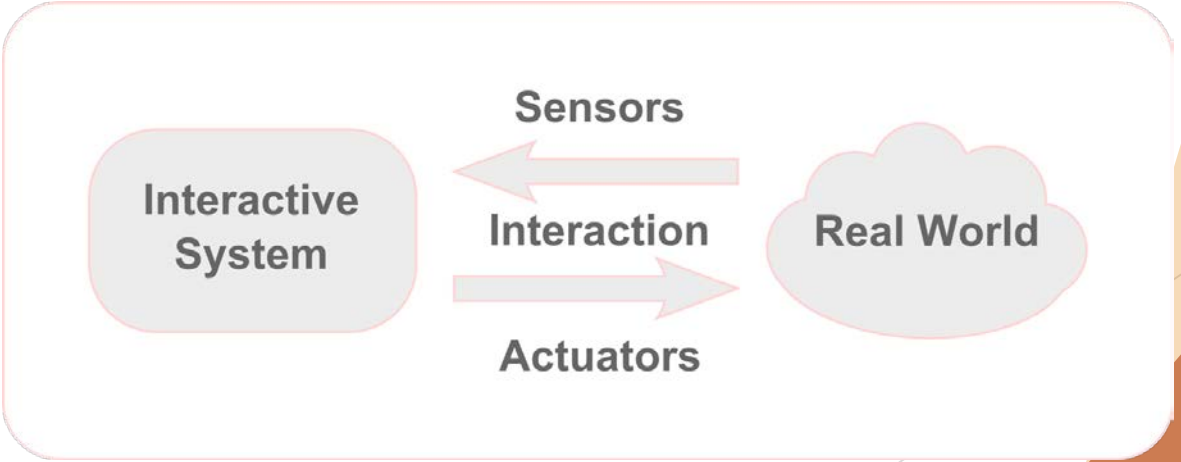
Physical Computing

Physical Computing

means building interactive physical systems by the use of software and hardware that can sense and respond to the analog world.



