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ADVANCED E-VOTING SYSTEM USING NFC

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Abstract: The electronic voting is the technology in which the citizens can do the vote using smart phone. It gives functionality to users to give vote from android mobile. E-voting technique have advantages over traditional voting framework like less manpower, it save time, accuracy and transparency ,fast result ,etc. Security pre-requisites E-voting technique has so many challenges associated with voting. Mainly Assimilation and Verification to keep secure voted data. To overcome these challenges we purpose the new e-voting framework in which the NFC tag is used to give more accuracy and transparency in voting framework. The NFC tag store information of voters to check the voter and voters vote in the application. The E-polling technique has three phases. The first involves analyze and verification of user .In second phase to get OTP and using this OTP user can vote in the framework. In third stage Administrator will count and sort out the votes and declare the result of voting in application.

Keywords:- **E-voting, NFC, Security ,Secure Elections.**

I. Introduction

Today's world is democratic world, voting is pillar of construction of society. traditionally voting is using manual format .voter faces so many problems like voting ,voting booth is far from home ,standing in queue etc. so overcome from this problems we develop this electronic voting framework

1.1 Electronic Voting –

There are two categories of voting online voting and offline voting. Electronic voting is online voting framework. Peoples are ready to vote from there android phone. This feature is very useful to citizens who are physically handicapped or unable to come at voting booth. This voting required minimum time, also it decreases the manual work. This framework increases the voting percentage. In electronic polling structure information is handled digitally and confidentially.

1.2 NFC (Near Field Communication)-

Using NFC we afford guarantee to electronic voting framework.NFC store all information about voter .It is limited range radio communication .It empower network between two devices. User put NFC tag close to mobile phone, automatically its checks all the information and process this information .Confirm all the specifics and after the confirmation vote is adequate to vote desired candidate. Cryptography technique is again worn for security purpose.AES encryption algorithm is used for cryptography.

II. Literature Survey

2.1 Assimilation of non-functional requirements for electronic voting frameworks: A systematic mapping

Author: S. Sepúlveda, Member, IEEE, M. Bustamante, and A. Cravero. "Assimilation of non-functional requirements for electronic voting frameworks: A systematic mapping". This paper proposes a Today's democracy is the plan of ministry prevailing in the western world and voting is the pillar fundamental in the society. The Traditional voting framework uses the pen and page and the election is done mutually .so to reduce this man power, time and maintain the care of voting framework this new technique is introduced.

2.2 Design a Secure Electronic Voting Framework Using Fingerprint Technique.

Author: Sanjay Kumar, Manpreet Sing, "Design a Secure Electronic Voting Framework Using Fingerprint Technique". This Paper represents the protected e-voting framework using fingerprint technique. The fingerprint is a biometric which is most widely worn to analyze the people. In this paper the mixture of biometric among electronic polling is require less manpower and save time of user.

2.3 Secured E-Voting Using NFC Technology

Author: Rutuja Nikam1, Monika Rankhambe2, Diksha Raikwar3, Atharv Kashyap4, "Secured E-voting Using NFC Technology ".This paper represent the technology which involves the voting .Important concept of democracy is election. Here NFS Tag is used for providing security to e-voting framework. It Is Hardware Device in which voter Information Is stock and progress .This paper represent Framework Is executed on Android Phone.NFC Uses RFID Technology NFC Is Generated Technology which did information exchange. The advantage of NFC For the Validation and casting of vote. Application based on two verification OTP And voters contact number so that they can verify the voter.

2.4 E-Voting Framework for on Duty Person Using RSA Algorithm with Kerberos Concept

Author: Ms. Tanzila Afrin1, Prof.K.J.Satao2, "E-Voting Framework for On Duty Person Using RSA Algorithm with Kerberos Concept". In Electronic polling framework in which election is stored, prepared as digital data .This framework is useful to people who are not able to come to voting booth due to the duty or they are physically handicapped. In this framework two phases first Application Control in which assimilation and verification are involved and in second phase voting process is done .Kerberos concept is used for network verification. It is Network verification Protocol which is work on 'Tickets' to allow connection Over No-Secure Way. It Act as Client Server Model and Provide verification To User And Server.

III. Proposed System

To the best of our knowledge this new technology refers to electronic voting frameworks where the election data is recorded, stored and processed primarily as digital information. The main aim of a confidential e-polling is to give the of the confidentiality to voters and accuracy of the users. The verified voters and voting data security aspects for e-polling frameworks are discussed here.

