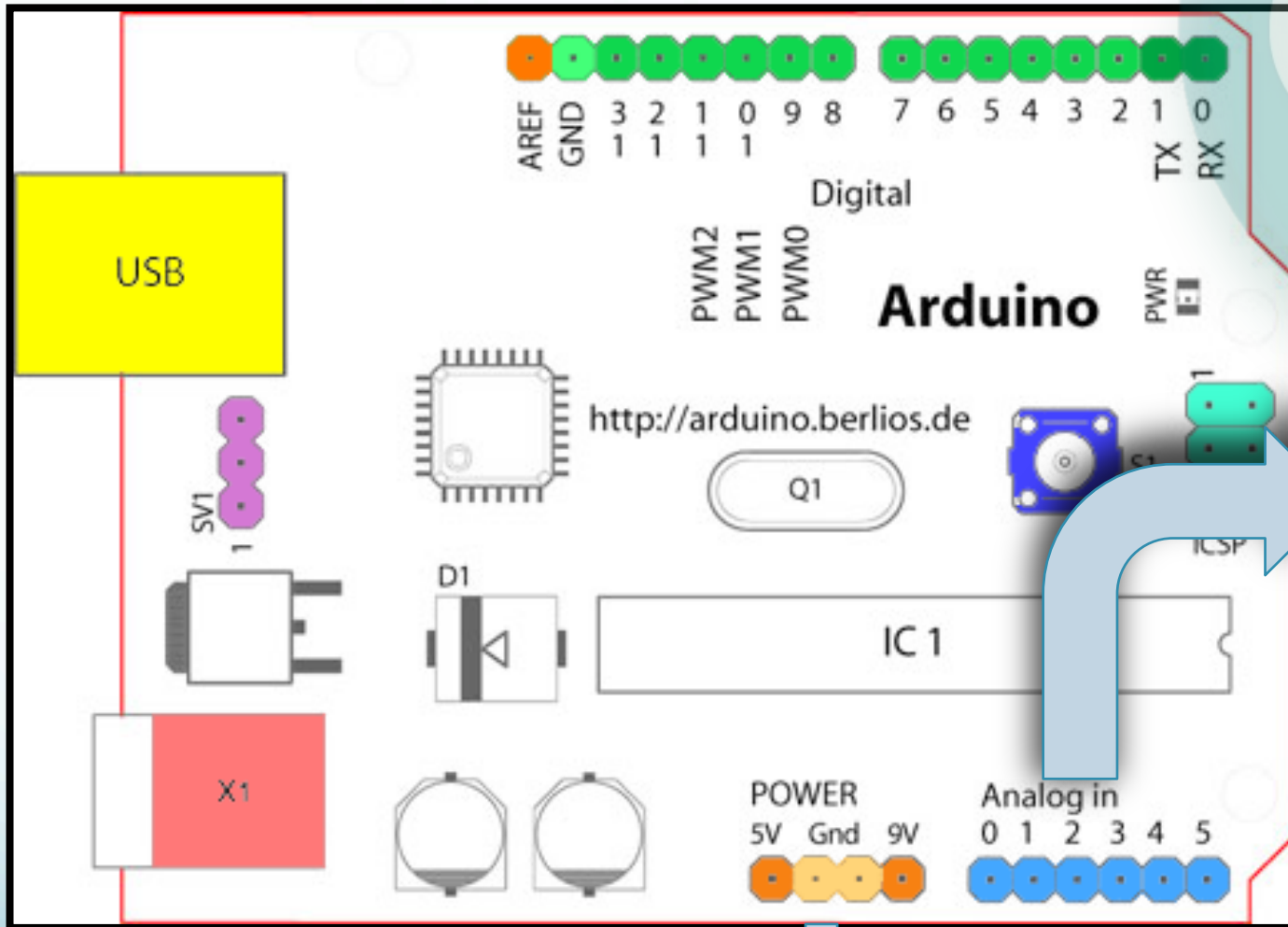
This is my USB Port, it lets me connect to your Computer. It also supplies me power.



This is my Power Port. It keeps me Alive.



