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Features of the Arduino UNO

Hands-on Training:
C with Electronics.

The Arduino Uno is a microcontroller board based on the ATmega328. Arduino is an open-source, prototyping platform and its simplicity makes it ideal for hobbyists to use as well as professionals. The Arduino Uno has 14 digital input/output pins (of which 6 can be used as PWM outputs), 6 analog inputs, a 16 MHz crystal oscillator, a USB connection, a power jack, an ICSP header, and a reset button. It contains everything needed to support the microcontroller; simply connect it to a computer with a USB cable or power it with a AC-to-DC adapter or battery to get started.

Microcontroller: ATmega328
Operating Voltage: 5V
Input Voltage (recommended): 7-12V
Input Voltage (limits): 6-20V
Digital I/O Pins: 14 (of which 6 provide PWM output)
>   Serial: 0 (RX) and 1 (TX). External Interrupts: 2 and 3.
>   PWM: 3, 5, 6, 9, 10, and 11.
>   BT Reset: 7. (Arduino BT-only) Connected to the reset line of the bluetooth module.
>   SPI: 10 (SS), 11 (MOSI), 12 (MISO), 13 (SCK). These pins support SPI communication
>   LED: 13. is a built-in LED connected to digital pin 13.

Analog Input Pins: 6 (A0-A5)
DC Current per I/O Pin: 40 mA
DC Current for 3.3V Pin: 50 mA
Flash Memory: 32 KB of which 0.5 KB used by bootloader
SRAM: 2 KB (ATmega328)
EEPROM: 1 KB (ATmega328)
Clock Speed: 16 MHz

Flash memory is an electronic (solid-state) non-volatile computer storage medium that can be electrically erased and reprogrammed. **The program code is stored in the Arduino's flash memory.** Flash memory is nonvolatile,which means that, even if you disconnect the board from its power source, the contents of the remain intact.

SRAM (static RAM) is random access memory (RAM) that retains data bits in its memory as long as power is being supplied. **SRAM is where your program variables (data) get stored during program execution.**

EEPROM (electrically erasable programmable read-only memory) is user-modifiable read-only memory (ROM) that can be erased and reprogrammed (written to) repeatedly. **EEPROM memory is often used to store configuration or other types of information that are needed when the system powers up, but are not often changed.** EEPROM is a little slower to access than flash memory.

Bootloader: A boot loader is a type of program that loads and starts the boot time tasks and processes of an operating system or the computer system.

Life must continue. And continue towards perfection, through progress, evolution, through self-initiative. Impatience can not lead to do that. Frustration is its enemy.