ABSTRACT

The ‘Online Voting System’ is the study and implementation of the voting requirements and protocols during an election. It is an online voting system aimed at easing the voting procedure and reducing the election’s time duration. The system is a web application where a person can cast vote after the verification of their personal information and can view the results of the ongoing election. The application is built on the traditional Waterfall Model. The application is built using HTML, CSS and JS for the UI/UX and Python and Django framework for the server-side scripting. The application employs MySQL for storing and retrieving data. A voter, after verification, can view the candidates running for the election along with their personal information, qualification and work done by them. The web application provides simple and intuitive user interface without ambiguity for easy and errorless voting. It can make the election conclude quickly and the money spent to provide wages to vote counters can be saved and used for something more productive.

***Keywords: voting, verification, waterfall, framework, server-side, web application, MySQL***

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LIST OF ABBREVIATIONS

1. INTRODUCTION

The ‘Online Voting System’ implementation of the voting requirements and protocols during an election. It is an online voting system aimed at easing the voting procedure and reducing the election’s time duration.

The system is a web application where a person can cast vote after the verification of their personal information and can view the results of the ongoing election. The web application provides simple and intuitive user interface without ambiguity for easy and errorless voting. It can make the election conclude quickly and the money spent to provide wages to vote counters can be saved and used for something more productive.

Online voting system promotes e-governance and brings transparency in the election. This completely mitigates counting errors and theft of ballot boxes during the physical election – which happens often in Nepal during Elections. Along with benefits, it also brings forth problems. For instance, implementation and maintenance cost can be huge, prone to security attacks like hacking, etc. The solutions to these problems are following proper security regulations while building the system and hiring a cyber-security specialist for checking and improving the vulnerabilities. The system can be made short term i.e. making the voting system online only during the election period which can cut the maintenance cost.

1. PROBLEM STATEMENT

Election is the fundamental part of democracy which promotes the democratic decision making. However, Elections are the major financial burden for a nation like Nepal – where local and parliamentary election are conducted every few years. For instance, the local election of 2022 in Nepal brought forth the whopping expenditure of NPR 8.11 billion (USD 63.7 million) for Election Commission which is the highest till date. In essence, every few year millions of dollars are spent during election and the amount rising. Another problem with elections in Nepal is robbery of the ballot boxes which has happened during every election.

OVS aims at resolving these problem to great extent. Implementation of OVS will substantially reduce the cost and time for conducting election. OVS is not the foolproof solution to reduce election expenditure as its implementation and maintenance requires funding and politicians are going to spend above set limits, however, not having to pay wages to the counters, for as long as the day they take to count the votes, can save the amount from the set budget. It is also quite useful in case of the re-elections.

1. OBJECTIVES

* To reduce the time it takes from casting the vote to electing a candidate.
* To reduce the cost of conducting election.
* To improve e-governance index.
* To stop the robbery of ballot boxes.

1. METHODOLOGY

## 4.1 REQUIREMENT IDENTIFICATION

### 4.1.1 LITERATURE REVIEW

### 4.1.2 REQUIREMENT ANALYSIS

## 4.2 FEASIBILTY STUDY