**SECURE IOT PLATFORM FOR INDUSTRIAL AUTOMATION**

**AIM:**

The main aim of this project is to design a SCADA system to monitor and control various environmental parameters.

**PURPOSE:**

The purpose of the project is to monitor the environmental parameters as well as control those corresponding appliances.

**BLOCK DIAGRAM:**

**LDR**

**TEMPERATURE SENSOR**

**GPRS**

**BULB**

**DC FAN**

**POWER SUPPLY**

**RELAY**

**LCD DISPLAY**

**MICRO CONTROLLER**

**SMOKE SENSOR**

**BUZZER**

**DRIVER CIRCUIT**

 **Power Supply:**

**STEP DOWN**

**TRANSFORMER**

**BRIDGE**

**RECTIFIER**

**FILTER**

**CIRCUIT**

**REGULATOR SECTION**

**DESCRIPTION:**

The project is designed to implement a SCADA system, to monitor and control the various environment parameters. Here, the parameters are temperature, humidity, smoke and light. These parameters are sensed by using relevant sensors. Basically, the sensors are physical quantities, which are giving values in analog form. But Microcontroller is a digital circuit, which understands the values in digital format only. So, by using ADC, which can convert the values from analog to digital will interface to Microcontroller.

Now, the ARM Microcontroller has the values of parameters and this will be displayed on PC as well as LCD. The buzzer will buzz if the sensors values exceed the threshold limit. Based upon these values we can control the corresponding appliances like turn ON or OFF and also update the data into WEB page by using GPRS MODEM.

**HARDWARE USED:**

* Microcontroller
* Power Supply
* Light intensity sensor
* Temperature sensor
* Smoke sensor
* Relay
* Fan
* Buzzer
* GPRS MODEM
* LCD display

**SOFTWARE TOOLS:**

* Keil uvision
* Express PCB
* Flash magic

**RESULT:**

By using this project we can implement a SCADA system, to monitor and control the various environmental parameters.