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LED SCORILING DISPLAY USING THE MICROCONTROLLER

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ABSTRACT
Now a days display is most important thing/ organization or public utility places like hospitals, Railway stations, collages,hotels,shopsand parks. sticking paper is easy but naturally disaster. This project deals about an advance and easy display board .The project is built by using AT89C51 micro controller from 8051families. Using microcontroller board we can easily implement the design..

KEYWORDS:Microcontrollerboard,Transistor, Array,Led,ULN2803,CD4094

INTRODUCTION
Looking back history of scrolling display, first come across the development of microprocessor, but the stand alone microprocessor is not self-sufficient. It requires other components like memory and I/O devices and various peripherals to form a workable led scrolling display. The device which contains a microprocessor,buses,memory,i/o ports is called asmicrocontroller.there are many limitations in microprocessor hence we use microcontroller. The latest versions of 8051 families are 8051 and 89c51,89c52have on-chip EPROM,EEPROM. So data is easily rewritable ,sowe are using AT89C51.LEDS are popular for many reasons and various specifications, they operated in low voltage commonly 0.7v, led'sare compatible with system. The main advantage is small rugged,multicolour,Lightweight.they are highly reliable and have lifespan more than 1, 00,000 Hours.A PN Junction Diode can emit light or exhibit electro luminescence .the light emitting process is done byrecombination of holes and electron.In LED'sthe forward biasing higher energy of electron are required for diode, electrons are injected in 'n' region .and holes injected in the p-region. The electrons and holes then recombine with the majority carrier near the junction. In all directionsrecombination radiation is emitted, with most of light.

MATERIALS AND METHODS
1.Microcontroller board.
2.Transistor Array.
3.Led.
4.ULN2803:
This is a relay driver IC.
Features:
1.thisic Output current (single output)500 mA (max)
2.High sustaining voltage output is 50 V (min)
3.It has Output clamp diodes
4.With various types of logic Inputs iscompatible
6.capacitor.
7.connector.
8.crystal.
9.Pcb
10.Power Supply.
11.RS 232(serial communication): This is use to transfer data system todevice and vise vesa
12.Tronsformer.
13.Diodes
14.AT89c51:

This is 40 pin IC.it has 4 port which is act as input as well as output. It has two 16 bit timers. It has 16 address bus and 8 data bus.It has 21 sfr.this IC is hard of led scrolling display.

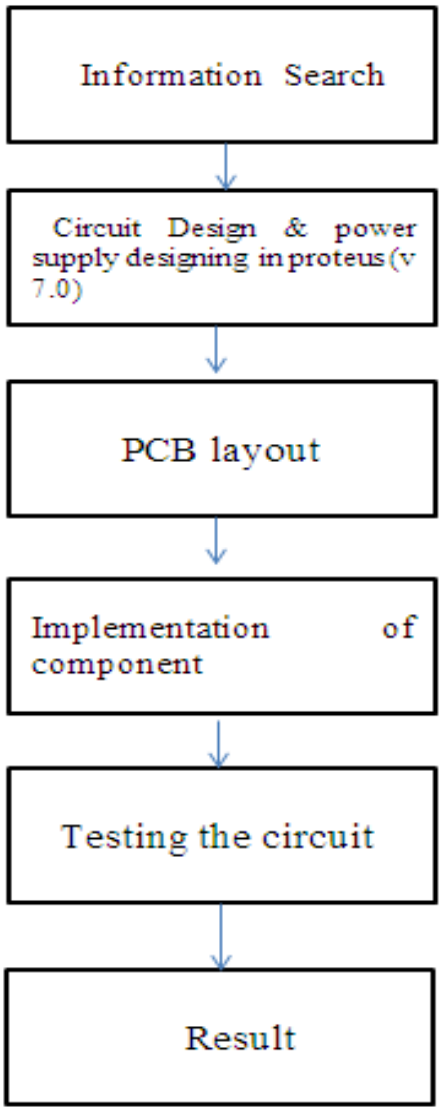

Fig 1

FUTURE SCOPE

1.This project indicate that there is fastest growth in electronic field.
2.This project replace the methods like banners, wall posters,using unnecessary paper…etc
3. By using solar energy systems we can overcome lack of power supply
4.We can display more characters by using external memory.
5.To eliminate noise we can use noise filters.
6.we can increase size of display board using more leds.

