



SECURE ELECTION APPLICATION

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Abstract: The purpose of Secure Election App is to automate the existing manual system with the help of computerized equipment and full-fledged computer software, fulfilling their requirements, so that their valuable data/information can be stored for a longer period with easy accessing and manipulation of the same. The required software and hardware are easily available to work with Secure Election App as described above can lead to error-free, secure, fast and reliable management system. It can assist the user to easily attend a real-world election competition with no stress or struggle. This will thus help the in better organization of conducting a election competition. The host can maintain computerized records without any redundant entries. This means that one need not be distracted by misinformation or malpractice that is not relevant while being able to work and reach the information. The aim is to automate the existing manual system with the help of computerized equipment and full-fledged computer software, fulfilling their requirements, so that their valuable data/information can be stored for a longer period with easy access and manipulation of the same. Hence, the project describes how to manage for good performance and better services for the clients.

Keywords: Full-fledged computer software, Easy accessing, Real-world election , Computerized records, Clients .

I. INTRODUCTION:

The Android application "Secure ELECTION APP" has been developed to override the problems prevailing in the existing manual system. Secure ELECTION APP is an Election Application that is used to conduct and manage a real-world Election with absolutely no hassle or worry ensuring that Election events can be held in an efficient methodology. Here, a user or participant can register and login into the application and can participate in the Election happening at the moment, which will take in the application itself with ease, and no hassles, hence creating no distress or confusion. The votes are then checked by the software and are displayed to the Admin, who would be the host of the Election event. This application ensures to reduce and avoid as many errors as possible while conducting a Election. It does so by displaying an error message while entering incorrect or invalid data. This application does not require any formal knowledge for the user to use this system, hence proving it to be user-friendly in nature.

II. LITERATURE SURVEY

" Neumann gives a list of suggestions for "generic voting criteria" which suggests that a voting system should be so hard to tamper with and so resistant to failure that no commercial system is likely to ever meet the requirements, and developing a suitable custom system would be extremely difficult and prohibitively expensive. A voting machine must produce human-readable hard copy paper results, which can be verified by the voter before the vote is cast, and manually recounted later if necessary David Chaum presents a very interesting scheme, whereby voters could get receipts for their votes. This receipt would allow them to know if their votes were included in the final tally or not, and to prove that they voted without revealing any information about how they voted. The security of this scheme depends on visual cryptography developed by Naor and Shamir, and on voters randomly choosing one of two pieces of paper. Mercuri and Neumann advocate the use of this technique in electronic voting systems. In the recent years, voting equipment which were widely adopted in many countries may be divided into five types

1. Paper-based voting: The voter gets a blank ballot and use a pen or a marker to indicate he want to vote for which candidate. Hand-counted ballots is a time and labour consuming process, but it is easy to manufacture paper ballots and the ballots can be retained for verifying, this type is still the most common way to vote.

2. Lever voting machine: Lever machine is peculiar equipment, and each lever is assigned for a corresponding candidate. The voter pulls the lever to poll for his favourite candidate. This kind of voting machine can count up the ballots automatically. Because its interface is not user-friendly enough, giving some training to voters is necessary.

3. Direct recording electronic voting machine: This type, which is abbreviated to DRE, integrates with keyboard; touch screen, or buttons for the voter press to poll. Some of them layin voting records and counting the votes is very quickly. But the other DRE without keep voting records are doubted about its accuracy

4. Punch card: The voter uses metallic hole-punch to punch a hole on the blank ballot. It can count votes automatically, but if the voter's perforation is incomplete, the result is probably determined wrongfully.

5. Optical voting machine: After each voter fills a circle correspond to their favourite candidate on the blank ballot, this machine selects the darkest mark on each ballot for the vote then computes the total result. This kind of machine counts up ballots rapidly. However, if the voter fills over the circle, it will lead to the error result of optical-scan. Recent years, a considerable number of countries has adopted E-voting for their official elections. These countries include; America, Belgium, Japan and Brazil. David Friedman Charles Wright Dan Kalowsky John Daniel Electronic Voting Literature Review Computer scientists who have done work in, or are interested in, electronic voting all seem to agree on two things: Internet voting does not meet the requirements for public elections Currently widely-deployed voting systems need improvement Voting on the Internet using everyday PC's offers only weak security, but its main disadvantages are in the areas of anonymity and protection against coercion and/or vote selling. It's such a truly bad idea that there seems to be no credible academic effort to deploy it at all. The Presidential elections of 2000 brought national attention to problems with current American methods of casting and counting votes in public elections. Most people believe that the current system should be changed; there is much disagreement on how such changes should be made. The MIT/Caltech researchers [1] "see a promising future for electronic voting, despite its problems today" (under a few conditions). They advocate using the methods currently in use which result in the lowest average numbers of "uncounted, unmarked, and spoiled ballots," like in-precinct optical scanning. Their report even proposes a framework for a new voting system with a decentralized, modular design.