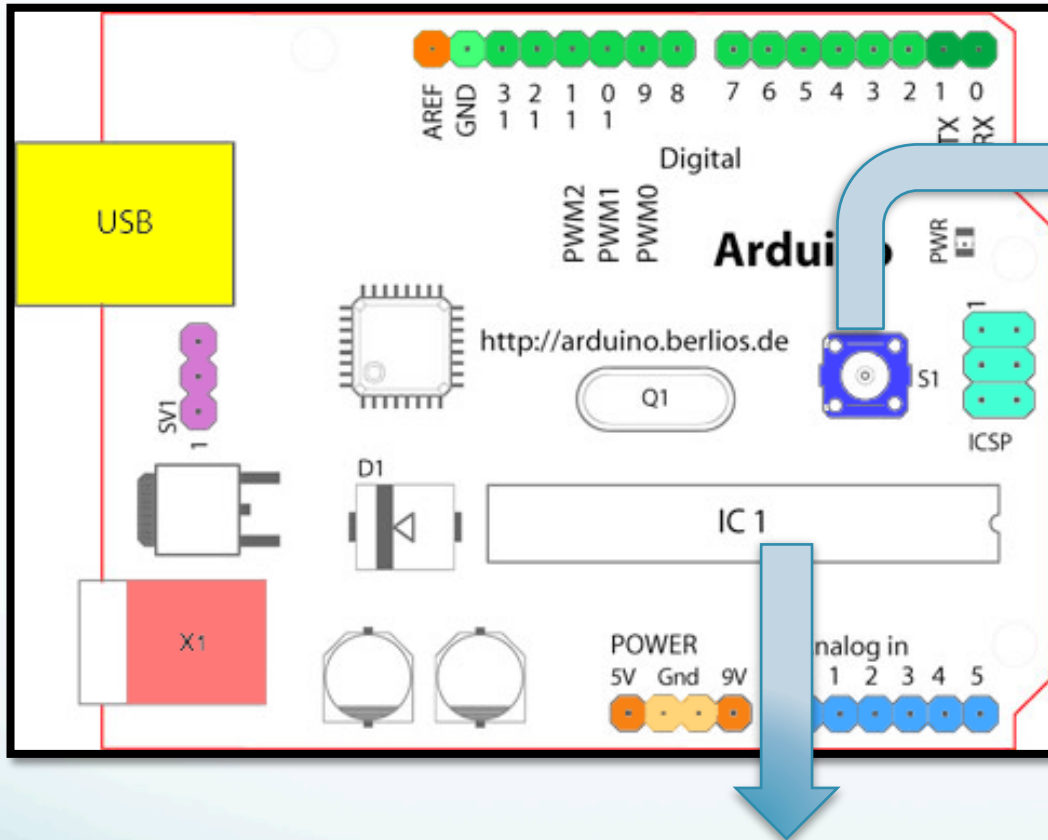
# HARDWARE



These are Analog Pins which let me Sense Analog Inputs from 0-5V.

