**Coding**

**Using Simple IF-ELSE LOGIC**

*// Digital Data Acquisition – Spring 2015 (NUST UNIVERSITY)*

*// End Semester Project*

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*#include <LiquidCrystal.h>*

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

*// initialization*

*int fan = 6;*

*int bulb = 8;*

*int ldrpin = 9;*

*float temp;*

*int temppin=0;*

*int ldrstate = 0;*

*void setup()*

*{*

*pinMode (fan, OUTPUT);*

*pinMode (bulb, OUTPUT);*

*pinMode (ldrpin, INPUT);*

*Serial.begin (9600); // Setting the Baud Rate*

*lcd.begin (16, 2); // Activating both Rows of LCD*

*lcd.print (“NUST PNEC”);*

*delay (5000); // 5 Seconds Delay*

*lcd.clear();*

*lcd.print (“SPRING 2015”);*

*delay (5000);*

*lcd.clear();*

*lcd.print (“DDAC”);*

*delay (5000);*

*lcd.clear ();*

*lcd.print (“by”);*

*delay (5000);*

*lcd.clear ();*

*lcd.print (“Cdr. Dr. Aleem”);*

*delay (5000);*

*lcd.clear ();*

*lcd.print (“And”);*

*delay (5000);*

*lcd.clear ();*

*lcd.print (“Cdr. Dr. Attaullah”);*

*delay (5000);*

*lcd.clear ();*

*lcd.print (“Semester Project”);*

*delay (5000);*

*lcd.clear ();*

*lcd.print (“INCUBATOR”);*

*delay (5000);*

*lcd.clear ();*

*lcd.print (“Group Members”);*

*delay (5000);*

*lcd.clear ();*

*lcd.print (“M. Ali Farooq”);*

*delay (5000);*

*lcd.clear ();*

*lcd.print (“M. Aatif Mobeen”);*

*delay (5000);*

*lcd.clear ();*

*lcd.print (“S. M. Afaq Khan”);*

*delay (5000);*

*lcd.clear ();*

*lcd.print (“Initialization”);*

*delay (5000);*

*lcd.clear ();*

*lcd.print (“Temperature = ”);*

*}*

*void loop ()*

*{*

*ldrstate = digitalRead (ldrpin); // Reading the LDR State*

*temp = analogRead (tempPin); // Reading the Temperature*

*temp = temp\*0.48828125; // Conversion Factor*

*delay (1000);*

*Serial.printIn (temp); // Printing in Serial Monitor*

*Serial.printIn (“Centigrade”);*

*lcd.serCursor (0, 1); // Selecting the LCD Cursor to 1st Line*

*lcd.print (temp);*

*lcd.print (“Centigrade”);*

*if (ldrstate == HIGH)*

*{*

*if (temp>36) // Maintaining the Range 32 – 36.*

*{*

*digitalWrite (fan, HIGH);*

*digitalWrite (bulb, LOW);*

*}*

*else if (temp<32)*

*{*

*digitalWrite (fan, LOW);*

*digitalWrite (bulb, HIGH);*

*}*

*else*

*{*

*digitalWrite (fan, LOW);*

*digitalWrite (bulb, LOW);*

*}*

*}*

*else*

*{*

*if (temp>36)*

*{*

*digitalWrite (fan, HIGH);*

*delay (800);*

*digitalWrite (fan, LOW);*

*delay (200);*

*digitalWrite (bulb, LOW);*

*}*

*else if (temp<32)*

*{*

*digitalWrite (fan, LOW);*

*digitalWrite (bulb, HIGH);*

*}*

*else*

*{*

*digitalWrite (fan, LOW);*

*digitalWrite (bulb, LOW);*

*}*

*}*

*}*