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Student Electronic Voting Security System for Educational Organization

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***Abstract*: Online Voting System using aadhar card manages complete college voting system. This is a web application is developed to provide easy solution for colleges and universities to conduct elections in a fair and easy manner. In this application we use aadhar and college registration number as a validation for checking voter details.**

It will have all the basic modules and also it makes voting fully computerized which is very fast and efficient. College Voting System is a software application which maintains records of the students, Candidates, Users. This software is designed for voting purpose which saves lot of time and counting is done within a single click. Online voting system project is implemented in PHP platform using Mysql database as back end.

***Keywords*: PHP, MySQL, MD5, aadhar card**

1. Introduction

Online voting system project is implemented in PHP using Mysql database as back end. Main aim of online voting system is to develop an online application like online reservation system, for citizens who are above 18 years of age to vote through online. Using these system citizens of India can vote through online without visiting polling booth. A centralized database is maintained by election commission of India where citizen's information is maintained whenever citizen is using online voting system his/her information is authenticated with the data present in database if user is not in the list he cannot use online voting system.

Users are provided with an online registration form before voting user should fill online form and submit details these details are compared with details in database and if they match then user is provided with username and password using this information user can login and vote. If conditions are not correct entry will be cancelled.

The students have should provide their Aadhar number, roll number and mobile number for verification, based on these details the student's information is validated and securely allowed to vote through the web application.

2. System analysis

A. Existing system

The Existing system maintained the data manually. The data maintenance by the system is not systematic. Maintaining data becomes difficult, when the details are maintained in the form of hard copy.

Disadvantages of Existing System:

- Highly Expensive.
- Lack of database security.
- Less Speed for generating reports.
- Storing data and retrieval becomes very difficult.
- It is not computerized and hence not systematic.
- Lack of database security.

B. Proposed system

In this website a student is given an Identity card that contains unique Card Id. When the Sub User enters the card id, it displays all the information about the particular student, i.e. his personal details and also gives the information about all the candidates who have contested for election based on student's section.

In addition, this software is designed such a way that an individual is not allowed to vote more than once. I.e. once an individual has finished voting, his/her personal information will be disabled. Data in this software is completely secured. Means only authorized person can update the information.

The current system is used to less transparency because there could be chances of cheating at the voting time. Authentication of Voters, Security of the voting process, protecting voted data these are the main challenges of current Election voting. That's why it is necessary to generate a secure election voting system. In this paper, we have proposed an election voting system which is based on the fingerprint of voter which is saved as Aadhar card number in a central government database. In the Aadhar's centralized database, the government collects biometric and demographic data of citizens and provides a 12-digit unique identity number to individual. Fingerprint biometric provide secure authentication because fingerprint is unique to each individual.

Advantages:

- It increases the counting speed.
- It reduces the human effort.
- There is no chance of wastage of votes.
- It saves lot of time.
- Result will be announced within a short period of time.
- Since it is an offline LAN connected project, no need

of internet connection.

C. MD5 Scheme

- In cryptography, MD5 (Message-Digest algorithm 5) is a widely used cryptographic hash function with a 128-bit hash value. As an Internet standard (RFC 1321), MD5 has been employed in a wide variety of security applications, and is also commonly used to check the integrity of files. An MD5 hash is typically expressed as a 32-digit hexadecimal number.

1) The Algorithm

- The MD5 hash is described in RFC 1321 along with a C implementation. MD5 is similar to the MD4 hash. The padding and initialization is identical.
- MD5 operates on 32-bit words. Let M be the message to be hashed. The message M is padded so that its length (in bits) is equal to 448 modulo 512, that is, the padded message is 64 bits less than a multiple of 512. The padding consists of a single 1 bit, followed by enough zeros to pad the message to the required length. Padding is always used, even if the length of M happens to equal 448 mod 512. As a result, there is at least one bit of padding, and at most 512 bits of padding. Then the length (in bits) of the message (before padding) is appended as a 64-bit block.
- The padded message is a multiple of 512 bits and, therefore, it is also a multiple of 32 bits. Let M be the message and N the number of 32-bit words in the (padded) message. Due to the padding, N is a multiple of 16.

D. Modules description

- Registration
- User Login
- Admin Login
- Election Creations
- Voting Counting

1) Registration

In Registration module the User can register their information like name, Class, contact number, email id etc.,

2) User Login

After Registration Process Complete the user Have several username and password.

3) Admin Login

Admin have several username and password. This login to access only Authenticating Person Only.

4) Election Creations

Admin have to privilege to create Election Person Details Upload in this Modules.

5) Voting Counting

After Success full complete the elections administrators will be count the votes. Then Result will be publish.

