Q) Display Temperature in Celsius and Fahrenheit on LCD use TMP36 sensor. Also make the LED bar which turn on as temperature increases. Watch recorded video for detail description.

ANSWER:

#include <LiquidCrystal.h>

int pinTemp = A0;

int yellow = 13;

int orange = 10;

int blue = 9;

int green = 8;

int red = 7;

LiquidCrystal lcd(12, 11, 5, 4, 3, 2);

void setup() {

lcd.begin(16, 2);

pinMode(pinTemp,INPUT);

pinMode(yellow,OUTPUT);

pinMode(orange,OUTPUT);

pinMode(blue,OUTPUT);

pinMode(green,OUTPUT);

pinMode(red,OUTPUT);

analogReference(INTERNAL);

delay(1000);

}

void loop() {

int reading = analogRead(A0);

float tempC = reading/9.31;

float tempF = (tempC \* 9.0 / 5.0) + 32.0;

lcd.setCursor(0,0);

lcd.print(tempC);

lcd.println("C");

lcd.setCursor(0,1);

lcd.print(tempF);

lcd.println("F");

delay(100);

if(tempC == 9 || tempC < 29)

{

digitalWrite(yellow,HIGH);

digitalWrite(orange,LOW);

digitalWrite(blue,LOW);

digitalWrite(green,LOW);

digitalWrite(red,LOW);

}

else if (tempC == 29 || tempC < 49)

{

digitalWrite(yellow,HIGH);

digitalWrite(orange,HIGH);

digitalWrite(blue,LOW);

digitalWrite(green,LOW);

digitalWrite(red,LOW);

}

else if (tempC == 49 || tempC < 69)

{

digitalWrite(yellow,HIGH);

digitalWrite(orange,HIGH);

digitalWrite(blue,HIGH);

digitalWrite(green,LOW);

digitalWrite(red,LOW);

}

else if (tempC == 69 || tempC < 89)

{

digitalWrite(yellow,HIGH);

digitalWrite(orange,HIGH);

digitalWrite(blue,HIGH);

digitalWrite(green,HIGH);

digitalWrite(red,LOW);

}

else if (tempC == 89 || tempC < 109)

{

digitalWrite(yellow,HIGH);

digitalWrite(orange,HIGH);

digitalWrite(blue,HIGH);

digitalWrite(green,HIGH);

digitalWrite(red,HIGH);

}

}

Q1) What is the range that lm35 can read temperature between?

ANSWER:

LM35 can read Temperature between −55°C to 150°C.

Q2) Is LM35 digital or analog sensor?

ANSWER:

LM35 is an Analog sensor.

Q3) What is meant by ADC?

ANSWER:

ADC means ANALOG TO DIGITAL CONVERTER. This device can take analog signals like electric signals and digitize them into binary format.