

**A
PROJECT
ON
“ONLINE VOTING SYSTEM”**

**Submitted to
G. S. COLLEGE OF COMMERCE & ECONOMICS, NAGPUR
(AUTONOMOUS)**

**In the Partial Fulfillment of
B.Com. (Computer Application) Final Year**

**Submitted by
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**Under the Guidance of
Pravin J. Yadao**



**G. S. COLLEGE OF COMMERCE & ECONOMICS, NAGPUR
(AUTONOMOUS)**

2021-2022

**G. S. COLLEGE OF COMMERCE & ECONOMICS, NAGPUR
(AUTONOMOUS)**

**CERTIFICATE
(2021 - 2022)**

This is to certify that Mr. Ritik Marghade & Aditya Bisen

**has completed their project on the topic of ONLING VOTING
SYSTEM prescribed by G. S. College of Commerce & Economics,
Nagpur (Autonomous) for B.Com. (Computer Application) –
Semester-VI.**

Date:

Place: Nagpur

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Project Guide**

External Examiner

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We take this opportunity to express our deep gratitude and whole hearted thanks to project guide Prof. Pravin Yadao, Coordinator for his guidance throughout this work. We are very much thankful to him for his constant encouragement, support and kindness.

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We also wish to express our sincere thanks to Principal Dr. N. Y. Khandait for providing us wide range of opportunities, facilities and inspiration to gather professional knowledge and material without which this project could not have been completed.

Date:

Place: Nagpur

Name of student & signature

RitikMarghade

Aditya Bisen

DECLARATION

We Ritik Marghade & Aditya Bisen hereby honestly declare that the work entitled “ONLING VOTING SYSTEM” submitted by us at G. S. College of Commerce & Economics, Nagpur (Autonomous) in partial fulfillment of requirement for the award of B.Com. (Computer Application) degree by Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur has not been submitted elsewhere for the award of any degree, during the academic session 2021-2022.

The project has been developed and completed by us independently under the supervision of the subject teacher and project guide.

Date:

Place: Nagpur

Name of student & signature

Ritik Marghade

Aditya Bisen

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INTRODUCTION

Introduction:-

“ONLINE VOTING SYSTEM” is an online voting technique. In this system people who have citizenship of India and whose age is above 18 years can give his\her vote online without going to any physical polling station. There is a database which is maintained in which all the names of voters with complete information is stored.

In “ONLINE VOTING SYSTEM” a voter can use his\her voting right online without any difficulty. He\She has to be registered first for him/her to vote. Registration is mainly done by the system administrator for security reasons. The system Administrator registers the voters on a special site of the system visited by him only by simply filling a registration form to register voter. Citizens seeking registration are expected to contact the system administrator to submit their details. After the validity of them being citizens of India has been confirmed by the system administrator by comparing their details submitted with those in existing databases such as those as the Registrar of Persons, the citizen 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

At their core, online voting systems protect the integrity of your vote by preventing voters from being able to vote multiple times. As a digital platform, they eliminate the need to gather in-person, cast votes using paper, or by any other means (e.g. email, insecure survey software).

You may hear an online voting system being referred to as an online election system, an online e voting system, or electronic voting. These all make reference to the same thing: a secure voting tool that allows your group to collect input from your group and closely scrutinize the results in real time.

Keep reading for access to the most comprehensive online voting

Online voting tools and online election voting systems help you make important decisions by gathering the input of your group in a way that's systematic and verifiable.

Oftentimes, these decisions are made on a yearly basis - during an event (e.g. your organization's AGM) or at a particular time of the year. Or you might run ongoing polls amongst your group (e.g. anonymous employee feedback surveys).

It's a good idea to use an online voting system to:

- **Elect your leadership:** A board of directors election is a good example, where there are multiple positions (e.g. chair, vice president, secretary, treasurer). All of which may include supporting documentation (e.g. biographies, resumés, headshots).
- **Admit new members to your group.** This helps you stick to a regular, fair process of evaluation and lets candidates know what to expect.
- **Gather anonymous feedback from your employees.** Managers (and managers of managers) want to know how their employees truly feel about their jobs and work life. Using an online voting system with a capacity for secret balloting helps employees express their true feelings, by understanding and trusting that their feedback will be heard, but not tied directly to them.
- **Vote on yearly budgets.** And since adjustments to your budget are often needed, an online voting system will keep voting secure and accessible - no matter where the members of your group may happen to be.

- **Alter your operational procedures and bylaws.** Just like leadership elections, expect group members to react strongly toward changes - no matter how minor - to organizational processes. You'll want to collect individual responses to these changes in a systematic manner.

In all of these cases, an online voting system will enable better decisions, justify those decisions, and let you share proof that these decisions were carried out in line with the standards of your group.

As any experienced operations professional will tell you, tight team alignment generates drastically better outcomes for companies and clients. We wholeheartedly agree with this notion and have spent many painstaking years developing a culture around this mindset. Our teams are constantly sharing information about important updates, changes, and modifications.