Other researchers have done work in electronic voting; while they may not explicitly mention voting from remote poll sites, their work is nonetheless relevant to any effort at designing or implementing a remote poll site voting system. Lorrie Cranor [2] could be classified, like the Caltech/MIT researchers, as a cautious optimist. She acknowledges the problems inherent in each kind of voting apparatus, but doesn't make an overt recommendation on her site for one technology over the rest. Some other academics, whom we did not study in class, like Peter Neumann who moderates the RISKS mailing list, are less optimistic. They agree mostly with the Caltech/MIT committee, but their papers focus on the immensity of the problem one faces when trying to design and implement a truly secure voting system. They often remind us of Ken Thompson's Turing acceptance speech and the fact that we really can't trust any code which we did not create ourselves. (And in reality, we cannot trust even code that we do write ourselves, since we almost always need a development toolchain written by someone else.) Therefore, they tend to be extremely suspicious of proprietary voting machines and their makers who insist that we should "just trust [them]."

Neumann [4] gives a list of suggestions for "generic voting criteria" which suggests that voting system should be so hard to tamper with and so resistant to failure that no commercial system is likely to ever meet the requirements, and developing a suitable custom system would be extremely difficult and prohibitively expensive.

Rebecca Mercuri [3,7] invented the "Mercuri method" for electronic voting. A critical component of this method is very similar to the Caltech/MIT proposal: a voting machine must produce human-readable hardcopy paper results, which can be verified by the voter before the vote is cast, and manually recounted later if necessary. Her philosophy and Neumann's are very similar; in fact, they've written papers together on the subject. David Chaum presents a very interesting scheme [5], whereby voters could get receipts for their votes. This receipt would allow them to know if their votes were included in the final tally or not, and to prove that they voted without revealing any information about how they voted. The security of this scheme depends on visual cryptography developed by Naor and Shamir, and on voters randomly choosing one of two pieces of paper. Mercuri and Neumann advocate the use of this technique in electronic voting systems. Dr. Michael Shamos of CMU provides a sharp counterpoint [6] to Neumann and Mercuri's views. While his "Six Commandments" summary of requirements for a voting system is very similar to others' requirements, he's less afraid of the catastrophic failures and sweeping fraud made possible by imperfections in electronic voting machines actually occurring in a real election. Shamos is also much less impressed with paper ballots than are Neumann and Mercuri. He places a great deal of faith in decentralization to make fraud difficult to commit and easy to detect. Dr. Shamos even likes DRE machines. (We must take into account the fact that this paper was written ten years ago, long before the 2000 elections and before more modern mathematical results like Chaum's; some of Dr. Shamos' opinions may have changed since then. While Dr. Neumann's talk cited here is of similar age, his pessimism with regard to machines has had little reason for change

III. PURPOSE

This system aims to eliminate and in some cases, reduce the hardships faced by the prevailing manual system. This system is designed for the sole purpose that the company can run its other important operations in a smooth and effective manner. This application can lead to an error-free, secure, reliable and fast management system. Therefore, it can help an organization in better utilization of resources. The prevailing system is considered to be tedious and time consuming and can lead to faults and errors almost all the time. The Secure Election App intends to minimize all these drawbacks by providing a simple, yet efficient solution to the problem. This system calculates the results of the user's attempt and it does so automatically by using the in-built algorithm to give us the exact result, without any miscalculation or counting error. By using this application, we tend to save a lot of time and energy in just a few taps on a touchscreen. This application will be made an open-source software, so that all can use this application at any given time and will also be available for free of cost.

IV. EXISTING SYSTEM

The prevailing system is a manual system that requires a host to physically or display the questions in a separate software and calculate the results in a separate software, often leading to a lot of confusion and error. The participants on the other hand must physically answer the questions, often leading to unnecessary arguments and confusion on who answered the question. This tends to be a very tedious and time-consuming process and can lead to errors in data, causing a lot of unwanted worry and hassle to the competition.

V. PROPOSED SYSTEM

Secure Election App aims to automate the existing manual system with the help of computerized equipment and full-fledged software, fulfilling their requirements, so that their valuable data/information can be stored for a longer period with easy access and manipulation of the same. This system provides users to attend a election competition with ease through a simple application. At the end of the election, the participants will have to submit their answers, and the results of the election will appear only to the host user, who is the admin. Hence, this simple system can help a participant and their hosts to handle and manage a election competition with ease and no hassle. Secure Election app provides for an easy-to-use solution to the existing system which tends to be very tedious and time consuming. Since the application will be an open-source application, it will be really simple for all to access the application.

