

BLUETOOTH BASED COLLEGE BELL WITH RTC

AIM:

Design and Development of Bluetooth based college bell with RTC.

PURPOSE:

Alarm systems are need for schools, colleges and offices. Still in so many places manual process used, particularly in schools. We can avoid manual involvement with electronic system. We want to implement college bell using RTC with Bluetooth communication.

DESCRIPTION:

This project includes Bluetooth (HC-05) module, which is connected to Arduino through UART interface. RTC Module (DS1307) connected to Arduino I2C port. Relay can control AC bulb which is connected to Arduino digital pin.

WORKING:

In this project we can change date and time from Bluetooth app. Here time is in 24 hours format. User can set 9 alarms from Bluetooth application. These alarm values saved in EEPROM memory of Arduino. While RTC running, If any alarm gets triggered then buzzer will be ON along with light. RTC time displayed on 16X2 LCD display. We can change time from Bluetooth app if it corrupts.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
Bluetooth	:	HC-05
RTC	:	DS1307
Buzzer	:	DC 5V
Relay	:	DC 12V
Bulb	:	AC 230V
Power Source	:	12v 2 amp Adaptor

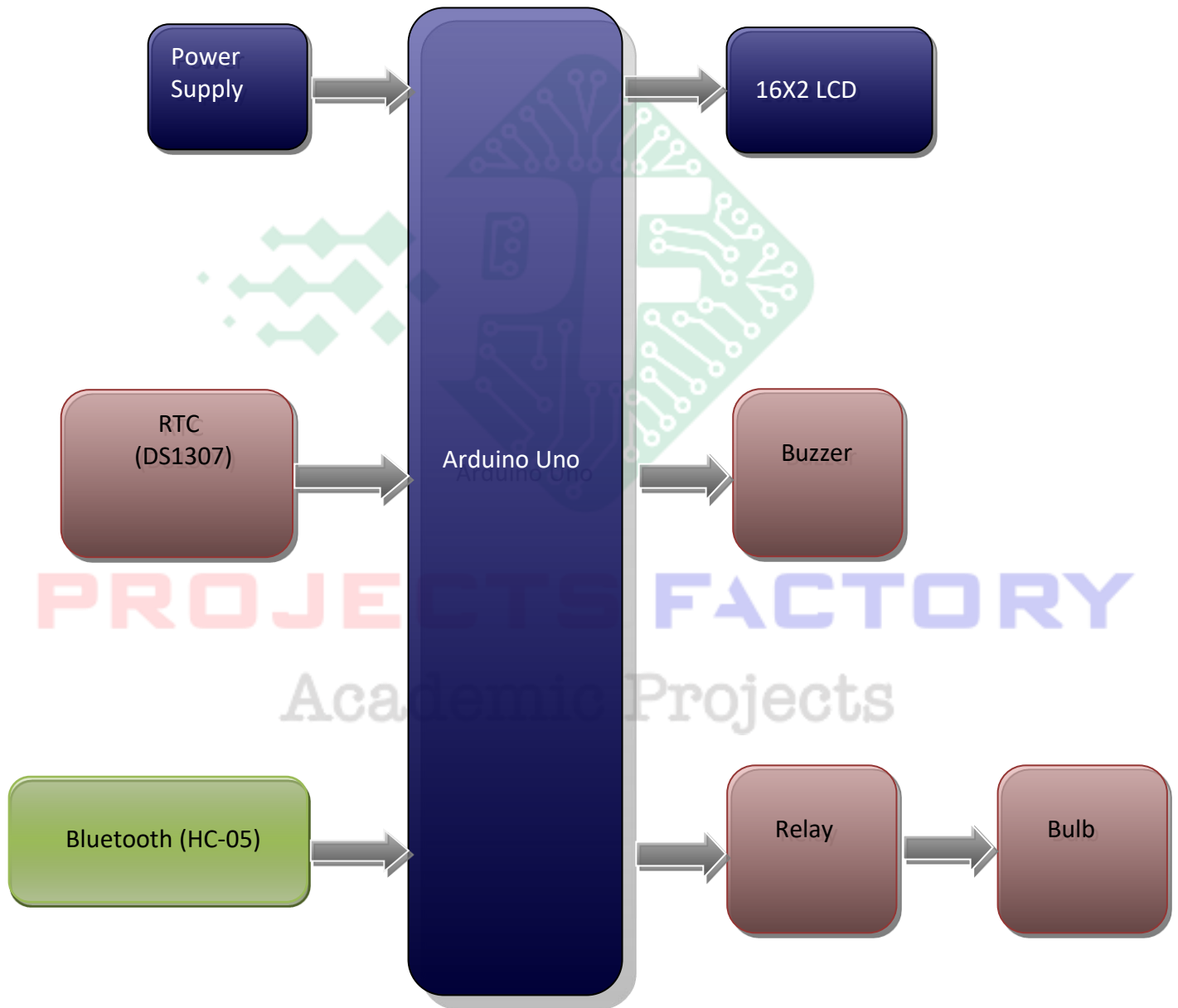
SOFTWARE:

Arduino IDE
Proteus based circuit diagram

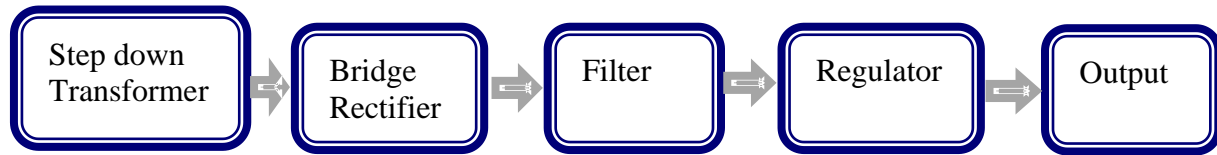
APPLICATIONS:

- School Bell Applications
- Timer Applications

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERED:

- We have covered Bluetooth (HC-05) module interfacing
- Relay with light interface
- RTC DS1307 Interface



PROJECTS FACTORY
Academic Projects