OBJECTIVES

Objectives:-

The specific objectives of the project include:

1. Reviewing the existing/current voting process or approach in BHARAT
2. Coming up with an automated voting system in BHARAT
3. Implementing a
4. an automated/online voting system.
5. Validating the system to ensure that only legible voters are allowed to vote.
6. Each voter will be able to vote only once.
7. Nobody will have access to the votes before the votes before the official opening of the electronic ballot box.
8. The votes cast cannot be intercepted, modified or diverted.
9. The on –line site will resist any attack.
10. Only registered vote will have access to the application.
11. Voters will be protected against any attempt of identified theft.
12. The secrecy of the election will be controlled.

Preliminary System Analysis

Preliminary System Analysis :

This section details the suggested deliverables associated with the case. These include tasks for scheduling, data modeling, process modeling and object oriented techniques. The case is given to students close to the start of semester, with the intention that the students read and familiarize themselves with the content and structure of the case study before the specific skills required to complete the deliverables are taught. The course is taught in a lecture plus tutorial format with 12 teaching weeks spread across a 14 week semester. In each teaching week there is a two hour lecture and a two hour tutorial session. Lectures are delivered to the entire group of enrolled students in a traditional large-group format, with the presentation covering the background and theoretical aspects of a new topic each week. Small in-class exercises and practical tasks are also conducted in lectures but due to the large group format, this is all done in a group work setting with a lot of discussion and interaction between students. The weekly tutorial sessions are where the majority of the practical work takes place as these sessions are limited to 15 participants each to facilitate more individual attention. The tutorial format includes a small amount of revision of lecture material with the remainder of the session devoted to practical tasks and putting the skills into practice. It is during these tutorial sessions that the teaching case or assignment would be discussed. Deliverables in the case follow a similar order and pattern to the topics taught in the course. Therefore it is possible for students to apply their newly developed skills each week on the relevant section of the case. For example, the Project Management tutorial would include discussion of scheduling, feasibility and problem analysis and would have a series of in-class practical tasks. The instructor may then discuss how these tasks relate (or overlap) with the Project Management deliverables for

the teaching case and allow students to independently work on their own assignments. Students are also given the opportunity to present their completed deliverables to the instructor before the formal submission. This allows them to gauge their progress and gain valuable feedback on areas that may need further

Preliminary investigation

Preliminary investigation:-

The election crisis of 2000 brought the flaws of the election system to the public eye, forcing investigations into the methods used by all states for voting and calling for major improvements to these methods. Currently, each county in each state is responsible for their own method of voting, whether at poll sites, by mail, or even by the Internet, which a few states have implemented for trial runs. Regardless of the method used, each system is intended to accomplish the same goal – determine the winner of the election based on the votes submitted. A report done by the National Science Workshop on Internet Voting [5] stated a list of criteria that all election systems should follow in order to reach this goal:

- Eligibility and Authentication of voters
- Uniqueness of vote
- Accuracy of the record of the vote Integrity of the vote
- Verifiability and Auditability of the vote count
- Reliability of the election system
- Secrecy and Non-Coercibility of the vote
- Flexibility of election equipment
- Convenience for the voters
- Certifiability of the election system
- Transparency of the voting process
- Cost-effectiveness of the election system

As will be shown, these criteria are the ideal to be followed for the election systems, but not necessarily the reality. The reality is that none of the election systems abide by all the criteria and, as a result, run into serious problems. Some proposals that claim to solve these problems in theory prove to fail in practice. The state of the art and the problems of electronic voting at poll sites will be the focus of this report. In doing this, a challenge will be set in order to rectify these problems. State of the Art Many people are opposed to the idea of remote poll site electronic voting. The foremost issues in the computer community are regarding software security and certification. Rebecca Mercuri's [8] statement on electronic voting highlights some of these concerns. She expresses concern about the fact that there is no standard electronic ballot format. Therefore, a computer ballot can be made to cause more confusion. Also, if the election process becomes fully automated, it removes any opportunity to perform manual checks. She further goes on to say that even the best cryptographic systems can be broken into and this can potentially compromise the accuracy of the votes and privacy of a large number of voters. Mercuri is a proponent of a system that provides an indisputable paper audit trail. M. I. Shamos [9] makes an argument against centralized software voting system. He presents a nightmare scenario where an unscrupulous programmer produces software that favors a certain candidate and that software is deployed throughout the country. The flaws in the current election systems validate the above concerns. The Caltech/MIT report [6] highlights problems of some of the electronic voting equipment in use today.

Specifically, the mechanical lever voting machines provide no ability to audit them and to “recount” individual ballots. The same problems occur with the Direct Recording Electronic (DRE) systems. In addition, there are issues regarding the time spent on these machines by a voter, which can be very high and result in low system throughput. Election systems that use optical-scan voting machines require voters to fill in an oval or connect dots on a paper ballot. The problem occurs when the voter improperly marks the ballot, causing the computer to count them incorrectly or reject them totally. The equipment used in the election system is just part of the problem of poll site voting. The Caltech/MIT report unraveled many additional problems, including registration, ballot security and even the poll site process itself [6]. At the poll sites, there is often “rush hour traffic” during peak times, which can lead to discouragement for voters to wait in long lines to vote. Since voting is not something that happens very often, the process itself is unfamiliar and can be confusing to the voter. Also, workers at the poll sites are volunteers, primarily elderly, and must work the entire day. In dealing with ballot security, this could be an issue, since these older, tired volunteer workers will be guarding the poll sites. These problems with poll site voting are also important issues. Moreover, the cost of switching to electronic voting systems may be well beyond the budget of most counties. According to a report by Lorrie Cranor [10], this might make the whole idea infeasible in the near future. There is also the problem that once a county does spend huge amount to acquire such a system, it will be tied down to it for a long time which will hamper

