MICROCONTROLLER BASED LIFT SYSTEM

Jayshree sahu*Dr Amita MahorDr S.k.sahu*****

***NIIIST Bhopal M.P**NIIST Bhopal M.P.**

***** Neelam collegeof engg. &Technology Agra**

ABSTRACT-This paper presents the microcontroller based lift system using microcontroller chip AT89C52 based on messege scheduling which basically belongs to data based system in which change in one operation is visible to other concurrent operation ,in which user can programme each set by entering no of series of text date time etc in data base system which can be performed on the priority basis.

INDEX ITEM-Introduction Block diagram,circuit diagram,circuit description,algorithm

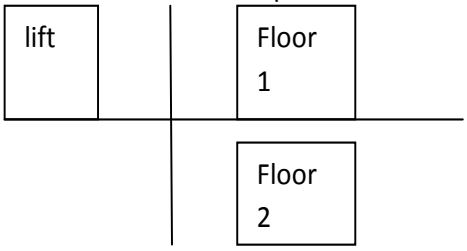
INTRODUCTION-Conventional lift system based on elevated control system which has no of disadvantages as large no of cables ,risk factor,complicated,less intelligent, uneconomical.But modern Distributed elevated control system is in intelligent economical system which provide all above reduced disadvantages.

3 recent innovations include permanent earth magnet motors, machine room less, rail mounted gearless machine aned microprocessor controls.

METHODOLOGY

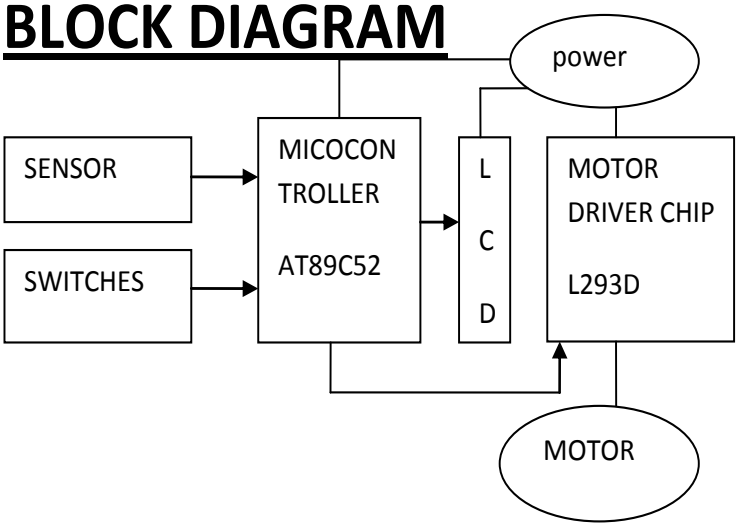
Based on plate monitoring and control

let's understood with an example consider floor 1 & 2



- If push button 2 inside the lift=on,the lift is not in the position 2, lift comes to 2
- If push button 2 outside the lift=on,& the lift is not in the position 2,lift comes to 2.
- If push button 1 outside lift =on& the lift is not in position 1 lift comes to 1

BLOCK DIAGRAM

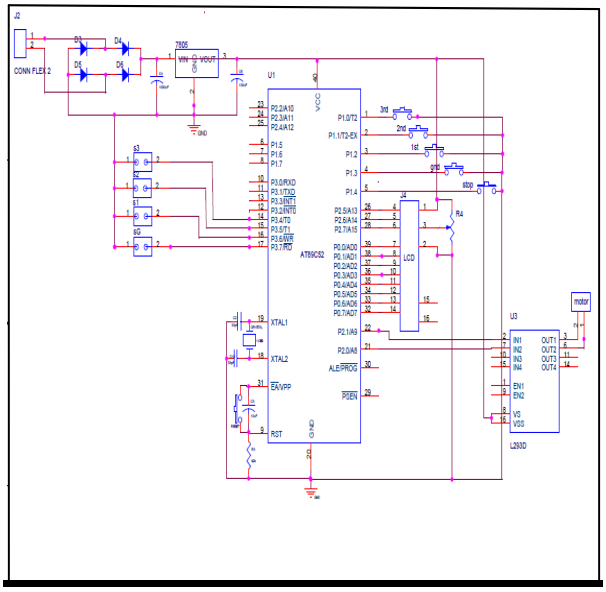


WORKING PRINCIPLE

Based on sensor and switch polling method in which observation of changes made over switches done by sensors through messege scheduling.