Physical Computing Examples

- Assistive tech
- Drones
- 3d printers
- Museums
- Fun

https://www.youtube.com/watch?v=H7HTQai7Wwg

https://youtu.be/ApAzIJ3jQtw

https://youtu.be/huxarKnxWU4

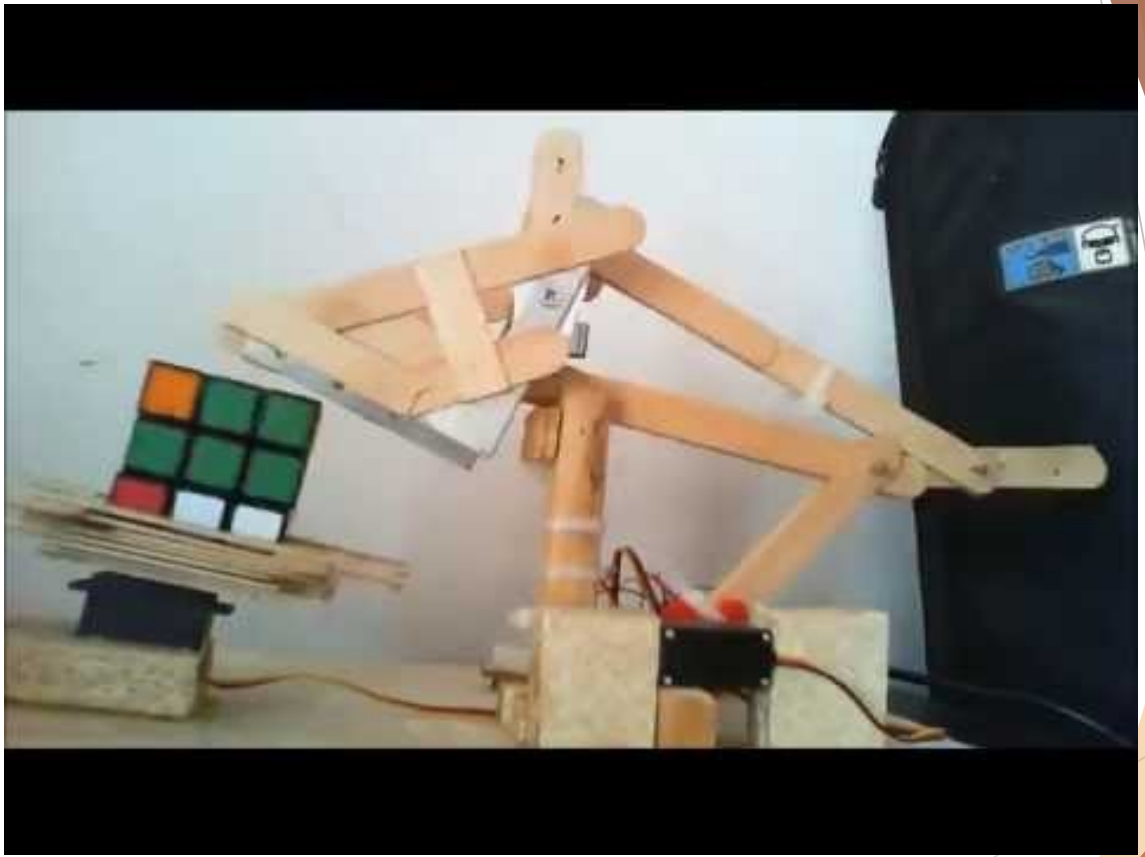
https://youtu.be/AL-L_8PDrEs

https://youtu.be/ROEZs0HpFQc

https://youtu.be/ZtNEPkwCfxA

http://www.watercanary.com/

https://youtu.be/Gqaqaf0YfYM



https://youtu.be/NRRSYEWIQ_w

What is a Micro Controller

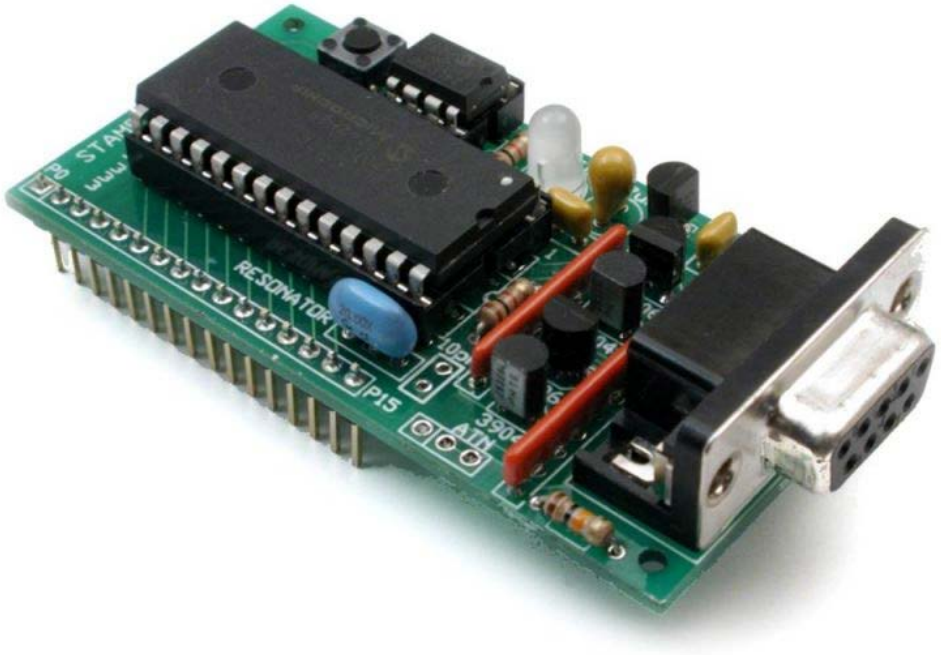
- Small computer on a single integrated circuit containing a processor core, memory, and programmable input/output peripherals.

- Microcontrollers are used in automatically controlled products and devices, such as automobile engine control systems, implantable medical devices, remote controls, office machines, appliances, power tools, toys and other embedded systems.

