The DS18B20 is a temperature sensor which has a built in analog-to-digital convertor (ADC). It has 12bit ADC. It can be connected to a raspberry pi’s gpio pins. It is a 3 pin sensor. Pin 3 acts as power line (vdd pin 3), pin1 as ground and pin 2 is actual data-output (DQ pin 2) pin. The DQ requires a 4K7 pull-up resistor. It has a temperature range from -55degree Celsius to +125degree Celsius. Pin 1 of DS18B20 is connected to gpio pin number 6, pin 2 to gpio pin number 7 and pin 3 to gpio pin number 1 .PHP: hypertext preprocessor language is used to read data output of DS18B20. To see this output on screen attached with pi we have to run these lines of code:-

1. Cd/sys/bus/w1/devices/28-00000658775b
2. Cat w1\_slave

The output of this would be somewhat like this:-

D2 01 4b 46 7f ff 10 6d : crc=6d YES

D2 01 4b 46 7f ff 10 6d t=29125

PHP code to read sensor data:-

<? Php

//file to read

$file=’sys/bus/w1/devices/28-00000658775b/w1\_slave’;

//read the file line by line

$lines=file($file);

// get the temp from second line

$temp=explode(‘=’, $lines[1]);

//setup formatting (in decimal form)

$temp=number\_format($temp[1]/1000,1,’.’,’ ’);

echo $temp;

?>

In the variable named temp we have current temperature in degree Celsius form. The above code is executed again and again using a JavaScript function so that we have updated value of temperature. For further manipulation this variable is responsible.