Sensors Application Using Pic16f877a Microcontroller

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Sensors Application Using Pic16f877a Microcontroller
14 Huthaifa Ahmad Al_Issa et al.: Sensors Application Using PIC16F877A Microcontroller significantly higher speed and sensitivity compared with macroscopic approaches. Sensor Types and Applications Sensors vary from very plain to highly complex. A simple example of a sensor is a mercury-based glass thermometer.

Sensors Application Using PIC16F877A Microcontroller
Sensors, Microcontroller, Ultrasonic Sensor, Temperature Sensor, Light Sensor, Robot, Distance Measurement To cite this article Huthaifa Ahmad Al_Issa, Saed Thuneibat, Mosa Abdesalam, Sensors Application Using PIC16F877A Microcontroller, American Journal of Remote Sensing .

Sensors Application Using PIC16F877A Microcontroller ...
Hence for every 1 degree increase in temperature there will be a increment of 10m volt in output voltage of LM35 sensor. PIC16F877A microcontroller is used to measure analog voltage value. PIC16F877A microcontroller built in ADC (analog to digital converter) is used to measure analog voltage. PIC16F877A PORTA have seven built in ADC channels.

Temperature Sensor using PIC microcontroller
LDRs can be used to control the shutter speed on a camera. The LDR would be used to measure the light intensity which then adjusts the camera shutter speed to the appropriate level. LDR Sensor Interfacing with PIC16F877A LDR Sensor is a Analog Sensor.

LDR Sensor Interfacing with PIC16F877A | EmbeTronicX
The PIC16F877A microcontroller is the heart of the entire system. It takes the inputs from the LM35 temperature sensor to measure the current room temperature, and then the microcontroller will respond to control the required fan speed. LCD is used to show the room temperature and fan speed.

Automatic Fan Speed Control using PIC16F877A Microcontroller
In this tutorial we are going to see Rain Sensor Interfacing with PIC16F877A. Post Contents1 Prerequisites2 Components Required3 Introduction4 Rain Drop Sensor4.1 Specifications4.2 Working Principle of Rain Drop Sensor5 Rain Sensor Interfacing with PIC16F877A5.1 Connection5.1.1 Rain Sensor5.1.2 LCD5.2 Source Code6 Troubleshooting Rain Sensor Prerequisites Before start this tutorial we should ...

Rain Sensor Interfacing with PIC16F877A | EmbeTronicX
• A/D Result Low Register (ADRESL) • A/D Control Register 0 (ADCON0) • A/D Control Register 1 (ADCON1) Learn more about ADC in PIC Microcontroller here.. Code and Explanation. The complete code for this Digital Thermometer using LM35 and PIC microcontroller is given at the end. The code is self-explained with comment lines and just involves the concept of interfacing a LCD with PIC ...

Digital Thermometer using LM35 and PIC Microcontroller ...
The HC-SR04 is an ultrasonic sensor which can be used to measure distance anywhere between 2cm to 450cm (theoretically). This sensor has proved itself worthy by fitting into many projects which involves obstacles detection, distance measuring, environment mapping etc. At the end of this article you will learn how this sensor works and how to interface it with PIC16F877A microcontroller to measure the distance and display it on the LCD screen.

Interfacing Ultrasonic Sensor HC-SR04 with PIC ...
Sensors are widely used for measurement of temperature. Usually, a temperature sensor converts the temperature into an equivalent voltage output. IC LM35 is such a sensor. Here we describe a simple temperature measurement and display system based on LM35 sensor and PIC16F877A microcontroller.

PIC16F877A-Based Temperature Monitoring System
PIC16f877a finds its applications in a huge number of devices. It is used in remote sensors, security and safety devices, home automation and many industrial instruments. An EEPROM is also featured in it which makes it possible to store some of the information permanently like transmitter codes and receiver frequencies and some other related data.

PIC16F877A Microcontroller Introduction and Features
READ Interfacing DHT11 humidity and temperature sensor with PIC16F877A using pic microcontoller DHT11 needs a start signal from the MCU to start the communication. Therefore, every time the MCU needs to send a start signal to the DHT11 Sensor to request it to send the values of temperature and humidity.

Interfacing DHT11 with PIC16F877A ... - PIC Microcontroller
measurement by using the sensors important in weather monitoring for agricultural. A device for weather monitoring ... 1.3 Pic microcontroller PIC16F877a is a 40-pin PIC Microcontroller and is used mostly in Projects and Applications. Few of its features are as follows:

Smart Agriculture Using Pic Microcontroller and GSM Based ...

PIC16F877A and PIC18F4520 are two such MCUs. Consider the operating voltage of your system. If they are 5V then select a 5V MCU some sensors or devices work and communicate on 3.3V in such case a 3.3V MCU can be selected. If size and price is a limitation then you can choose small 8-pin MCUs like PIC12F508.

PIC16F877A Microcontroller - Components101
The Required Components of Photo Infrared Sensor include IR receiver TSFF5210, Photodiode, 100 ohm resistor, 10k resistor, 10k variable resistor and LM358 IC. IC Lm358 is used as a comparator when IR receiver senses IR radiations. When the o/p of lm358 goes high, then LED connected at the o/p turns ON. The output pin of the IC LM358 is used to interface with PIC microcontroller.

IR Sensor Working and Its Interfacing with Microcontroller
Interfacing PIC16F877A with HC-SR04 ultrasonic sensor – CCS C Distance measurement using PIC16F877A microcontroller and HC-SR04 ultrasonic sensor The distance to an obstacle can be measured with the low cost ultrasonic sensor HC-SR04 (HC-SR05). The HC-SR04 sensor can measure distances form 2 to 400cm with an accuracy of 3mm.

Interfacing PIC16F877A with HC-SR04 ultrasonic sensor - CCS C
Then the microcontroller waits for 60 sec before it starts monitoring the PIR sensor output. This wait time is required for the PIR sensor to stabilize when first powered on. When the microcontroller detects the sensor is triggered, it drives the piezo buzzer with a 3725 Hz square wave. MikroC has built-in library for generating sound (Sound ...

Motion detection alarm using a PIR sensor module with a ...
Interfacing PIC microcontroller with LM35 sensor – mikroC Projects Interfacing PIC16F877A with DS18B20 temperature sensor The DS18B20 sensor is a 3-pin electronic component (like a simple transistor) from Maxim (formerly Dallas) which uses 1-wire protocol to communicate with master device (microprocessor, microcontroller ....).

Interfacing DS18B20 sensor with PIC microcontroller ...
Interfacing PIC16F877A with HC-SR04 ultrasonic sensor Distance measurement using PIC16F877A microcontroller and HC-SR04 ultrasonic sensor The distance to an obstacle can be measured with the low cost ultrasonic sensor HC-SR04 (HC-SR05). The HC-SR04 sensor can measure distances form 2 to 400cm with an accuracy of 3mm.

Interfacing PIC16F877A with HC-SR04 ultrasonic sensor
It is easy to interface LCD displays with PIC16F84A microcontroller using CCS PIC C compiler since the compiler has the LCD driver. There are 7 data lines between the microcontroller and the LCD display which are: RS, R/W, E, D4, D5, D6 and D7. Reference: LCD Datasheet. Micro-controller PIC16F84A and multiplexed 7-Segment display with shift ...

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