PWM-Anuduino

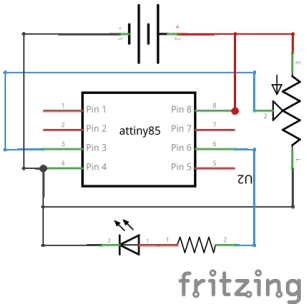
Overview of the experiment

Anuduino has 3 analog pins which can be used for analog input. These inputs take a voltage(0 to 5V) and convert it to a digital number between 0(0 volts) and 1023(5 volts) (10 bits of resolution). A very useful device that exploits these inputs is a potentiometer. When it is connected with 5 volts across its outer pins the middle pin will read some value between 0 and 5 volts dependent on the angle to which it is tuned(ie 2.5 volts in the middle). we can then use the returned values as a variable in our program.

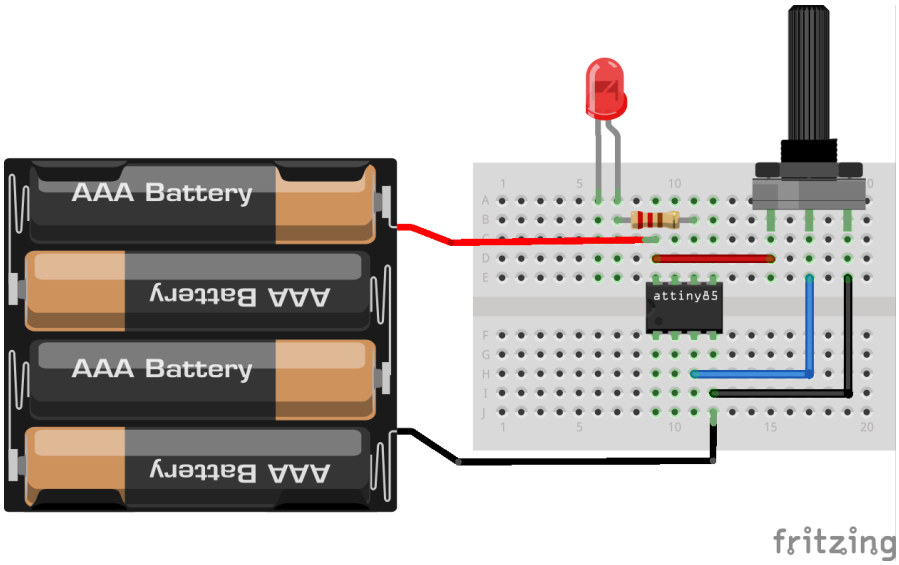
Components required

- Breadboard *1
- Attiny85 *1
- LED *1
- Potentiometer(10k) *1
- Resistor(470 ohm) *1

Schematic



Circuit Diagram



Code

```
int ledPin = 1;      // LED connected to port 1
int analogPin = 2;   // potentiometer connected to adc 2
int val = 0;         // variable to store the read value
int aref = 0;

void setup()
{
 pinMode(ledPin, OUTPUT);   // sets the pin as output
}


void loop()
{
  val = analogRead(analogPin);   // read the input pin

  analogWrite(ledPin,val/4);
}
```