**Digital Thermometer**

To build a **temperature display using arduino *and a 16×2 LCD module*** which constantly monitors temperature around the measurement field/range of LM35 and displays the same on LCD module

**LM35** is an analog, linear temperature sensor whose output voltage varies linearly with change in temperature. LM35 is three terminal linear temperature sensor from National semiconductors. It can measure temperature from***-55 degree Celsius to +150 degree Celsius.*** The voltage output of the LM35 increases 10mV per degree Celsius rise in temperature. LM35 can be operated from a 5V supply and the stand by current is less than 60uA. The pin out of  LM35 is shown in the figure below

Our arduino uno has an in built 10 bit ADC (6 channel). We can make use of this in built ADC of arduino to convert the analog output of LM35 to digital output. Since Arduino uno has a 6 channel inbuilt ADC, there are 6 analog input pins numbered from A0 to A5. Connect analog out of LM35 to any of these analog input pins of arduino.