3. Dataflow diagram

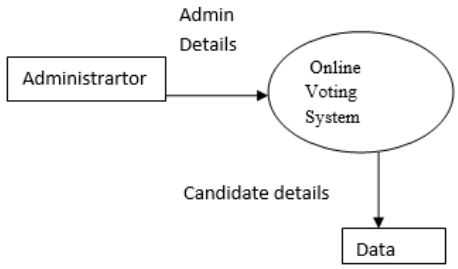

Fig. 1. Level 0

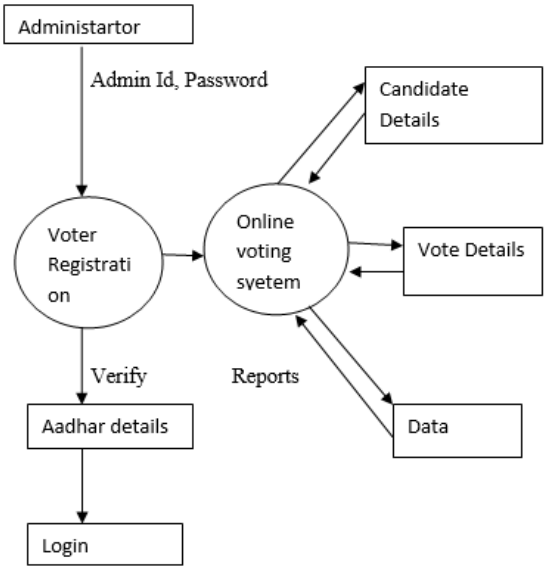

Fig. 2. Level 1

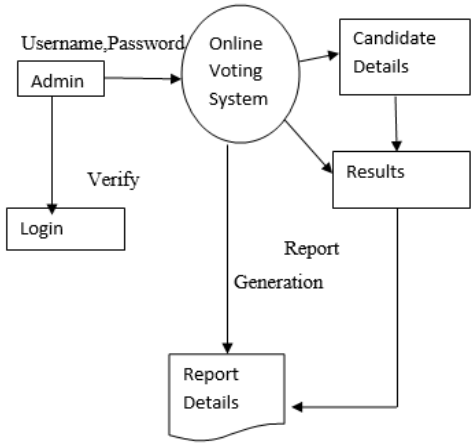

Fig. 3. Level 2

4. System Implementation

Each program is tested individually at the time of development using the data and has verified that this program linked together in the way specified in the programs specification, the computer system and its environment is tested to the satisfaction of the user. The system that has been developed is accepted and proved to be satisfactory for the user.

And so the system is going to be implemented very soon. A simple operating procedure is included so that the user can understand the different functions clearly and quickly.

Initially as a first step the executable form of the application is to be created and loaded in the common server machine which is accessible to all the user and the server is to be connected to a network. The final stage is to document the entire system which provides components and the operating procedures of the system.

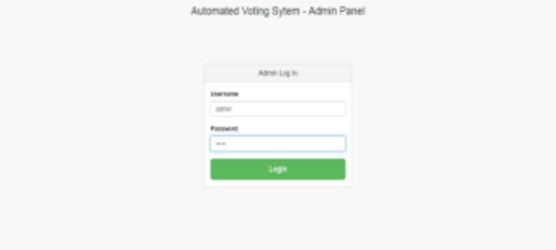

Fig. 4. Admin Login

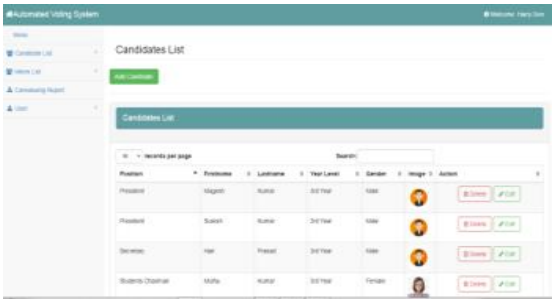

Fig. 5. Candidate List

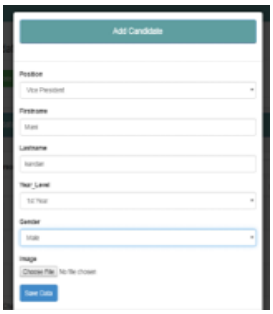

Fig. 6. Add Candidate Details

Fig. 7. User Registration

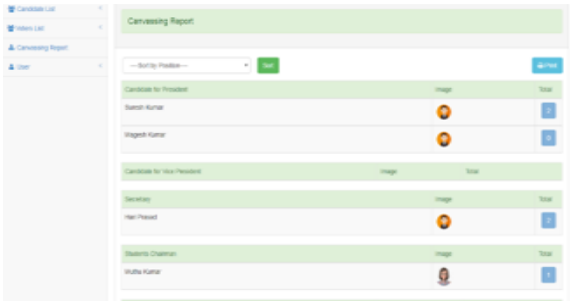

Fig. 8. Candidate Reports

5. Conclusion

This system presented a framework for information, tracking, and validating evolving multifaceted user profiles on Web sites that have all the challenging aspects of real-life Web information, include evolving user profiles and access patterns, dynamic Web pages, and external data describing ontology of the Web content. A multifaceted user profile summarizes a group of users with similar access activities and consists of their viewed pages, search engine queries, and inquiring and inquired companies. The choice of the period length for analysis depends on the application or can be set, depending on the cross-period validation results. Even though we did not focus on scalability, the latter can be addressed by following an approach similar to, where Web click streams are considered as an evolving data stream, or by mapping some new sessions to persistent profiles and updating these profiles, hence eliminating most sessions from further analysis and focusing the information on truly new sessions.

6. Future enhancement

Every application has its own merits and demerits. The project has covered almost all the requirements. Further requirements and improvements can easily be done since the coding is mainly structured or modular in nature. Changing the existing modules or adding new modules can append improvements. Further enhancements can be made to the application, so that the web site functions very attractive and useful manner than the present one.

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