future research. System in Use Countries that currently implement some sort of electronic voting are the USA, Brazil, Venezuela, Belgium, India, and the Philippines [1]. Belgium implemented electronic voting in 1991 because of the huge amount of time required to count their open electoral list ballots. Their technology includes storing data on a magnetic strip, and using a screen and light pencil to select options. This system was used by 44% of voters in 2000 elections, but has not spread to all polling places because of the expense [1]. In this scheme, the user is issued a magnetic stripe card at the polling place. The voter uses a light pen to select options, which are then recorded on the card. The voter carries the card to a "voting urn" and deposits the card. The vote is then saved on a storage device [2]. This system automatically centralizes votes and verifies the results with the magnetic cards [4]. The USA uses a wide variety of electronic systems and automated counting syst

Identification of **Need**

Identification of Need:-

- 1. Paper-based voting:** The voter gets a blank ballot and use a pen or a marker to indicate he want to vote for which candidate. Hand-counted ballots is a time and labor consuming process, but it is easy to manufacture paper ballots and the ballots can be retained for verifying, this type is still the most common way to vote.
- 2. Lever voting machine:** Lever machine is peculiar equipment, and each lever is assigned for a corresponding candidate. The voter pulls the lever to poll for his favorite candidate. This kind of voting machine can count up the ballots automatically. Because its interface is not user-friendly enough, giving some training to voters is necessary.
- 3. Direct recording electronic voting machine:** This type, which is abbreviated to DRE, integrates with keyboard; touch screen, or buttons for the voter press to poll. Some of them lay in voting records and counting the votes is very quickly. But the other DRE without keep voting records are doubted about its accuracy.
- 4. Punch card:** The voter uses metallic hole-punch to punch a hole on the blank ballot. It can count votes automatically, but if the voter's perforation is incomplete, the result is probably determined wrongfully.
- 5. Optical voting machine:** After each voter fills a circle correspond to their favorite candidate on the blank ballot, this machine selects the darkest mark on each ballot for the vote then computes the total result. This kind of machine counts up ballots rapidly. However, if the voter fills over the circle, it will lead to the error result of optical-scan.

SECURITY ISSUES OF ONLINE VOTING

Foreign experience revealed that they are often confronted by security issues while the online voting system is running. The origin of the security issues was due to not only outsider (such as voters and attackers) but also insider (such as system developers and administrators), even just because the inheritance of some objects in the source code are unsuitable. These errors caused the voting system to crash.

The proposed solutions were correspondingly outlined to hold back these attacks. For example, to avoid hacker making incursion into the voting system via network, we can design our system to transmit data without network. Another example is to limit voter to input particular data, so that we can prevent the command injection from running

Requirements:

- 1) Registration of the voter is done by ELECTION COMMISSION OF INDIA.
- 2) ELECTION COMMISSION OF INDIA can change the information any time if required.
- 3) Registration of the Voter depends upon the information filled by the user.
- 4) Voter is given a unique ID and PASSWORD.
- 5) In the DATABASE information of every voter is stored.
- 6) Database shows the information of every user.

Problems with the Existing Voter Registration System

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

- 1. 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.
- 2. 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.
- 3. 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.
- 4. 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.
- 5. 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.
- 6. Above all, a number of voters end up being locked out from voting.**

At present there are many drawbacks in the existing manual system. So, in this application you can store your data in a systematic manner. And we can easily retrieve it when we want. And there is a less chances of loss of data as compare to manual system.

Identify the objectives and scope of the new system:

This system provides accuracy and faster access. The main objective of this system is to manage the data of Classes, Departments, Assignments, Notes, etc. The purpose of this application is to reduce manual work of managing data. For future scope there will be a message function through which student and teacher can message each other.

Identify problems and suggest few solutions:

This phase is done to find out the solutions for developing a new system. This can be done by taking an interview of the people working in the organization. They can suggest and recommend ideas for development of new project.

Flaws of need System

Flaws of need System:-

As there are many drawbacks in the existing system, to solve these problems we require a application where the data can be record in a systematic way and the process of recording, maintaining and retrieving the information will be easy. And it should be less time consuming. The new system should be partially automated(computerized) .

Following are the point for the need of new system i.e. “Online Learning System”:

1.Userfriendly: This application will be user-friendly as it provides a Graphical User Interface to the user to perform every activity.

2.Time Saving: With the help of this application, you can easily maintain your data in systematic manner. So, it will save your time while retrieving data.

3.Assignment: In the new system student can submit their assignment from anywhere any time. And teacher can grade their assignment. So, it will help to keep accurate record of student assignment.

4.Study Material: Teacher can add downloadable study material for students. And student can download study notes from anywhere.

Project Category

Project Category:-

PLATFORM/LANGUAGES/TOOL USED:

Frontend: HTML, CSS, JavaScript, Bootstrap

Backend: PHP, MySQL

HTML

HTML stands for Hyper Text Markup Language. It is used to design web pages using markup language. HTML is the combination of Hypertext and Markup language. Hypertext defines the link between the web pages. Markup language is used to define the text document within tag which defines the structure of web pages. HTML 5 is the fifth and current version of HTML. It has improved the markup available for documents and has introduced application programming interfaces(API) and Document Object Model(DOM).

