



ONLINE VOTING SYSTEM



*In partial fulfillment of the requirements
for the award of the degree of*

**BACHELOR OF TECHNOLOGY
IN
COMPUTER SCIENCE AND ENGINEERING**

SUBMITTED BY

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UNDER THE ESTEEMED GUIDANCE OF

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IDE USED

Eclipse (@ www.eclipse.org) is an open-source Integrated Development Environment (IDE) supported by IBM. Eclipse is popular for Java application development (Java SE and Java EE) and Android apps. It also supports C/C++, PHP, Python, Perl, and other web project developments via extensible plug-ins. Eclipse is cross-platform and runs under Windows, Linux and macOS.

THE PROBLEM

Even though we've made great strides of progress in developing our voting system, it still has many flaws. One of those flaws is inaccessibility. The current system requires people to go to a polling booth and register their vote there. The recent pandemic of COVID-19 highlighted how dangerous this system is. Not only does physical voting expose people to the risk of COVID-19, but it also makes the process difficult for those who aren't in their voting region.

Every person's voting card is specific to a region. Additionally, at the time of voting, voter's names are listed in the list of their respective areas. You can't vote outside the vicinity of your voting card. So, people who are not present in their voting region can't cast a vote physically; they use the in-mail ballot, but that's highly inefficient.

THE SOLUTION

We can build an online voting management system through which people can cast their votes digitally. The system has a window for logging in where a voter can enter their voter ID number and other relevant details to enter. It also has an interface where the user can cast his/her vote. The system makes sure that a person casts only one vote.

Through an online voting system, we remove the risk of any spread of COVID-19. Moreover, people who aren't physically present in their voting region for any reason, or those who can't travel physically to the polling booth both would benefit from this implementation.

In the current scenario where the internet has brought almost all the ease to our living room, be it replacing physical banking to internet banking, ordering food online, buying movie tickets, buying any kind of clothes or household items to consulting your doctor for minor issues, bill payments of any kind etc.

Still since quite long time going to the polling booth and standing in long queue to cast vote has been persistent and it was challenging for the Government to motivate the public to participate in the election system and cast their vote, as there was no such online voting system available.

But all the credit goes to the internet and the Software developers who are soon going to make it possible for everyone to cast their vote to the candidate of their own choice with the unmatched ease.

Another challenge for the software developers is to develop an easy, user friendly software where everyone can vote.

ABOUT THE PROJECT

This project uses core java concepts from GUI to storing information. The code has been entirely written in java. To access the system, voters would have to log in their details and cast a vote. The project mainly uses the Swing components as they are lightweight and easy to use. The layout, insets and dimensions have been imported from the Java AWT.

The features provided by this voting system are:

- Voter login
 - Cast vote
 - Candidate details
 - Double vote confirmation
- Admin login
 - Admin area window
 - Add new admins.
 - Add new voters.
 - Display Voter list
 - Display Admin list

The login details are already saved in a file which acts as a database for information. The details are checked thoroughly for any error and if the information provided is correct then the voter is allowed to vote.

A confirmation message pops when the voter votes. So, this system ensures that voting is a two-step verification process.

APPLICATION

Before moving on to the application of this project, we must understand why voting is so much important. Here are some points which would aid in enlighten voters about the importance of Voting.

- All Votes are equal.
- Apart from the protests, voting is a highly effective medium to have the change that we want in the government.
- Non-choosers get NOTA.
- Voting gives us a sense of pride.

Let's move on to the application of this particular project.

- This system will make voting easier. Electronic votes can be sent from the comfort of our armchair, while on holiday or even in the middle of the night. We no longer have to make that tedious walk to the polling station.
- This system will make voting more accessible. E-voting would ensure a more reliable process.
- When there are fewer obstacles to voting, in theory more citizens exercise this right. Young people, who traditionally vote less often, would more likely be interested in getting their voice heard via e-voting. Greater participation and better representation of all sections of the population must be welcomed from a democratic point of view.
- With e-voting there are no invalid votes caused by errors made on the ballot paper or via EVM.
- When asked about the security issues surrounding e-voting, supporters argue that no system is full proof. In the past, there have been several cases of electoral fraud in Switzerland. This can be done by stealing envelopes containing the ballot papers sent in the post and then voting with a forged signature on behalf of the person who was robbed.
- It brings the elector closer to the candidates, develops democratic debate, encourages thoughtful voting, informs and combats various problems of representation.
- It guarantees confidentiality and transparency, since no relation can be established between the elector and the vote.
- The count is an automatic calculation.

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