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GSM BASED ELECTRONIC ELECTIVE SYSTEM

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ABSTRACT

"GSM-based electronic voting system" provides extra advantages and flexibility to the voter in this project. As GSM technology has progressed, it may be utilised to lessen the number of errors that occur throughout the voting process. In the past, several electronic voting techniques have been suggested and tested, but they have all failed to provide efficient and transparent voter proof. Under the watchful eye of the election commission, voters may put their ballots to use. After the polls close, the votes are manually tallied. GSM and switches are utilised for manual voting, and a buzzer is used to indicate that a voter has cast a ballot when the switch is pressed.

Key Words: AT89S52 Micro Controller, GSM, Buzzer Driver Circuit.

.. INTRODUCTION

Voting is the most important technique used to disclose the views of the people on issues such as the election of a government or the selection of a leader. As a result, paper ballots are being phased out in favour of computerised voting devices. For the most important role in an election, electronic voting systems should be developed with the utmost care and security. People with impairments may benefit from electronic voting machines, which read out the instructions through headphones, as well as assist the blind. The combination of mechanical and electrical equipment required to allow voters to cast their ballots and show the results of elections is known as a voting machine. In 1838, a proposal was made to use voting machines. There are several smart systems in use today that make use of microcontrollers, and a variety of voting methods have been created to ensure that votes are cast in a safe manner. In order to learn how many people are registered to vote in a certain location, the design illustrated here includes a voter information centre. An electronic voting machine that sends polling results to a monitoring system has been described in this study.

Voters may use their votes through GSM by sending a text message to the polling place via mobile network. Digital

tampering is also prevented in this technology, which is completely secure. Infrared sensors may be used to monitor the number of voters at the polling station.

Existing System

If a switch is pressed, the number of voters can be increased, and a buzzer will sound to indicate that the voting process has ended. In addition, there is a cancellation option built into the current system. People who are unable to get to the voting booths and cast their ballots will have a lower polling usage % under this method.

Proposed System

II. Voters may use their GSM voting by sending a message to the polling booth, and there is also a manual alternative for those who want to cast their ballots in person. When a single participant has finished the voting procedure, the buzzers will turn on.

III. BLOCK DIAGRAM

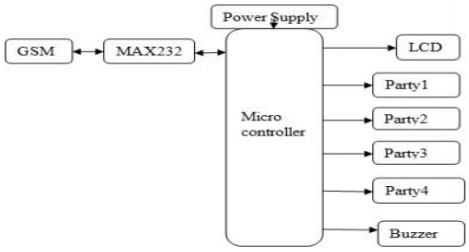

Fig 1: block diagram of the proposed system

8051 Microcontroller

It is an 8-bit microcontroller with 40 pins. The 8051 has 32 I/O pins, while the remaining eight are used for a specific purpose. 8051 controllers need a power supply and a ground pin in order to function. The RESET pin is required in order to reset the microcontroller to its default settings and begin afresh. Clock system clock is delivered into both XTAL 1 and XTAL 2 via the crystal clock circuit. The 8051 microcontroller block diagram comprises RAM, ROM, interrupts, timers, I/O pins, a serial port, and the CPU.

Fig 2: block diagram of the 8051

Liquid Crystal Display

Having a sixteenx2 fluid precious stone alphanumeric display means that it will display 16 characters on each line, and there are a few such lines. Each character is shown in a 5x7-part grid on top of this LCD. The LCD contains two registers, the command and data registers, respectively. The LCD is assigned charge headings, which are then stored in the order register. Information stored in the LCD's information register is summoned to perform a specific task such introducing it, cleaning the screen, establishing the marker position, prevailing show, and so on. The data is the character's ASCII value, which will be shown on the LCD.

GSM Modem

This device accepts a SIM card as a form of modulation and demodulation. The GSM module is utilised when a computer and a GSM system need to communicate with one other. In many countries, it is the mobile communication architecture of choice. Modular GSM phone system with built-in RS-232/USB/GSM modem, together with computer power supply. When connected to a computer, a GSM modem uses the mobile network to communicate.

In addition to SMS and MMS messages, GSM modems can also be used to send and receive text messages. Using

serial connectivity, a GSM may be simply integrated into a microcontroller system.

Polling Switches

Voting for the candidates is accomplished via the usage of Polling Switches. The switch may be pressed to cast a vote for the candidate of your choice. The four parties are represented by four switches in the simulated voting mechanism.

MAX232

In many communication systems, the MAX232 IC is often found. To put it another way, MAX232 is a device that converts between TTL and RS232 voltage levels. Serial communication is the first use case for MAX232. Communication between TTL logic and CMOS logic systems is a major issue. EIA/TIA-232-E, the international standard for RS232, defines logic 0 as a value between +3 and +15 volts, and logic 1 as a voltage between -3 and -15 volts. In TTL logic, 0 is defined by 0 volts, and 1 is defined by 5 volts, therefore this is a highly useful IC to use.

SOFTWARE DESIGN

In order to complete this project's equipment, we'll need to install software such as Keil u vision and glimmer enchantment on the controller we'll be using. Details on these programmes can be found in the sections below. Although the compiler runs on a single computer, it provides code for a specific type of computer. Code written using cross compilers is often compatible with computers with a substitute plan or special purpose devices that can't run their own compilers. The use of cross compilers is becoming more popular for embedded enhancement, especially in cases when a compiler is unlikely to be available. Ordinarily, an inserted degree stage has only a small amount of RAM, no plate, and limited I/O.

IV. To ensure that the code is always up to date and ready for testing, it is often modified and accumulated on a fast host computer (such as a tablet or workstation running the functioning framework). In situations when the host system has more resources than the target, cross compilers may be useful. One such compiler, the Keil compiler, supports a wide range of host and target combinations. Microcontrollers like Atmel, Motorola, and others in the eight-piece family are supported by this goal. Embedded Systems Academy has partnered with Streak Magic to make it easier for you to select a microcontroller gadget's options. A microcontroller's nonvolatile storage may be deleted in chunks or in its whole using this project.

]V. WORKING DESCRIPTION

VI. Fast host computers are used to make sure that the code is constantly up-to-date and available for testing (such as a tablet or workstation running the functioning framework). Cross compilers may be advantageous in cases when the host system has more resources than the target system has. It is possible to use a broad number of hosts and targets with the Keil compiler. There are microcontrollers in the eight-piece family that are supported by this objective. There are many microcontroller gadgets on the market, but choosing the right one might be difficult. The nonvolatile storage of a microcontroller may be removed in pieces or in its whole using this project. Fig 3 depicts the project's underlying structure.

VII. RESULTS

VIII. It is demonstrated in this article that the results of our "GSM based electronic voting system" technology may be seen using polling switches. If a voter is unable to vote in person, he or she may text a message to the designated voting number. As a result, voters may use GSM to cast their ballots.

IX. CONCLUSION

X To ensure voter privacy and security, the "GSM based electronic voting machine" initiative employs a single mobile phone number that can only be used once. Voters can only use their voting choice once by sending a message from their phone. If a voter uses a mobile device to cast their ballot, he will be sent an OTP. Voting is concluded if the OTP is matched. Manual voting is done via switches.

XI. FUTURE SCOPE

Using sophisticated VLSI techniques, the design of the electronic voting machine based on GSM technology presented in this work may be further optimised in terms of power consumption.

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