CSS (CASCADING STYLE SHEET)

Cascading Style Sheets, fondly referred to as CSS, is a simply designed language intended to simplify the process of making web pages presentable. CSS allows you to apply styles to web pages. More importantly, CSS enables you to do this independent of the HTML that makes up each web page.

- 1. Paper-based voting:** The voter gets a blank ballot and use a pen or a marker to indicate he want to vote for which candidate. Hand-counted ballots is a time and labor consuming process, but it is easy to manufacture paper ballots and the ballots can be retained for verifying, this type is still the most common way to vote.
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Recent years, a considerable number of countries has adopted E-voting for their official elections. These countries include; America, Belgium, Japan and Brazil.

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JAVASCRIPT

JavaScript is a lightweight, cross-platform, and interpreted scripting language. It is well-known for the development of web pages; many non-browser environments also use it. JavaScript can be used for Client-side developments as well as Server-side developments. JavaScript contains a standard library of objects, like Array, Date, and Math, and a core set of language elements like operators, control structures, and statements.

BOOTSTRAP

Bootstrap is a free and open-source tool collection for creating responsive websites and web applications. It is the most popular HTML, CSS, and JavaScript framework for developing responsive, mobile-first websites. It solves many problems which we had once, one of which is the cross-browser compatibility issue.

PHP

The term PHP is an acronym for Hypertext Preprocessor. It is a server-side scripting language that is used for web development. It can be easily embedded with HTML files. HTML codes can also be written in a PHP file. The PHP codes are executed on the server-side whereas HTML codes are directly executed on the browser.

Software and Hardware Requirement Specification

SOFTWARE REQUIREMENTS:

- i. **MYSQL DBMS-** It allows combination, extraction, manipulation and organization of data in the voters' database. It is platform independent and therefore can be implemented and used across several such as Windows, Linux server and is compatible with various hardware mainframes. It is fast in performance, stable and provides business value at a low cost.
- ii. **NetBeans IDE 7.1.2-**The NetBeans IDE is an award-winning integrated development environment available for Windows, Mac, Linux, and Solaris. The NetBeans project consists of an open-source IDE and an application platform that enable developers to rapidly create web, enterprise, desktop, and mobile applications using the Java platform, as well as PHP, JavaScript and Ajax, Groovy and Grails, and C/C++.

The NetBeans project is supported by a vibrant developer community and offers extensive documentation and training resources as well as a diverse selection of third-party plugins.
- iii. **JAVA coding-**This is for advanced user who find PHP codes easy to work with.
- iv. **Testing-** is done via WAMP SERVER.
- v. **Web browsers:** Mozilla Firefox, Google chrome, Opera and Internet Explorer
- vi. **Reporting Tool** i.e. through Data Report.

HARDWARE REQUIREMENTS:

- **Microsoft Windows XP Professional SP3/Vista SP1/Windows 7 Professional:**
 - **Processor:** 800MHz Intel Pentium III or equivalent
 - **Memory:** 512 MB

- **Disk space:** 750 MB of free disk space
- **Ubuntu 9.10:**
- **Processor:** 800MHz Intel Pentium III or equivalent
- **Memory:** 512 MB
- **Disk space:** 650 MB of free disk space

FRONT – END AND BACK-END

In their most general meanings, the terms front end and back end refer to the initial and the end stages of a process flow. In [software design](#), the **front-end** is the part of a software system that deals with the user, and the **back-end** is the part that processes the input from the front-end. The separation of software systems into "front ends" and "back ends" is a kind of [abstraction](#) that helps to keep different parts of the system separated. The general idea is that the front-end is responsible for collecting input from the user, which can be in a variety of forms, and processing it in such a way that it conforms to a specification that the back-end can use. The connection of the front-end to the back-end is a kind of [interface](#).

Front-end and back-end are terms used to characterize program interfaces and services relative to the initial user of these interfaces and services. (The "user" may be a human being or a program.) A "front-end" [application](#) is one that application users interact with directly. A "back-end" application or program serves indirectly in support of the front-end services, usually by being closer to the required resource or having the capability to communicate with the required resource. The back-end application may interact directly with the front-end or, perhaps more typically, is a program called from an intermediate program that mediates front-end and back-end activities. These terms acquire more special meanings in particular areas:-

(1) For software applications, front end is the same as user interface.