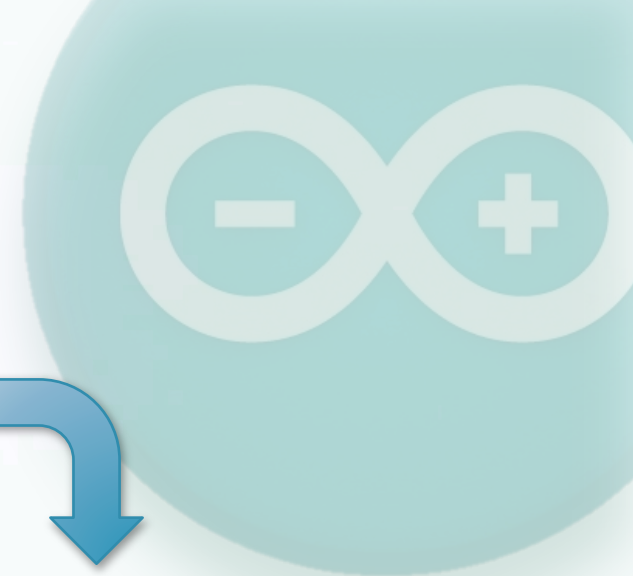
These pins lets me power the circuit

# HARDWARE



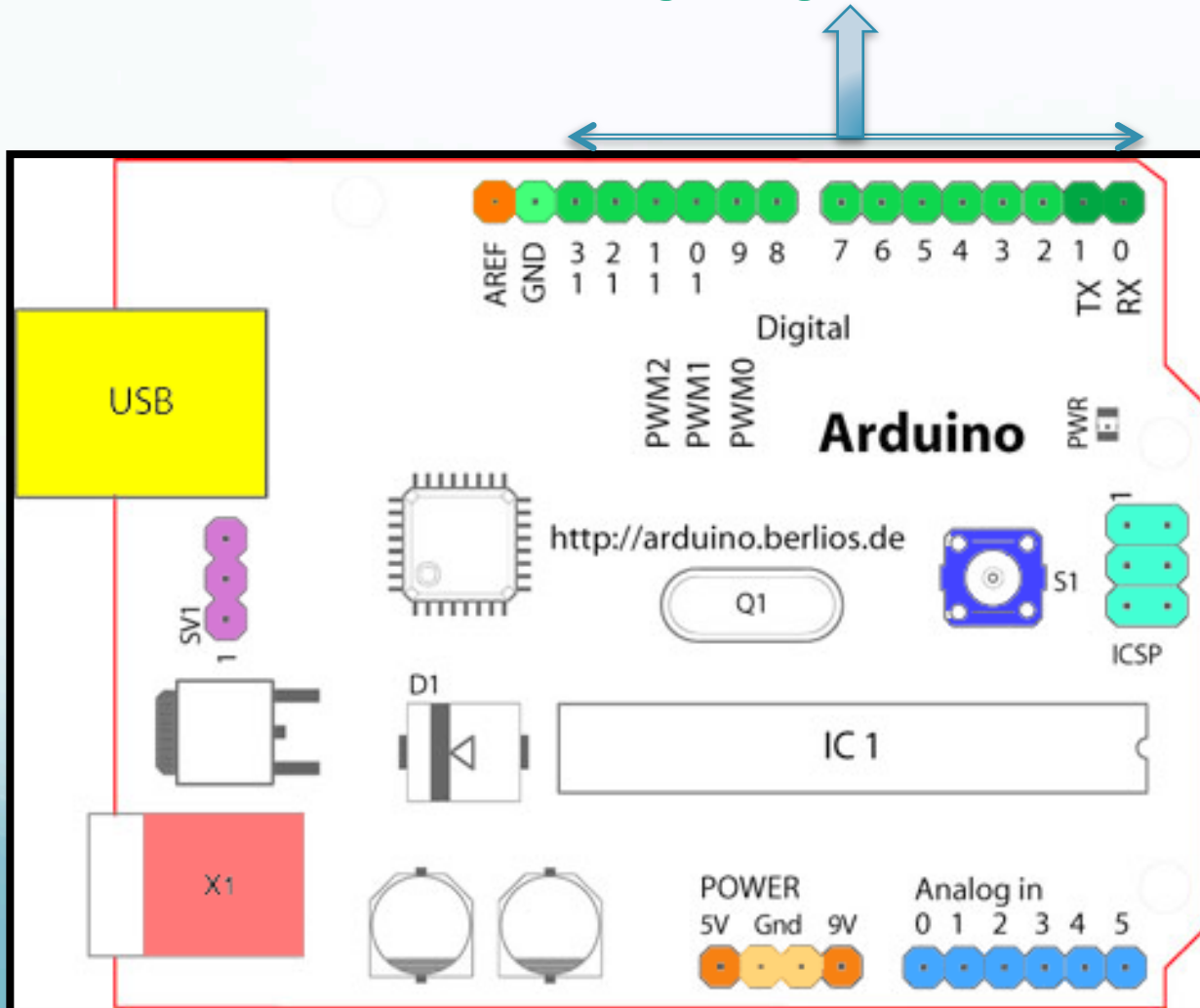
Reset Button for a refreshing restart!

This is the main microcontroller Chip which lets me think.