COMPONENTS USED

- microcontrollerAT89C52,5.5V,16MHZ,Processed billions of instructions per cycle per second
- Motor driver chip L293D ,Intetfacing between lift and microcontroller,16pinIC runs on 5v dc.
- Sensors and switches-reed type,.25w power, 0-16 AT.
- Crystal oscillator-11.059mhz for serial communnication.
- DC- Motor -1W, Rectifier-IN-4007



CIRCUIT OPERATION

Then regulator IC7805 sends the +5Volt supply to all the circuits, which will start the system.

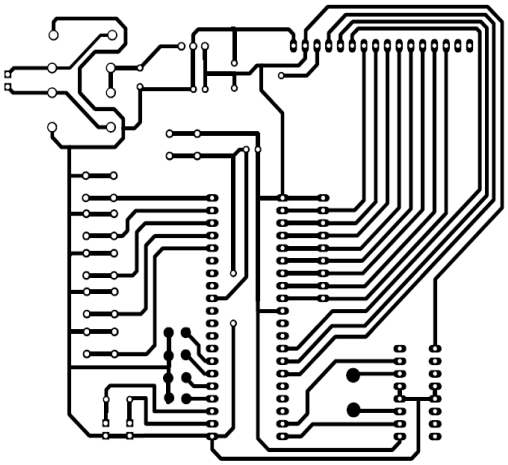
Automatic lift is designed by using microcontroller AT89C52.220 Volt ac power is supplied to step down transformer, which again supply 12Volt ac power to rectifier through diode which convert the ac power supply to dc power.

After the system is on, firstly it will check the position of the lift,if the lift is on ground, then it will start the motor due to which movement of lift is start Lift will remain at standby mode until new switch is pressed .

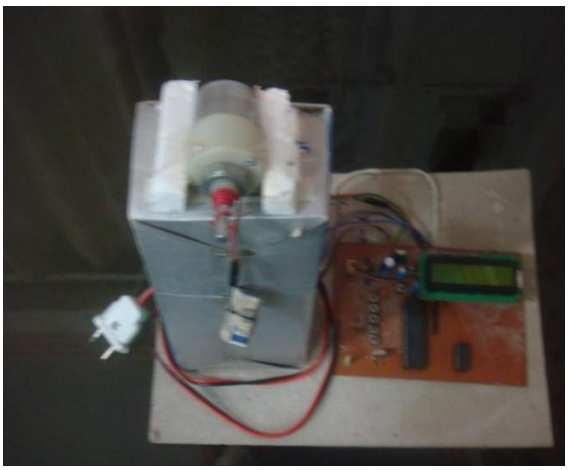
ALGORITHM

- Step-1 Initialize the controller
- Step-2 Initialize the LCD.
- Step-3 port 1 as I/P port.
- Step -4 Confirm port 3 as O/P port.
- Step-5 Take the I/P from Switches for required floor.
- Step-6 Sense the required floor through the sensor and stop the lift at that floor.
- Step-7 Repeat from step

PCB LAYOUT



RESULT



The Model is Successfully Run with desired O/P

CONCLUSION

Plateform monitoring and controlled message schedu- ling data base logic is successfully performed with an elevator

Lift moved in upward and downword direction with closing and opening of door at the desired floor.

Thereby removing earlier Non-Linearity presents between the arms arrangement due to sprocket and chain mechanism.Thus sprocket and chain mechanism are completely removed.

FUTURE SCOPE

In Embedded system.

Security system baesd on space vector modulation signal.

Mapping of input vaiables through fuzzy logic – the microcontroller makes decision for what action to take based on PLC method.

Further scope in Programmable Logic Controller Design,Operator Console Board may be used for display and keypad design.

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URE SCOPE

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