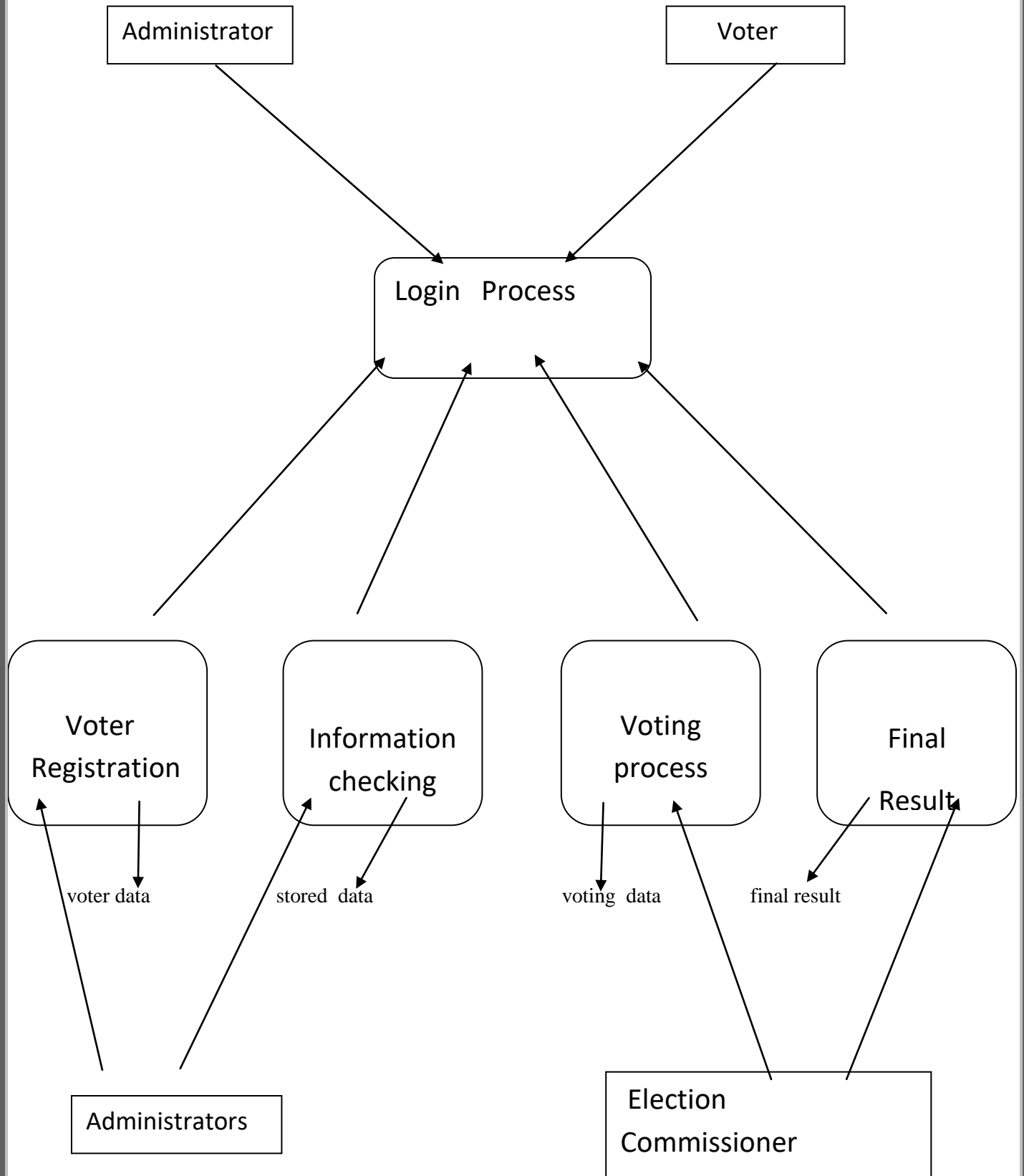
(2) In client/server applications, the client part of the program is often called the front end and the server part is called the back end.

(3) Compilers, the programs that translate source code into object code, are often composed of two parts: a front end and a back end. The front end is responsible for checking syntax and detecting errors, whereas the back end performs the actual translation into object code.