The framework proposes an Assimilation and verification of User in E-polling Framework Considering:

1. The verification of voter.

2. The attribute requirement voter Assimilation.

3. The Security of Database

Advantages of Proposed Framework

1. User can vote from mobile place

2. Less manual work and Save time.

3. Providing Fast voting Result.

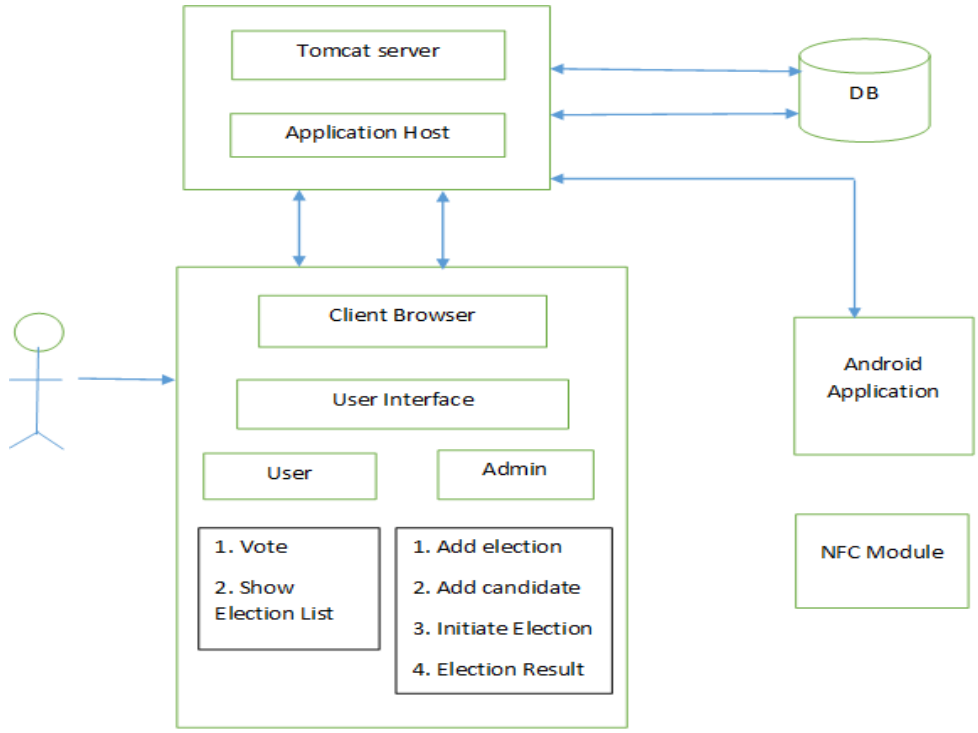

Figure 1: The proposed System Architecture.

IV. System Features

4.1 Functional Requirements

• System should support android handset.
• System should monitor the user location periodically
• System should properly interact with the server
• System should run as a background service on server
• System should support auto start on server side
• System should be able to generate OTP code

4.2 External Interface Requirements

4.2.1 User Interfaces

• Login Form
• Survey Form
• Image Upload Form

4.2.2 Hardware Interfaces

• NFC tag

4.2.3 Software Interfaces:

• Operating System: Windows
• Database: MySQL
• Android 2.2 Supported mobile handset

V. Technical Specification

5.1 Advantages

- User can vote from mobile place.

- Less manual work and Save time.
- Providing Fast voting Result.

5.2 Dis-Advantages

• Need of internet connection is compulsory to transfer the data.

5.3 Applications

• This application can be used by government to conduct the elections.
• As well as this application can be used in collages, company voting, pubic issue voting.

Conclusion

Here, Conclude that the in this framework designed for election commission to conduct their elections for different posts. The elections can be conducted easily and effectively in a proper manner by using this Mobile based voting framework using NFC module because the user can vote from the place where he is working by using this framework. It can be changed for public election and also parliament elections. Proposed E- voting framework is very effective and it will be useful for voters in many ways and it will decrease the cost and time. Internet-based voting offers many benefits including low cost and increased voter participation. Voting frameworks must consider security and human factors carefully, and in particular make sure that they provide voters with reliable and intuitive indications of the validity of the voting process.

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