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New Generation Voting System for Convenient and Compulsory Voting

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ABSTRACT: The implementation of modern technologies to improve the speed, security, and convenience of voting has gained popularity in recent years. This abstract describes a modern voting system that makes use of the Internet of Things (IoT) to make voting easy and required. The recommended approach integrates IoT devices, such as smart gadgets and sensors, with a secure web platform in an effort to address the challenges involved with traditional voting. A novel solution to the problems with existing voting systems is offered by the suggested new generation voting system. By utilizing IoT technology, it ensures compliance with mandatory voting laws while providing easy and secure voting experiences. The system's real-time monitoring features, improved security controls, and elevated transparency all help to promote public confidence in the electoral process. To help this revolutionary voting system be widely adopted, future research and development activities should concentrate on thorough testing, pilot studies, and addressing any privacy concerns.

KEYWORDS: Mobile voting, secure voting, voter registration, Arduino, IOT connectivity

I. INTRODUCTION

The foundation of all societies is its democratic system, which allows people to express their ideas and influence the direction of their country. However, traditional voting procedures frequently have a number of problems, such as poor voter turnout, administrative hassles, and security issues. A new voting mechanism using Internet of Things (IoT) technology has evolved to overcome these problems. This ground-breaking strategy intends to change voting, making it easier, inclusive, and required for all eligible individuals. The new voting system uses IoT to streamline the voting process and make it more accessible to a larger population. Citizens can cast their votes remotely from any location with an internet connection using IoT-enabled devices like smartphones, tablets, or special voting machines. By eliminating the requirement for actual attendance at polling places, this convenience also eliminates the lengthy lines, lengthy travel times, and other logistical challenges that frequently deter potential voters. The honesty and security of the voting process are two major issues with voting systems. To protect the integrity and confidentiality of votes, the IoT-based voting system makes use of cutting-edge encryption algorithms, secure communication channels, and distributed ledger technologies like block chain. The system delivers transparency, traceability, and immutability by utilizing these strong security features, which lowers the likelihood of tampering, fraud, or data breaches. Societies across the world are constantly searching for novel ways to strengthen the democratic process in an era characterised by rapid technology breakthroughs. While traditional voting techniques have been successful in the past, they also have several drawbacks and difficulties. To overcome these issues and provide a more practical and inclusive method of voting, a new generation voting system has been developed in response. One important feature of this system is the implementation of mandatory voting, which aims to promote greater citizen engagement and promote a more representative democracy. The convenience of the new generation voting technology combined with mandatory voting has the potential to completely transform political processes. In addition to resolving social and demographic divides, it promotes participation from a wide range of citizens and ensures that elected leaders are answerable to a larger cross-section of society. With this strategy, political representation is improved, the influence of extremist ideologies is reduced, and civic responsibility is enhanced.

II. METHODOLOGY

A systematic technique is required for the creation of a next generation voting system that uses the Internet of Things (IoT) to facilitate convenient and required voting. The methodology starts by thoroughly examining the current voting procedures and identifying the issues and difficulties that need to be resolved. This examination takes into account variables including accessibility, practicality, security, and inclusivity. The next stage is to create an IoT-based voting system that is reliable and simple to use. This entails building a safe and adaptable infrastructure that can manage several votes while preserving the confidentiality and integrity of the procedure. To secure voter eligibility and stop fraud, the system should have sophisticated authentication mechanisms. Extensive testing and validation are crucial for system reliability, involving simulations, security audits, and stress tests. Addressing vulnerabilities promptly enhances robustness and security. In order to assure its effectiveness and wide adoption, the development of a New Generation Voting System for easy and Compulsory Voting necessitates an effectively planned approach that takes many elements into account. The process includes the following crucial steps: research, design, implementation, and assessment. The design phase, when a new voting mechanism is conceptualized, gets under way based on the research findings. The system should strive to increase voter convenience while guaranteeing that all eligible persons participate by making voting mandatory. To make the voting process user-friendly and accessible, the design should embrace contemporary technologies. After having been put into operation, the new voting system needs to be assessed for its usefulness, efficacy, and user satisfaction. Voters, election officials, and other stakeholders' opinions will be gathered for this study using surveys, focus groups, or pilot testing. Any possible difficulties, such as usability or technological flaws, can be found using the data gathered and fixed through incremental improvements.

III. DESIGN AND IMPLEMENTATION

Societies would work entirely differently if a modern voting system was created and put into place that was both convenient and required. A system like this would improve the election process' accessibility and inclusivity while addressing the issues of low voter turnout.

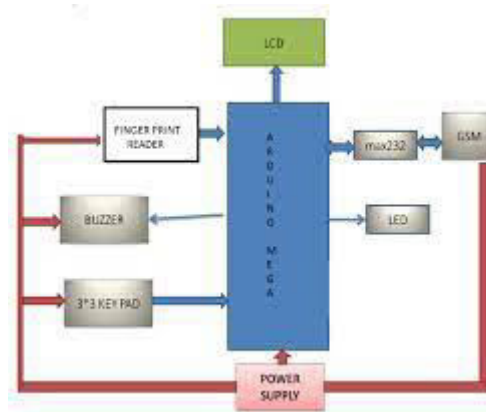


Figure 1: Block Diagram of the system

IV. EXPERIMENTAL RESULTS

Figures show the (a),(b),(c),(d),(e) shows the original image. In order to get feedback on a new voting system that will use the Internet of Things (IoT) to enhance the voting process, we are conducting an experimental poll. This revolutionary innovation aims to make voting more convenient while requiring everyone to take part in the democratic process.



Figure (a)



Figure (b)



Figure (c)

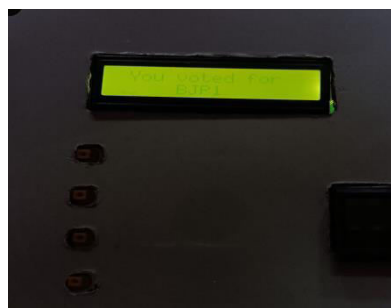


Figure (d)



Figure (e)

V. CONCLUSION

In conclusion, the adoption of a new generation voting system that makes use of Internet of Things (IoT) technology for convenient and required voting has enormous promise for improving the democratic process. Such a system can improve different aspects of voting by incorporating IoT devices and networking. IoT-based voting systems offer increased convenience and accessibility for voters, enabling remote voting from smartphones or dedicated machines, boosting turnout and involving more people in the democratic process. IoT-based voting systems improve security, integrity, and fraud by utilizing advanced encryption, authentication, and built-in safeguards, ensuring election results accuracy and reliability. In this system, voter turnout would rise while special interest group influence would be less and a more accurate representation of the public's will would be guaranteed. A New Generation Voting System, which combines ease with required voting, can promote a more active and representative democracy, resulting in stronger government and a society that genuinely values the opinions of all of its members.

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