Detailed System analysis

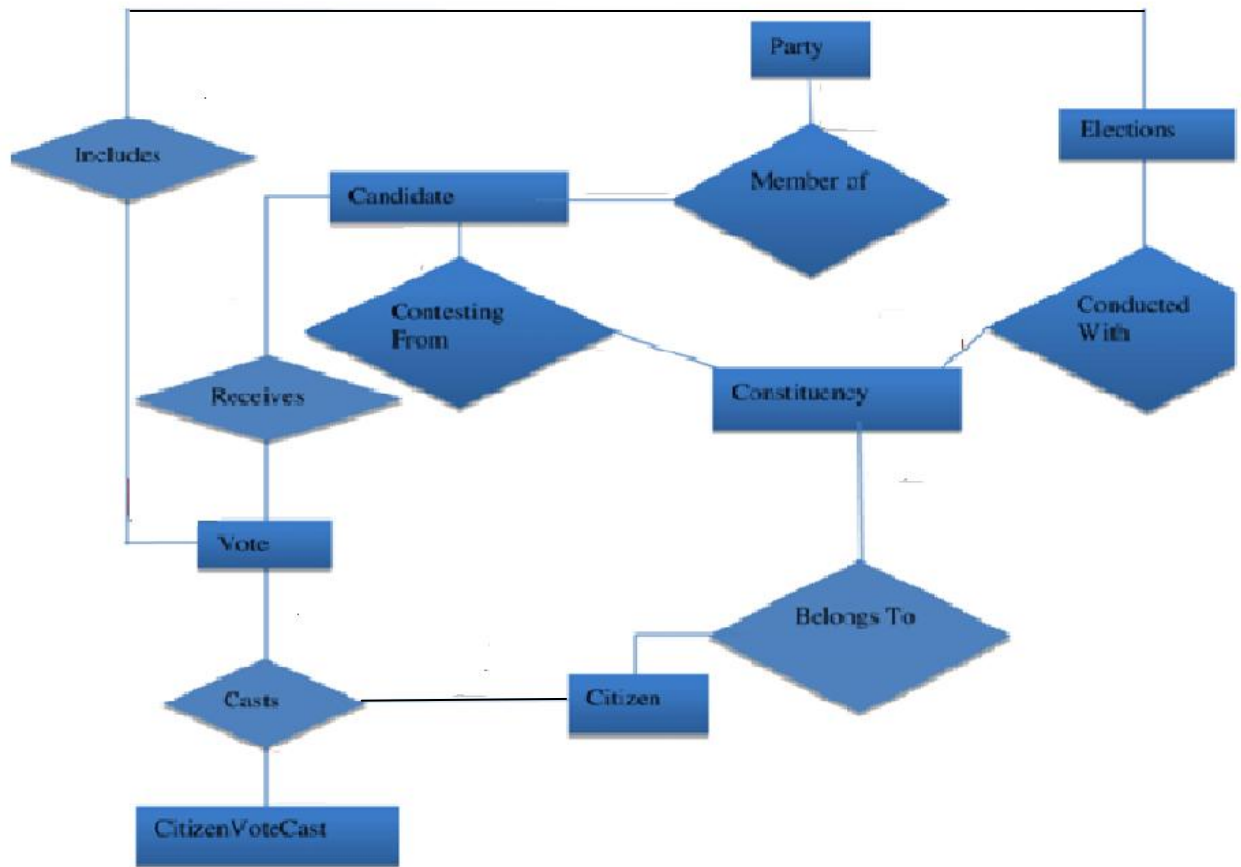
Data Flow Diagram

Data Flow Diagram:



Entity Relationship Diagram

ER Diagram:-



DATA TABLES

This project uses many tables:

- Voter
- Candidate

Voter Table:-

Field Name	Data Type	Description
VoterId	Integer	Login id for Voter(Primary key)
Name	Varchar	Name of the voter
Sex	Varchar	Sex of voter
Age	Integer	Age of voter
City	Varchar	City of voter
Security	Varchar	Security Question
Status	Boolean	Status of voter(he/she can vote or not)

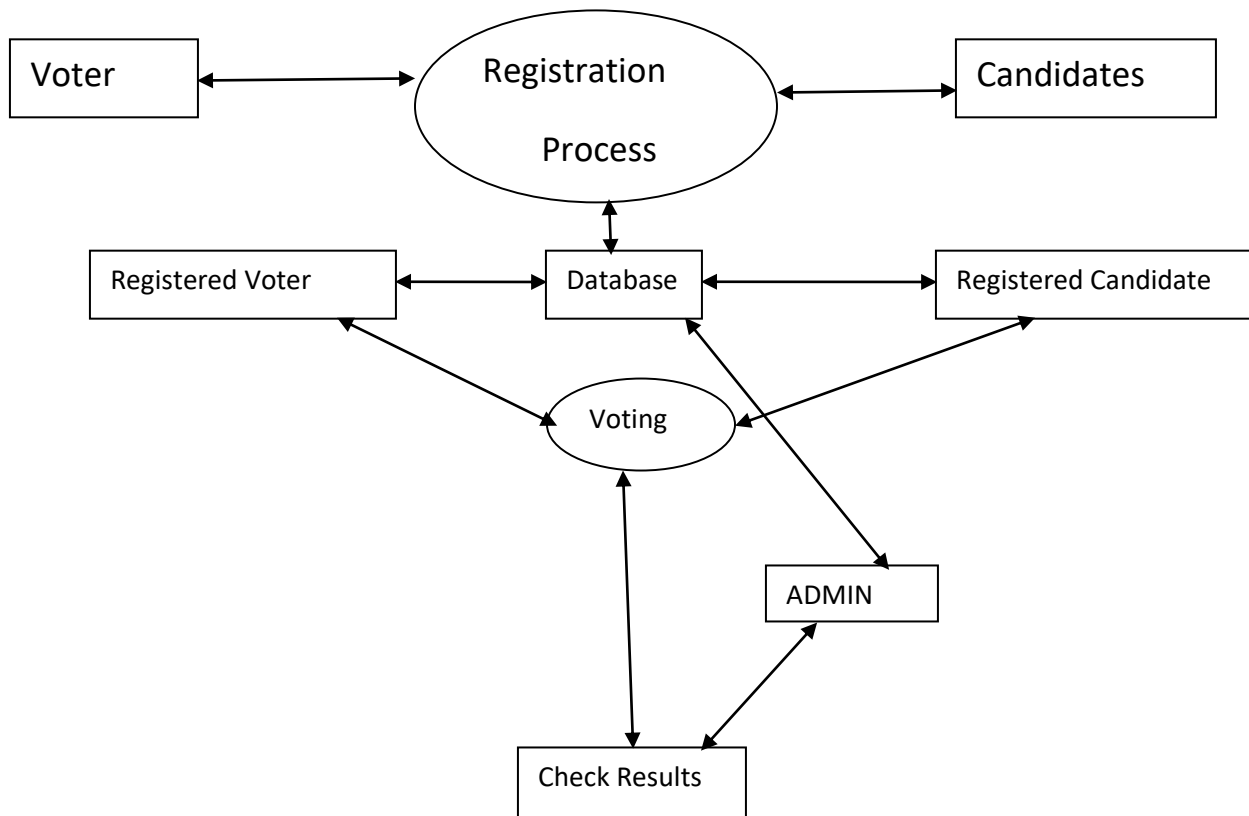
Candidate Table:-

Field Name	Data Type	Description
Symbol	Varchar	Party Symbol (Primary key)
Name	Varchar	Name of the voter
Sex	Varchar	Sex of voter
Age	Integer	Age of voter
City	Varchar	City of voter
Count	Integer	Count the no of votes

