AUTOMATIC COLLEGE BELL RING SYSTEM

DESCRIPTION:

Manual operation of school bell / college bell is a mundane task prone to human errors. If the bell operator forgets to ring it for a specific period, or delayed to ring the bell, it will create disturbances for the entire institution. Automatic Periodic College Bell is the only solution to avoid all these problems.

This project is very useful in schools, colleges and educational / academic institutions for automation of periodic class bell. This bell rings only at preprogrammed timings. As the C# front end is used, the entire calendar can be programmed into the C# application. User set the alarm in software. According to that set values alarm will on. Microcontroller is connected to PC through serial communication. C# application always interact with serial port and according to alarm set values application gives signals to microcontroller. Microcontroller takes values from serial port and generates alarm through buzzer (or relay). In C# application we can set 10 alarms at a time.

This project uses regulated 5V, 500mA power supply. Unregulated 12V DC is used for relay. 7805 three terminal voltage regulator is used for voltage regulation. Full wave bridge rectifier is used to rectify the ac output of secondary of 230/12V step down transformer. Max-232 is used as a serial driver. It supports different types of baud rates (1200, 2400, 4800, 9600……) in kbps.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Micro controller   :   AT89X series

Crystal   :   11.0592 MHz

Serial driver   :   Max-232

Buzzer

Relay   :   12V relay, Electro Mechanical

Power supply

Transformer   :   12V step down

Filter   :   1000uf/25V

Voltage Regulator   :   7805

SOFTWARE:
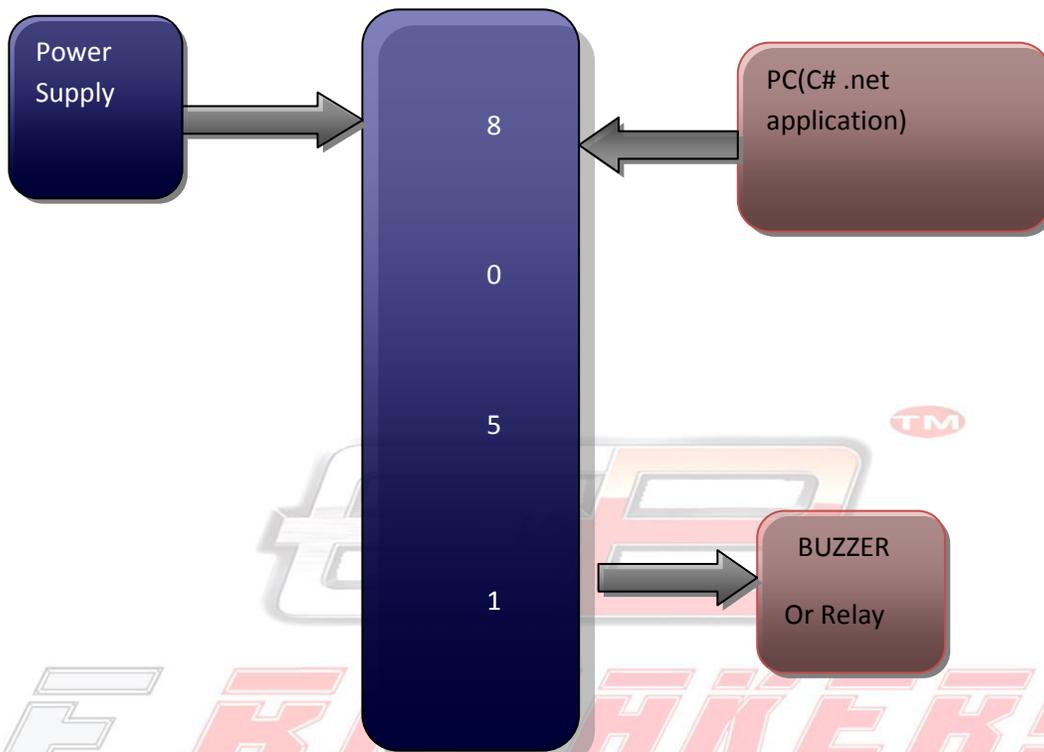
Keil micro vision

Proteus

UC flash

C# .net application

APPLICATIONS:

- ➢ Schools
- ➢ Colleges
- ➢ Educational institutes

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BLOCK DIAGRAM:

Power Supply	→ 8 0 5 1 ←	PC(C# .net application)
	→	BUZZER Or Relay

POWER SUPPLY BLOCK DIAGRM:

Step down Transformer → Bridge Rectifier → Filter → Regulator → Output