

Assignment No. 02

Write-up	Correctness of Program	Documentation of Program	Viva	Timely Completion	Total	Dated Sign of Subject Teacher
4	4	4	4	4	20	

Date of Performance: _____ Date of Completion _____

Problem Statement: Understanding the connectivity of the Arduino UNO circuit with temperature sensor.

Objectives:

To Learn the interfacing of LM35, with Arduino UNO

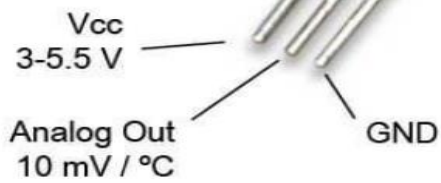
Outcome:

After completion of this assignment students will be able to understand the use of LM35 with the Arduino UNO and use of functions like void setup() and void loop (),Serial.println().

Software & Hardware Requirements:

1. Operating System: Windows (XP/Vista/7/10)
2. Software: Arduino IDE 1.8.3
3. Hardware: Raspberry -pi,,Arduino UNO, LM35,Patch Cords, USB cable type A/B.

Theory; **Use** **link** **for**
content:https://www.tutorialspoint.com/arduino/arduino_temperature_sensor.htm



```
int tempPin = 1;
void setup()
{
  Serial.begin(9600);
}
void loop()
{
  val = analogRead(tempPin);
  float mv = ( val/1023.0)*5000;
  float cel = mv/10;
  float farh = (cel*9)/5 + 32;
  Serial.print("TEMPRATURE = ");
  Serial.print(cel);
  Serial.print("*C");
  Serial.println();
  delay(1500);
  /* uncomment this to get temperature in farenhite
  Serial.print("TEMPRATURE = ");
  Serial.print(farh);
  Serial.print("*F");
  Serial.println();
  */
}
```

```

sketch_nov19a
int val;
int tempPin = 1;

void setup()
{
  Serial.begin(9600);
}
void loop()
{
  val = analogRead(tempPin);
  float mv = (val/1023.0)*5000;
  float cel = mv/10;
  float farh = (cel*9)/5 + 32;
  Serial.print("TEMPERATURE = ");
  Serial.print(cel);
  Serial.print("°C");
  Serial.println();
  delay(1500);
}
/* uncomment this to get temperature in farenhite
Serial.print("TEMPERATURE = ");
Serial.print(farh);
Serial.print("°F");
Serial.println();
*/

```

00:16:58.278 -> TEMPERATURE = 32.75°C
00:16:59.772 -> TEMPERATURE = 33.24°C
00:17:01.263 -> TEMPERATURE = 33.24°C
00:17:02.758 -> TEMPERATURE = 32.75°C
00:17:04.286 -> TEMPERATURE = 33.72°C
00:17:05.775 -> TEMPERATURE = 32.75°C
00:17:07.267 -> TEMPERATURE = 32.75°C
00:17:08.761 -> TEMPERATURE = 32.26°C
00:17:10.290 -> TEMPERATURE = 32.75°C
00:17:11.786 -> TEMPERATURE = 32.26°C
00:17:13.277 -> TEMPERATURE = 30.79°C
00:17:14.803 -> TEMPERATURE = 32.26°C
00:17:16.294 -> TEMPERATURE = 31.77°C
00:17:17.786 -> TEMPERATURE = 31.77°C
00:17:19.280 -> TEMPERATURE = 31.77°C

Sketch uses 3432 bytes (10%) of program storage space. Maximum is 32256 bytes.
Global variables use 216 bytes (10%) of dynamic memory, leaving 1832 bytes for local variables. Maximum is 2048 bytes.

Current humidity = 84.00% temperature = 22.00C
Current humidity = 85.00% temperature = 22.00C
Current humidity = 85.00% temperature = 22.00C
Current humidity = 85.00% temperature = 22.00C
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Current humidity = 86.00% temperature = 22.00C
Current humidity = 85.00% temperature = 22.00C
Current humidity = 85.00% temperature = 22.00C
Current humidity = 85.00% temperature = 22.00C
Current humidity = 85.00% temperature = 22.00C
Current humidity = 85.00% temperature = 22.00C

Output:

Instructions :

Handwritten write-up as follows :

- Name of Student: Batch:T1/T2
- Subject:LP-1
- Assessment table
- Title
- Objectives
- Problem statement
- Software and hardware requirements
- **Theory :**
- What is Use of Temperature sensor?
- What are feature of LM35 Tempatrure Sesor?
- Application of LM35 Sensor?

Attach Program code and Its Output