System Design

Form Design

Form Design:-



Source code

Authentication:-

```
<?php  
  
if (!isset($_SESSION['SESS_NAME'])) {  
  
    header("Location: login.php");  
  
}  
  
?>
```

Change_pass:-

```
<?php  
  
if(!isset($_SESSION)) {  
  
session_start();  
  
}  
  
include "auth.php";  
  
include "header_voter.php";  
  
?>  
  
<br>  
  
<br>  
  
<center><h3>Change Password</h3></center>  
  
<h4 style="color:#e60808;"><?php global $nam; echo $nam;?></h4>  
  
<?php global $error; echo $error;?>  
  
<center><form action="change_pass_action.php" method="post" id="myform">
```

Current Password :-

```
<input type="password" name="cpassword" value="" >
```

```
<br>
```

```
<br>
```

New Password:-

```
<input type="password" name="npassword" value="" >
```

```
<br>
```

```
<br>
```

Confirm New Password:-

```
<input type="password" name="cnpassword" value="" >
```

```
<br>
```

```
<br>
```

```
<input type="submit" name="cpass" value="UPDATE" >
```

```
</form></center>
```

```
<script type="text/javascript">
```

```
var frmvalidator = new Validator("myform");
```

```
frmvalidator.addValidation("cpassword","req","Please enter Current Password");
```

```
frmvalidator.addValidation("cpassword","maxlen=50");
```

```
frmvalidator.addValidation("npassword","req","Please enter New Password");
```

```
frmvalidator.addValidation("npassword","maxlen=50");
```



```
frmvalidator.addValidation("cnpassword","req","Please enter Confirm New Password");
```

```
frmvalidator.addValidation("cnpassword","maxlen=50");
```

```
</script>
```

```
<br>
```

```
<br>
```

```
<?php include "footer.php";?>
```

Change_pass_action:-

```
<?php
```

```
session_start();
```

```
include "auth.php";
```

```
include "connection.php";
```

```
if(isset($_POST['cpass'])) {
```

```
    $currentpass = md5($_POST['cpassword'] ) ;
```

```
    $newpass = md5($_POST['npassword']);
```

```
    $cnewpass = md5($_POST['cnpassword']);
```

```
    $currentpass = addslashes($currentpass);
```

```
    $newpass = addslashes($newpass);
```

```
    $cnewpass = addslashes($cnewpass);
```

```
    $currentpass = mysqli_real_escape_string($con, $currentpass);
```

```

$newpass = mysqli_real_escape_string($con, $newpass);

$scnewpass = mysqli_real_escape_string($con, $scnewpass);

$sql= mysqli_query($con, 'SELECT password FROM loginusers WHERE
username="'.$_SESSION['SESS_NAME'].'" ');

$row = mysqli_fetch_assoc($sql);

$pass = $row['password'];

if ($currentpass != $pass) {

    $error = "<center><h4><font color='#FF0000'>Incorrect Current
Password!</h4></center></font>";

    include ("change_pass.php");

}

else if ($currentpass == $pass && $newpass == $scnewpass){

$sql1 = mysqli_query($con, 'UPDATE loginusers SET password="'.
md5($_POST['npassword']).'" WHERE
username="'.$_SESSION['SESS_NAME'].'" ');

$error = "<center><h4><font color='green'>Password successfully
changed!</h4></center></font>";

include ("change_pass.php");

}

else {

```

```
$error = "<center><h4><font color='#FF0000'>New Password and Confirm  
Password does not match!</h4></center></font>";
```

```
    include ("change_pass.php");  
}  
}  
else {  
    $error = "<center><h4><font  
color='#FF0000'>Error!</h4></center></font>";  
    include ("change_pass.php");  
}  
?>
```

Connection:-

```
<?php  
$con = mysqli_connect("localhost","root","","polltest") or die ("error" .  
mysqli_error($con));  
?>
```


Language view:-

```
<?php
if(!isset($_SESSION)) {
    session_start();
}
include "auth.php";
include "header_voter.php";
?>
<center><h3> Voting So Far </h3></center>
<?php
include "connection.php";
$member = mysqli_query($con, 'SELECT * FROM languages');
if (mysqli_num_rows($member)== 0 ) {
    echo '<font color="red">No results found</font>';
}
else {
    echo '<center><table><tr bgcolor="#FF6600">
<td width="30px">ID</td>
<td width="100px">LANGAUAGE</td>
<td width="100px">ABOUT</td>
<td width="30px">VOTE</td>
```

```
</tr>';
```

```
while($mb=mysqli_fetch_object($member))
```

```
{
```

```
    $id=$mb->lan_id;
```

```
    $name=$mb->fullname;
```

```
    $about=$mb->about;
```

```
    $vote=$mb->votecount;
```

```
    echo '<tr bgcolor="#BBBEFF">';
```

```
    echo '<td>.$id.</td>';
```

```
    echo '<td>.$name.</td>';
```

```
    echo '<td>.$about.</td>';
```

```
    echo '<td>.$vote.</td>';
```

```
    echo "</tr>";
```

```
}
```

```
    echo '</table></center>';
```

```
}
```

```
?>
```


