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Introduction To Sensors – Lesson 10: Magnetic Sensor

FORMULAS

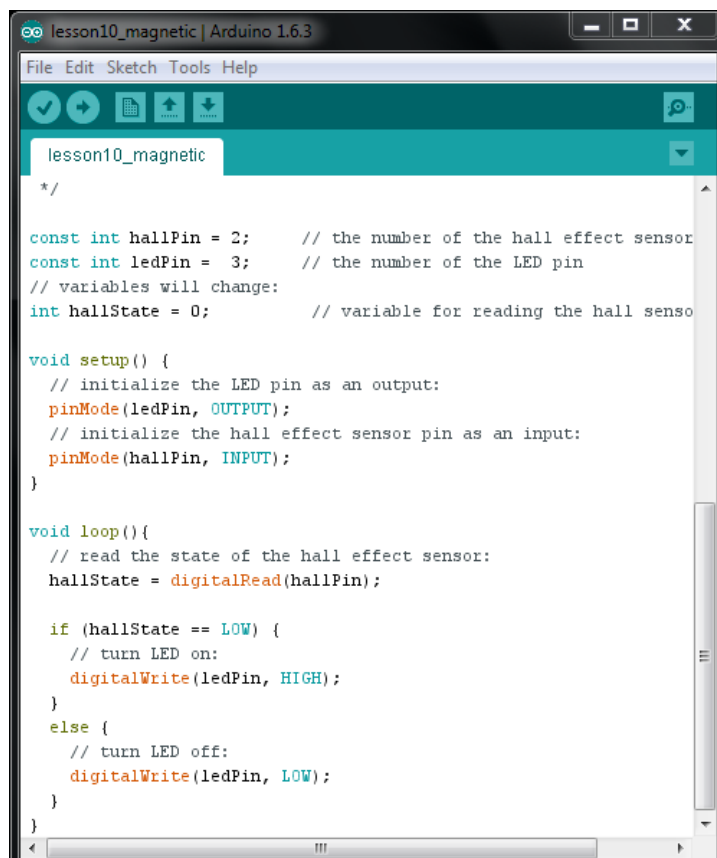
The following formulas and information are meant to go with the online lesson found here:
<http://www.pyroelectro.com/edu/sensors/magnetic/>

LESSON 10 ARDUINO PROGRAM

In this lesson's program we set it up for one input and one output.

The sensor gives input to a digital pin and forces an output from a digital pin which toggles the red LED.

It's a simple program, but make sure you understand each line before you continue to build the experiment.



```
lesson10_magnetic | Arduino 1.6.3
File Edit Sketch Tools Help
lesson10_magnetic
*/
const int hallPin = 2;    // the number of the hall effect sensor
const int ledPin = 3;    // the number of the LED pin
// variables will change:
int hallState = 0;       // variable for reading the hall senso

void setup() {
  // initialize the LED pin as an output:
  pinMode(ledPin, OUTPUT);
  // initialize the hall effect sensor pin as an input:
  pinMode(hallPin, INPUT);
}

void loop(){
  // read the state of the hall effect sensor:
  hallState = digitalRead(hallPin);

  if (hallState == LOW) {
    // turn LED on:
    digitalWrite(ledPin, HIGH);
  }
  else {
    // turn LED off:
    digitalWrite(ledPin, LOW);
  }
}
```

ADDITIONAL INFORMATION

If you have any questions about the formulas or information found in this document, please feel free to head on over to the forums and ask us some questions!

<http://www.pyroelectro.com/forums/viewforum.php?f=27>