UID Based Voting System- Extension to EVM – A Review On

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***ABSTRACT*:** The traditional voting system has EVM in every poll booth which is connected with the main server. In this system it is easily possible to give a fake identity and vote under the same name of some other XYZ person. It also becomes difficult to identify the people who are voting for more than one time. In our proposed system we are trying to create a software application which will be linked to the database of the main server. Where in the database a person's Aadhar number would be linked. And with the help of these details it would be possible to detect if the voter is a valid voter or not. Our proposed system gives solution to the problem of malpractices in traditional voting system. Also a person who is not living in his/her hometown where he has his voting registration will be able to vote without any difficulty with the help of his Aadhar number which would enable him to vote from any city or town. The main motto of our system is to overcome some of the disadvantages of the traditional voting system.

KEYWORDS: Voter, voting, EVM, Aadhar-number, biometrics.

I. INTODUCTION

Nowadays, election plays a very important role in a democratic country. The election is a process for selection of a good candidate who will lead the all thing. In democracy, people choose their leader by giving their vote. Recently, in India electronic voting system is used. In this system the availability of the voter in the city during the time of voting is important. This is major drawback of electronic voting system. A voting system in which the voter can vote from anywhere is the solution to this problem.

Thus in this review paper, we are discussing the work done by the few of the researchers to improvise the voting system, their drawbacks and future scope of the system.

II. LITERTURE SURVE

According to the recent Research paper in 2017 titled 'Multi purpose platform independent online voting system', the Researchers have proposed a system for providing more security in voting system
Using smart phones. The security in their system is provided using OTP and scanning QR code. The researchers have proposed an online voting system which is possible using smart phones. [1]

According to the Research paper in 2015 titled 'Fingerprint based e-voting system using Aadhar database', the Researchers have proposed a client-server web-enabled software architecture for the project. On the client side they have a fingerprint scanner and a GUI that accepts voter's Aadhar number, provides an interface to vote and display confirmation, status and error messages. The GUIs will only act on events from the server and feedback of the voter without any extra processing. Servers are placed at remote locations from the poll booths. They are used for carrying out all the processing work such as image processing, transferring data between the client and the database, generating statistics, sending messages to voters, etc. [2]

According to the Research paper in 2014 titled 'An online voting system Biometric finger print and Aadhar card', the Researchers have proposed the system of Biometric online voting system with biometric fingerprint using Aadhar card. It determines the particular voter by his/her fingerprint whether he/she is a valid voter or not. It allows voter to cast the vote to the candidate online and update the database in the server. Biometric online voting system uses Adhar card to retrieve the complete details about the voter. The researchers have proposed Administrator module, Server module and client module. They have also studied three samples of fingerprint namely Arches, Loops and Whorls. [3]

According to the Research paper in 2013 titled 'Online Voting System for India based on Adhar ID', the Researchers have proposed the system for online voting system for India. The have provided a lot of security. Manipulation of votes and delay of results can be avoided easily. A unique Aadhar identity is the center point of their proposed model. It is leads to the easier verification of both voters as well as candidates. In the proposed framework, they have tried to build a secure online voting system that is free from unauthorized access while casting votes by the voters. The server aspects of the proposed system have such distribution of authority that server does not enable to manipulate the votes. [4]

According to the Research paper in unknown year titled 'Secure Authentication for Online Voting System', the Researchers have proposed four modules namely voting registration, Authentication, vote casting and recording and vote counting. Their proposed work is a mixture of steganography and Biometric security. By using various types of cover media like image, audio and video, it

is possible to hide secret data. In their work, image steganography is used to hide secret data. This image is used as a cover image. [5]

Limitations and challenges in Existing Systems:
1. The online voting system is easy to hack
2. Not everyone knows how to use online voting system.
3. Physical security of machine in the online voting system.
4. Security of storage of casted votes.
5. Susceptibility to fraud – A malicious voting system created and distributed by one vendor to hundreds or thousands of polling booths, can falsify million of votes.
6. Any computer software is basically generated from software programming and coding. And all these software could be tampered by a programmer who knows the source code.
7. Complexity of the system is increasing.

III.   SYSTEM ARCHITETURE
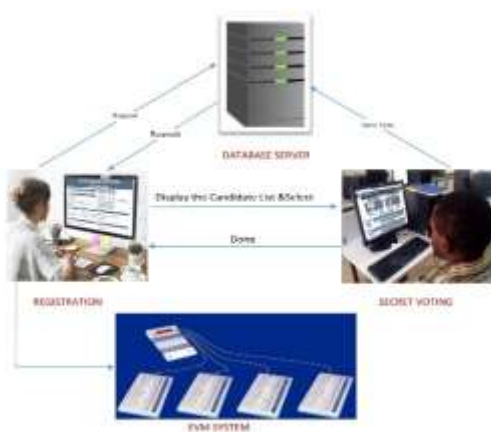
IV.   MATHEMATICAL MODEL

Mathematical modeling is used for measurement of how the system is implemented mathematically. It provides flexible i.e. mathematical thinking and use of concepts of set theory. Formal set of notation description, informal English description (Set of all inputs) gives:

$S = (V, C, D)$

Where

S=System
V=Voter Registration
C=Confidential Voting
D= Database

$V = \{ID, B, DI\}$ Are set of Voter Registration Where

ID= Adhar Number
B= Biometrics
DI= Display information

$C = \{UV, CV\}$ Are set of Confidential Voting Where
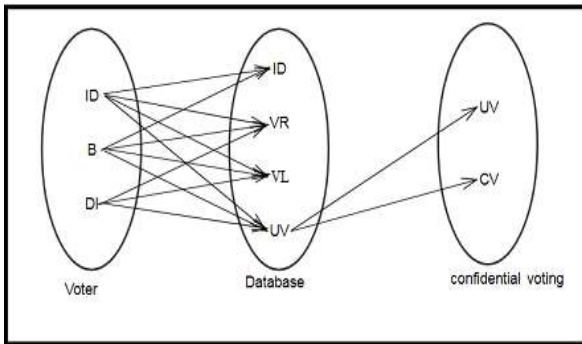
UV= User Validity
CV= Candidate Voting

$D = \{VR, VL, UV\}$ Are set of Database Where

VR= Voter Registration
VL= List of Candidate
UV= User Validity

X. CONCLU SION

Thus few of the works of researchers was studied in this paper where they tried to propose a new voting system. Electronic Voting Machine (EVM) is the most powerful device in today's voting system. But to solidify it more, use of biometric fingerprint, various security algorithms and making the process easier for the voter is what the researchers study implies till now. Hence, the voting system can be made much more powerful, if it is digitalized and made kiosk free.

SCOPE OF IMPROVMENT

Any system always has a scope for improvements and more advancements. All the systems studied under the literature survey have their own pros and cons. All the systems proposed till date are online. There could be such a system where the only internet connectivity is between the system in the polling booth and the database of the main server. As soon as the voter comes into the polling booth and gives his Biometrics, the fingerprint is verified from the system and database respectively. Only verified and valid voter will be able to cast his vote in EVM. EVM is the most secure device for voting. There can be the implementation of this system which would be an Extension to the existing system of EVM.

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