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Title: **Online Election System (for society)**

Preliminary Investigation

Organizational Overview

Online Election System is about voting processes for member-based organizations. Our staff strives to simplify and secure elections and votes for voters, members and election administrators.

Online Election System is the result of frustrations running elections for student groups, associations and not for profit organizations. We spent many hours tallying paper ballots and kludgy spreadsheets or scripts to tally and share results. We knew we could do better.

Access our online election system with your desktop computer, laptop, smartphone or tablet.

With our online election system and associated services, we strive to provide an election platform that allows both small volunteer groups and large associations to run a secure, democratic election at a reasonable price.

We build simple elegant technology solutions to real world problems by listening to our customer needs. And we are always looking to improve our online voting tool, so email us with comments and questions!

Description of System

"ONLINE VOTING SYSTEM" is an online voting technique. In this system people who are resident of the society and whose age is above 18 years of age and any sex can give his/her vote online without going to any physical polling station.

Voter has to be registered first for him/her to vote. Registration is mainly done by the system administrator for security reasons. Residents seeking registration are expected to submit their details while signup. The system Administrator registers the voters on a special site of the system visited by him only by simply verifying the registered voters. After the validity of them being citizens of that society has been confirmed by the system administrator, the resident is then registered as a voter. After registration, the voter is assigned a secret Voter ID with which he/she can use to log into the system and enjoy services provided by the system such as voting. If invalid/wrong details are submitted, then the citizen is not registered to vote.

Similarly, for candidates there will be a separate registration which will be verified by the admin.

Registered voter can then vote for every designation created by the administrator. Voting can be done once for each designation by each voter. A deadline will be given to elections. After the election deadline is over, everyone will be able to view result of all elections.

Limitations of the present system

The problems of the existing manual system of voting include among others the following:

- **Expensive and Time consuming**: The process of collecting data and entering this data into the database takes too much time and is expensive to conduct, for example, time and money is spent in printing data capture forms, in preparing registration stations together with human resources, and there after advertising the days set for registration process including sensitizing voters on the need for registration, as well as time spent on entering this data to the database.
- **Too much paper work**: The process involves too much paper work and paper storage which is difficult as papers become bulky with the population size.
- **Errors during data entry:** Errors are part of all human beings; it is very unlikely for humans to be 100 percent efficient in data entry.
- **Loss of registration forms:** Some times, registration forms get lost after being filled in with voters' details, in most cases these are difficult to follow-up and therefore many remain unregistered even though they are voting age nationals and interested in exercising their right to vote.
- **Short time provided to view the voter register:** This is a very big problem since not all people have free time during the given short period of time to check and update the voter register.
- Above all, a number of voters end up being locked out from voting.

Proposed system and its advantages

The ONLINE VOTING SYSTEM shall reduce the time spend making long queues at the polling stations during voting. It shall also enable the voters to vote from any part of the globe as explained since this is an online application available on the internet. Cases of vote miscounts shall also be solved since at the backend of this system resides in a well-Developed database using MYSQL that can provide the correct data once it's correctly queried. Since the voting process shall be open as early as possible, the voters shall have ample time to decide when and whom to vote for.

Feasibility study

Operational feasibility

It is mainly related to human organizations and political aspects. The points to be considered are:

- What changes will be brought with the system?
- What organization structures are disturbed?
- What new skills will be required? Do the existing staff members have these skills? If not, can they be trained in due course of time?

The system is operationally feasible as it very easy for the End users to operate it. It only needs basic information about Windows platform.

Technical feasibility

An important issue for the development of a project is the selection of suitable front-end and backend. When we decided to develop the project, we went through an extensive study to determine the most suitable platform that suits the needs of the organization as well as helps in development of the project. The aspects of our study included the following factors.

Front-end selection:

- Scalability and extensibility.
- Flexibility.
- Robustness.
- According to the organization requirement and the culture.
- Must provide excellent reporting features with good printing support.
- Platform independent.
- Easy to debug and maintain.
- Event driven programming facility.

According to the above stated features we plan to use HTML, CSS, JavaScript, Bootstrap as the front-end for developing our project.

Back-end Selection:

- Multiple user support.
- Efficient data handling.
- Provide inherent features for security.
- Efficient data retrieval and maintenance.
- Popularity.
- Operating System compatible.
- Easy to install.
- Various drivers must be available.
- Easy to implant with the Front-end.

According to above stated features we selected Python, Django and MY SQL as the backend.

Economic feasibility

This feasibility checks whether the system can be developed with the available funds. The cost of project depends upon the number of man-hours required. The Online voting system does not require enormous amount of money to be developed. As this system will be majorly used for

society elections, there will not be a requirement of huge database. Thus, this can be done economically if planned judicially, so it is economically feasible.

Schedule feasibility

Time evaluation is the most important consideration in the development of project. The time schedule required for the developed of this project is very important since more development time effect machine time, cost and cause delay in the development of other systems. A reliable Online voting system can be developed in the considerable amount of time.

Technologies used

MYSQL DBMS- It allows combination, extraction, manipulation and organization of data in the voters' database.
PyCharm - PyCharm is a dedicated Python Integrated Development Environment (IDE) providing a wide range of essential tools for Python developers, tightly integrated to create a convenient environment for productive Python, web, and data science development.
Django – Django is a Python-based free and open-source web framework that follows the model–views–template (MVT) architectural pattern. Django also provides an optional administrative create, read, update and delete interface that is generated dynamically through introspection and configured via admin models.

PYTHON coding - This is the programming language used which is very easy to work with.

Bootstrap – It is a free front-end framework for faster and easier web development. Bootstrap includes HTML and CSS based design templates for typography, forms, buttons, tables, navigation, modals, image carousels and many other, as well as optional JavaScript plugins.