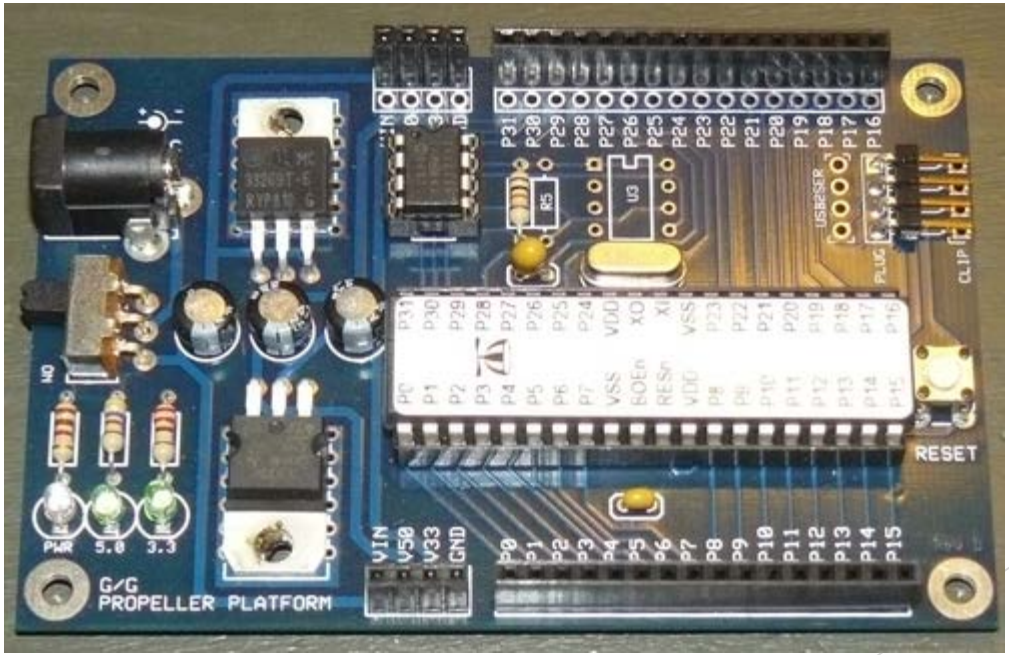
Types of Micro Controller

- Atmel
- Pic
- Propeller Parallax
- ARM

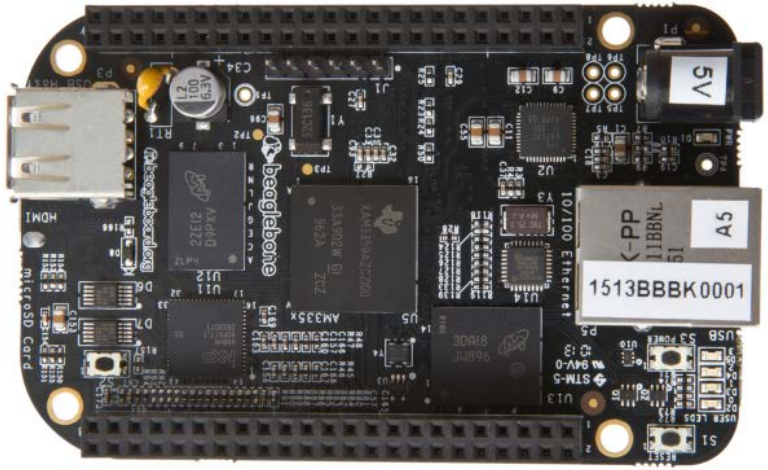
PIC



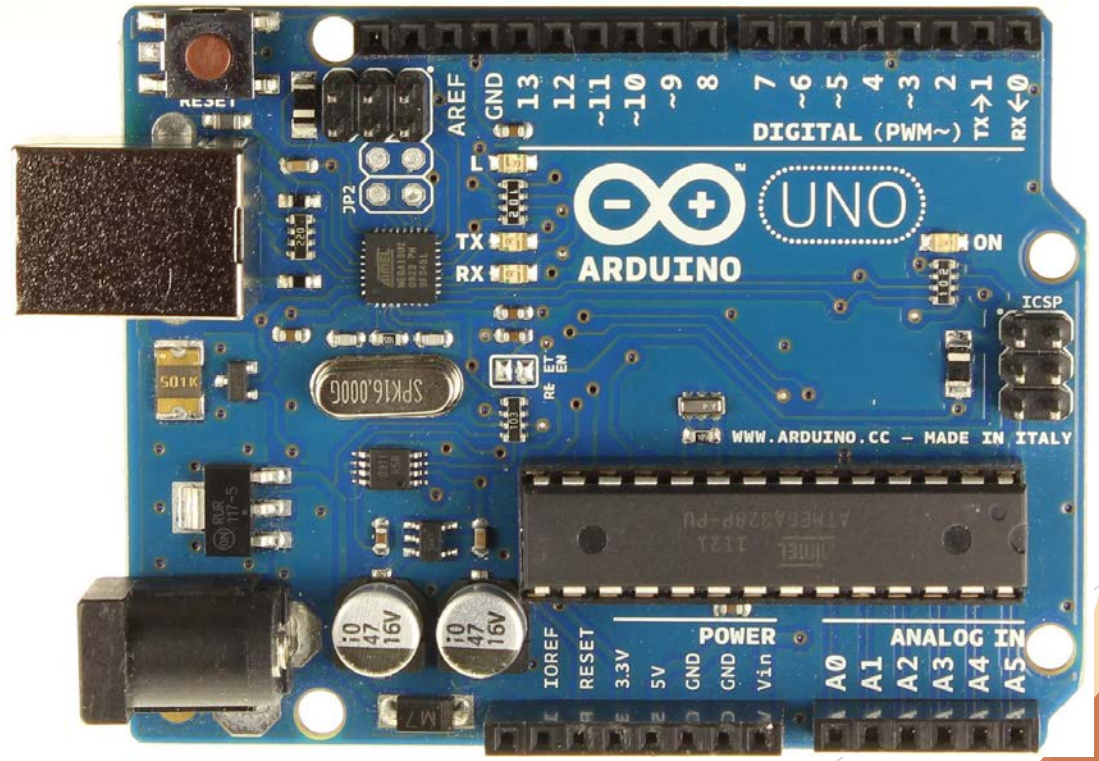
Propellor Parallax



Arm - Beaglebone - Raspberry PI



Atmel - Arduino



Open Source - Software

Open source software is software that can be freely used, changed, and shared (in modified or unmodified form) by anyone. Open source software is made by many people, and distributed under licenses that comply with the Open Source Definition.

Open Source - Hardware

The CERN-OHL is to hardware what the General Public Licence (GPL) is to software. It defines the conditions under which a licensee will be able to use or modify the licensed material. The concept of ‘open-source hardware’ or ‘open hardware’ is not yet as well known or widespread as the free software or open-source software concept. However, it shares the same principles: anyone should be able to see the source (the design documentation in case of hardware), study it, modify it and share it.