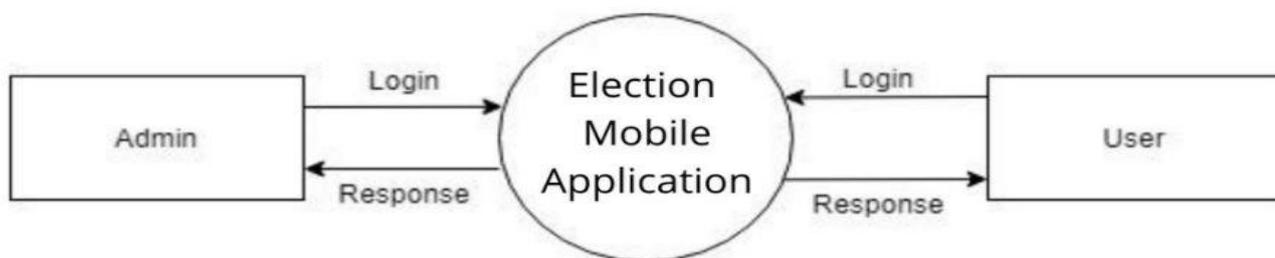
VI. SYSTEM DESIGN

After gathering the requirements and determining that the proposed system is technically

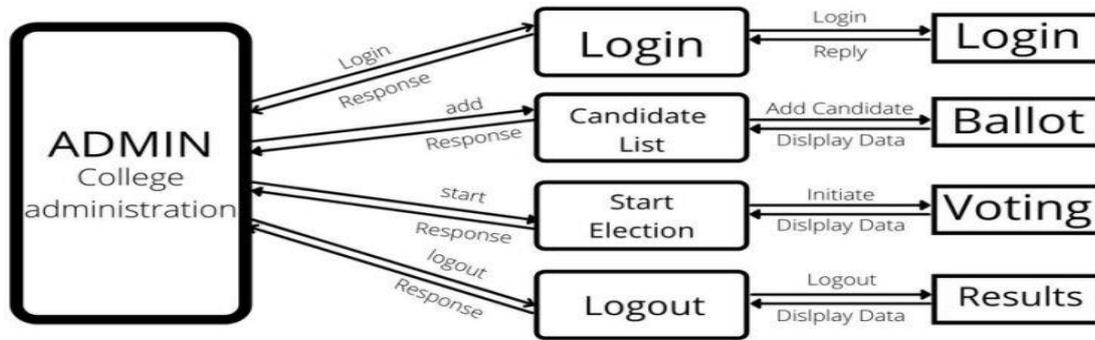
feasible, we will move further towards the designing issues. Here the main goal is to transform the requirements specification into a structure that is suitable for implementation in some programming language. Here we determine the individual's constraints to be used further as per requirements. These constraints are then mapped into DATA FLOW DIAGRAMS (DFD) & ENTITY RELATIONSHIP DIAGRAM(ER-DIAGRAM).

In this section, we will present the DFDs and ER-DIAGRAMs of the entities.

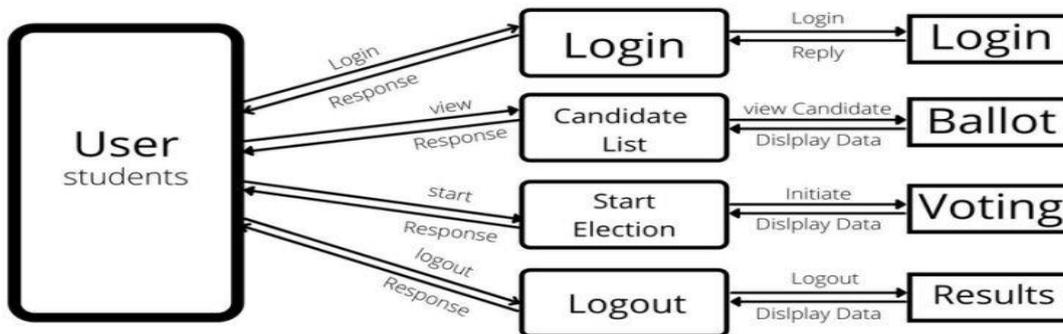
Level 0 DFD: A level 0 DFD, also called a fundamental system model or context diagram represents the entire software element as a single bubble with input and output data indicated by incoming and outgoing arrows, respectively.



Admin Level DFD: The Admin level DFD represents the entire work and data flow of the actions done by an admin in utilizing the Android election Application.



User Level DFD: The Employee level DFD represents the entire work and data flow of the actions done by an employee in utilizing the Android election Application.



VII. CONCLUSION

This research paper discusses the fine points and flaws of top election applications. This application has been developed in the most preferred mobile operating system i.e. Android and ios. This application has been developed to overcome the flaws in the existing system like properly categorizing the sections, providing section wise candidates, maintaining number of votes along with a user friendly and attractive and easy to use user interface. It has been designed to ask both may easy for users to vote and show the results of elected candidates. The abilities of this app helps voting of the user more easy. It is designed as a preparation tool for Student council election and various local body election.

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