SCADA SYSTEM

***AIM:***

*In this Arduino based project we are going to build a temperature controlled fan using* ***LM35 Sensor*** *and Arduino.*

***HARDWARE:***

***The hardware we are using***

* *LM35 sensor*
* *Breadboard*
* *Arduino board*
* *12v DC motor with controller*
* *Combination circuit*
* *LCD (16x2)*
* *Jumper wire*

***WORKING:***

Temperature sensor LM35 senses the temperature and converts it into an electrical (Analog) signal, which is applied to the ATmega328 microcontroller of the Arduino UNO Board. The Analog value is converted into a digital value. Thus the sensed values of the temperature and speed of the fan are displayed on the LCD. When the temperature exceeds 30°C the fan starts rotating.

***CONCLUSION:***

This automatic fan also uses a sensor namely the LM35 sensor as a tool for detecting the temperature in this Automatic Fan project. The fan operates at a temperature of 30 o C for the first fan and 35 o C for the second fan. Thus, **when the temperature is below 30 o C, the fan will stop moving or rotating**.

***FUTURE SCOPE:***

As we know that automatic system and automation is the requirement of today's technology. We are moving toward automation day after day. It is one of the tending topic. So in this project we will provide two functions. First one is, control the turned on/off the fan with respect to the human detection rather than the use of manual switching system. Other function is control the speed of a fan with respect of temperature set. In this project Arduino Uno forms the processing part. Which firstly detect the human with the use of PIR sensor and senses the temperature with the use of LM35(Temperature sensor). Arduino Uno senses the temperature and control the speed with the set temperature. This is set by the user. When the current temperature is greater than or equal to the set temperature the fan turned on otherwise it will stay off. For turning on here should be two condition supposed to be true. One is object detection and other one is temperature should be appearing at set temperature. After turning on the fan speed will be change accordingly with temperature. Whenever the temperature will be increase fan speed will be increase