# HARDWARE

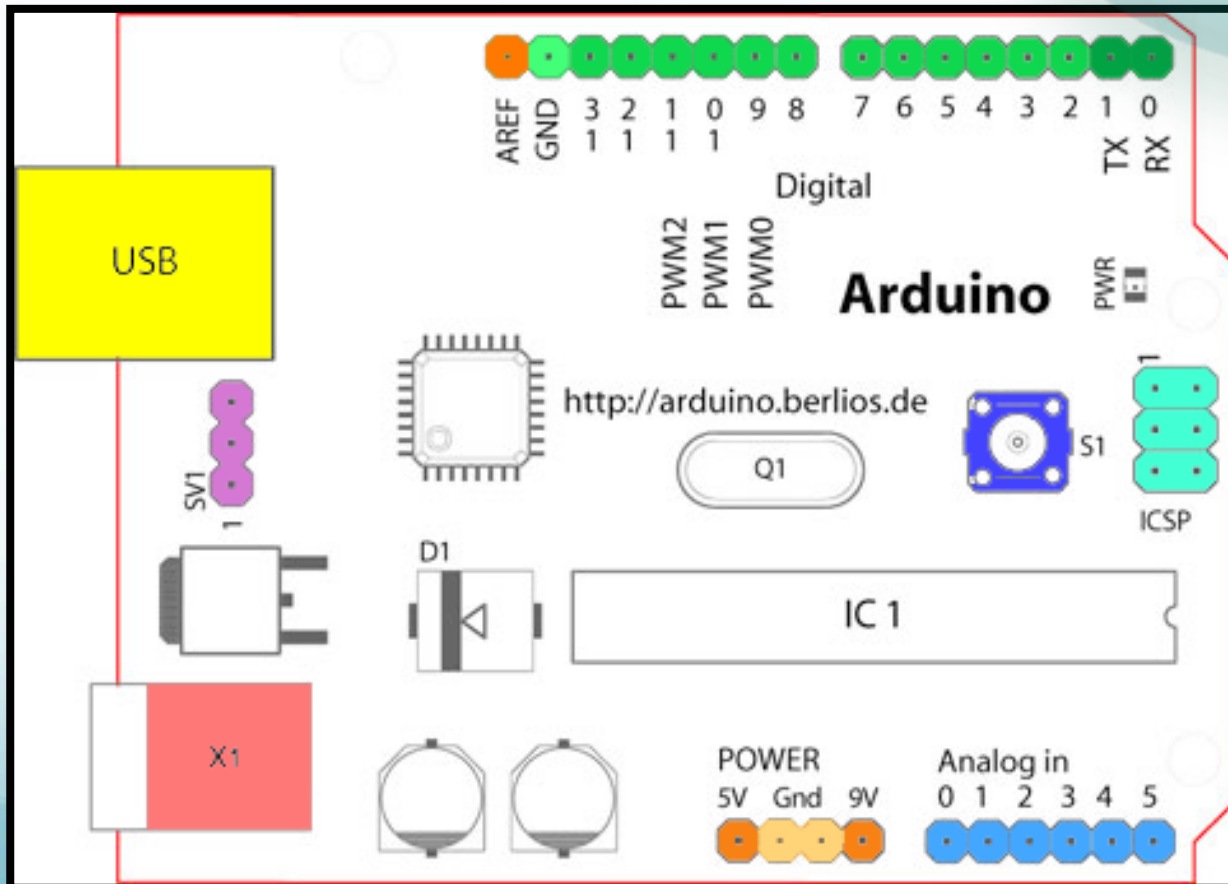
These are 14 Digital IO Pins, i.e. they can sense as well as send Digital Signals.





# HARDWARE

You can get more detailed information here  
<http://arduino.cc/en/Reference/Board>



# SOFTWARE

Well like most people communicate with each other via certain language like hindi, punjabi, english etc, I interact with your computer via C/C++ derived language.

My IDE(integrated development environment) is a cross-platform application.

*Cross what?*

Well it doesn't matter if you have a Mac, Windows or Linux, you can program me anytime anywhere. This is because it's based on **JAVA**.

Download Software from here -  
<http://arduino.cc/en/Main/Software>



# SOFTWARE

## Bare Minimum Code / Structure

A screenshot of the Arduino IDE interface. The title bar reads "BareMinimum | Arduino 1.0.3". The toolbar contains icons for check, run, file, upload, and download. A tab labeled "BareMinimum" is active. The code editor contains the following text:

```
void setup() {  
  // put your setup code here, to run once:  
}  
  
void loop() {  
  // put your main code here, to run repeatedly:  
}
```

*BTW my program is not called a program.  
It's called a sketch(artsy right? 😊).*

# SOFTWARE



```
void setup()
```

This function runs once and only once, No question asked! It shoots up as soon as Arduino is powered ON.

Remember to use it to initialize variables, pin modes, start using libraries, etc.

# #

It's like when you plan for a trip and you make a list of all the things required for the trip.



# SOFTWARE



```
void loop()
```

This function runs again and again endlessly to eternity (well not exactly but as Arduino has a life cycle).

And it makes sense too, as in each and every situation of our life the process keep on going again and again.



# WHY ME?

because I'm....

fast

**cheap**

**Abundant Libraries**

Cross-Platform



**Wide support for all  
kinds of sensors**

Open-Source

**easy yet complex**

and many more...

I think we have good understanding  
right now

be geared up for more

for any doubts mail me at  
[mail@sahilkhanna.org](mailto:mail@sahilkhanna.org)

**Aloha...**

