BLUETOOTH BASED HOME AUTOMATION

AIM:

Design and Development of Bluetooth based home Automation.

PURPOSE:

In homes and offices, there is lot of loads. Which is need for daily activity? All these loads are in various places. Controlling switch boards are far away from loads. While operating loads it is very difficult to find out whether they are ON or not, especially if they are far away. Here we propose solution like Bluetooth based home automation.

DESCRIPTION:

This project includes Bluetooth (HC-05) module, which is connected to Arduino through UART interface. Three loads connected to Arduino digital pins which are Bulb, LEDs and fan respectively through relays.

WORKING:

User can control loads from Bluetooth Application. Here we have customized app in our mobile. It has buttons on screen. By pressing keys we can control Bulb, fan, and LEDs respectively. All these loads status displayed on 16X2 LCD and in APP screen. Here we used own customized app and we can keep our college name on top of app screen.

TECHNICAL SPECIFICATIONS:

HARDWARE:

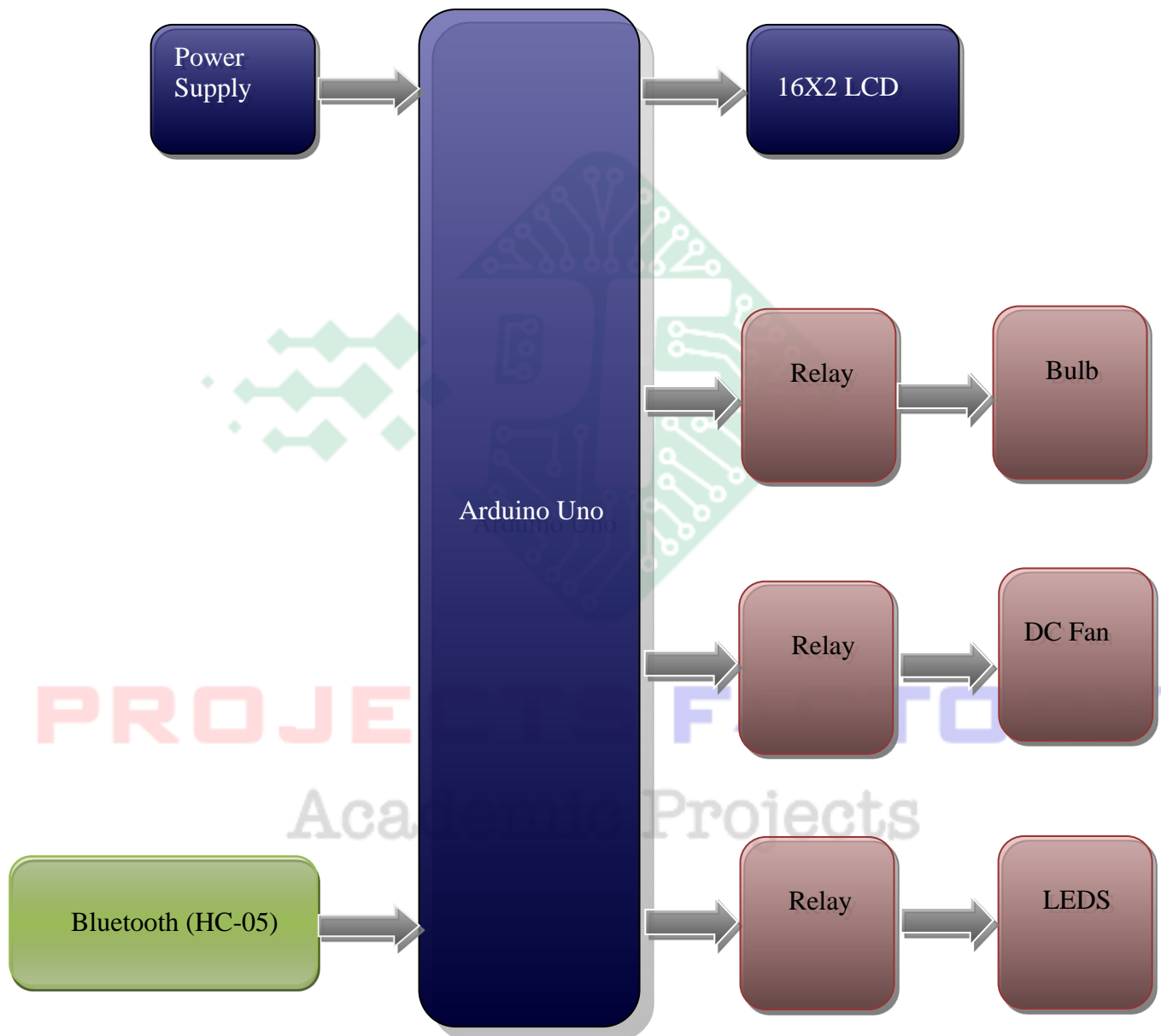|		
Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
Bluetooth	:	HC-05
Bulb	:	AC 230V
Fan	:	DC 12V
LED	:	DC LED 3.3V
Relay	:	12v DC Coil type
Power Source	:	12v 2 amp Adaptor

SOFTWARE:

Arduino IDE

Proteus based circuit diagram

APPLICATIONS:

- ➢ Home Appliances
- ➢ Industrial Applications

BLOCK DIAGRAM:

POWER SUPPLY BLOCKDIAGRAM:

Step down Transformer → Bridge Rectifier → Filter → Regulator → Output
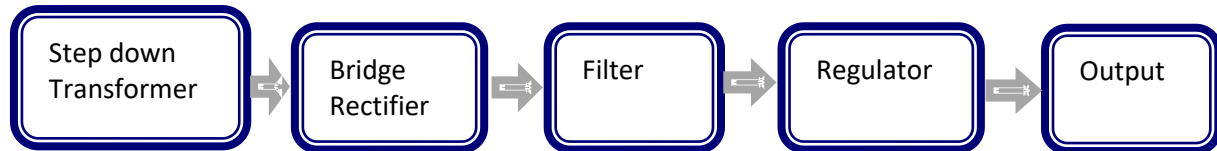
INTERFACES COVERD:

- We have covered Bluetooth (HC-05) module interfacing
- 12V DC Relays with loads like Light, Fan and LEDs