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BLOCK DIAGRAM

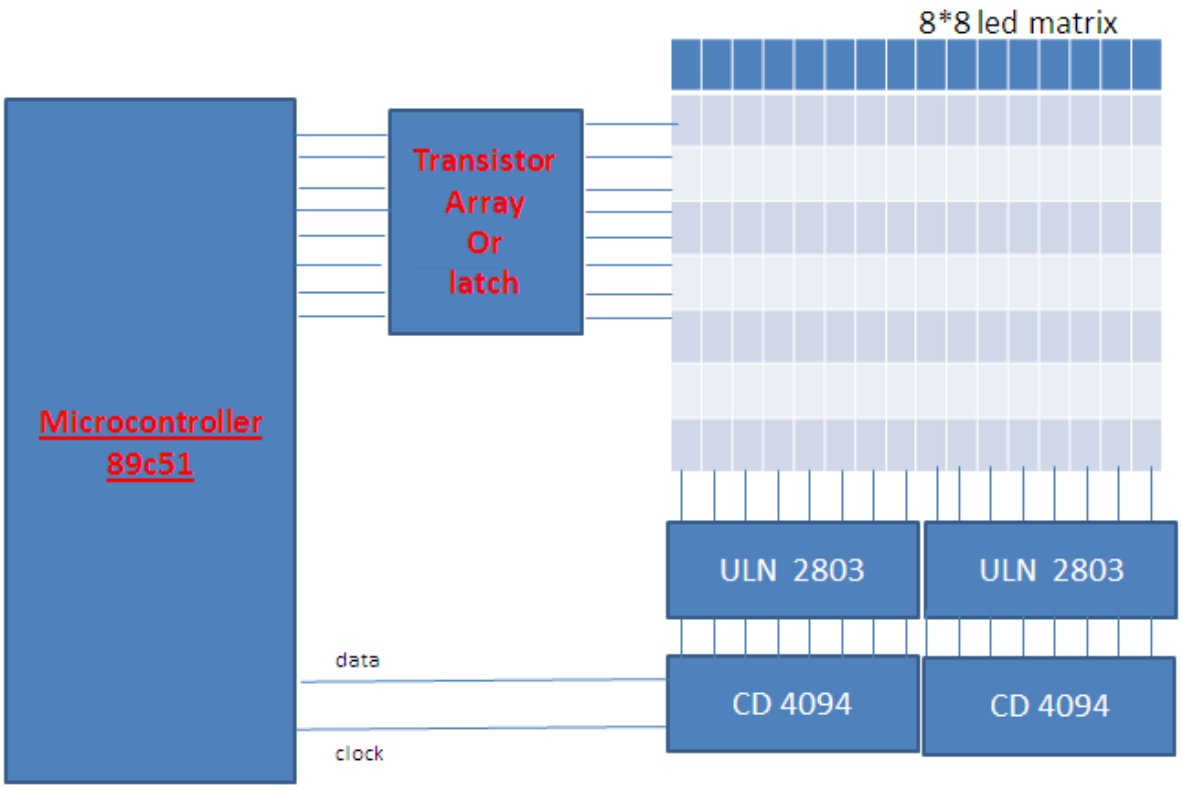
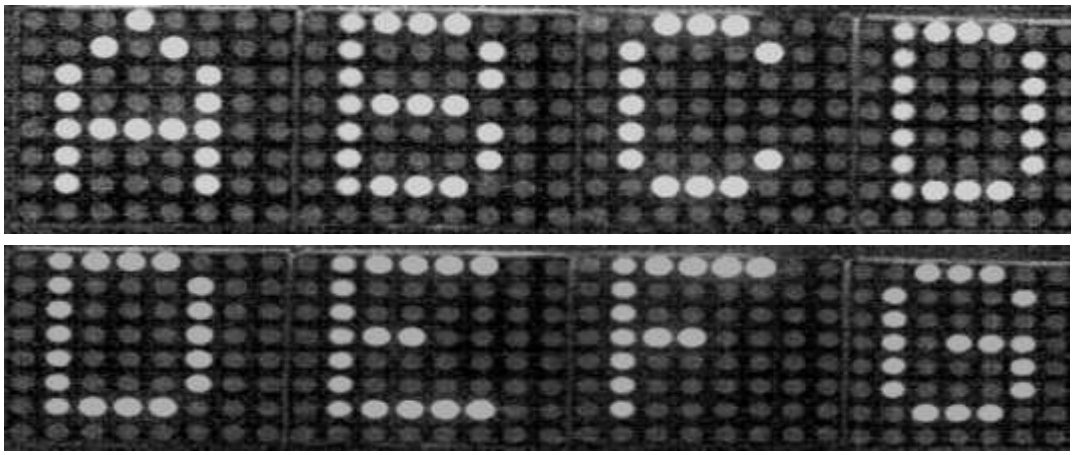


Fig2

. RESULTS

When we entered the message in system it displayed in display board, scrolling from right to left.
The following figure indicate the working of led's



CONCLUSION

This project indicate that ,we can use led scrolling display in various places such as any organization or public utility places like hospitals, Railway stations, collages,hotels,shopsand parks.

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