Login:-

```
<?php include "header.php";

if(!isset($_SESSION)) {

session_start();

}

if (isset($_SESSION['SESS_NAME'])!="") {

    header("Location: voter.php");

}

?>

<br>

<center>

<legend><h3>Login for Voting </h3></legend>

<br>

</center>

<?php global $nam; echo $nam; ?>

<?php global $error; echo $error; ?>

<br>

<center><font size="4" >

<form action="login_action.php" method="post" id="myform" >

Username :

<input type="text" name="username" value="" >
```

```
<br>
```

```
<br>
```

Password :

```
<input type="password" name="password" value="" >
```

```
<br>
```

```
<br>
```

```
<input type="submit" name="login" value="login" >
```

```
</form></font>
```

```
</center>
```

```
<script type="text/javascript" >
```

```
var frmvalidator = new Validator("myform");
```

```
frmvalidator.addValidation("username", "req", "Please Enter Username");
```

```
frmvalidator.addValidation("username", "maxlen=50");
```

```
frmvalidator.addValidation("password", "req", "Please Enter Password");
```

```
</script>
```

Login-action:-

```
<?php

session_start();

include "connection.php";

if(isset($_POST['login'])) {

$username = $_POST["username"];

$password = $_POST["password"];

$username = addslashes($username);

$password = addslashes($password);

$username = mysqli_real_escape_string($con,$username);

$password = mysqli_real_escape_string($con,$password);

$sql = mysqli_query($con, 'SELECT * FROM loginusers WHERE
username="".$_POST['username']."' AND
password="".md5($_POST['password'])." AND status="ACTIVE" ');

if (mysqli_num_rows($sql) >0 ) {

    $member = mysqli_fetch_assoc($sql);

    $_SESSION['SESS_NAME'] = $member['username'];

    $_SESSION['SESS_RANK'] = $member['rank'];

    if($member['rank']=='administrator'){
```

```
        header("location: admin.php");

    }

    else if($member['rank']=='voter'){

        header("location: voter.php");

    }

}

else {

    $error = "<center><h4><font color='#FF0000'>Incorrect Username or
Password</h4></center></font>";

    include "login.php";

}

}

else {

    $error = "<center><h4><font color='#FF0000'>Invalid Username or
Password</h4></center></font>";

    include "login.php";

}

?>
```

Logout:-

```
<?php
session_start();

if (!isset($_SESSION['userSession'])) {
    header("Location: login.php");
} else if (isset($_SESSION['userSession'])!="") {
    header("Location: index.php");
}

if("username"){
    session_destroy();
    unset($_SESSION['SESS_NAME']);
    include'login.php';
}

?>
```

Profile:-

```
<?php
if(!isset($_SESSION)) {
    session_start();
}
include "auth.php";
include "header_voter.php";
include "connection.php";
?>
<h4> Welcome <?php echo $_SESSION['SESS_NAME']; ?></h4>
<?php
$username = $_SESSION['SESS_NAME'];
$query = 'SELECT status FROM voters WHERE
username="$_SESSION['SESS_NAME']" AND status = "VOTED"';
if ($result = mysqli_query($con,$query)) {
    if (mysqli_num_rows($result) > 0) {
        $sql = mysqli_query($con, 'SELECT voted from voters WHERE
username="$_SESSION['SESS_NAME']"');
        $row = mysqli_fetch_assoc($sql);
        echo "You have voted for: " . " " . $row['voted'];
    } else {
```

```
echo "You have not voted yet. Please submit your vote!";
```

```
}
```

```
}
```

```
?>
```

Reg_action:-

```
<?php
```

```
session_start();
```

```
$captcha = "" ;
```

```
include "connection.php";
```

```
if(isset($_POST['submit'])) {
```

```
$name = mysqli_real_escape_string($con, $_POST['firstname']);
```

```
$name2 = mysqli_real_escape_string($con,$_POST['lastname']);
```

```
$name3 = mysqli_real_escape_string($con,$_POST['username']);
```

```
$pass = mysqli_real_escape_string($con,$_POST['password']);
```

```
$sq = mysqli_query($con, 'SELECT username FROM loginusers WHERE  
username='".$_POST['username'].''');
```

```
$exist = mysqli_num_rows($sq);
```

```

        if($exist==1){

            $nam="<center><h4><font color='#FF0000'>The username already
exist, peak another.</h4></center></font>";

            unset($username);

            include('register.php');

            exit();

        }

        $sql = mysqli_query($con, 'INSERT INTO voters(firstname,lastname,username)
VALUES("'.$_POST['firstname'].'","'.$_POST['lastname'].'","'.$_POST['username'
].'")');

        if (!$sql) {

            die (mysqli_error($con));

        }

        $sql2 = mysqli_query($con, 'INSERT INTO loginusers(username,password)
VALUES("'.$_POST['username'].'","'.md5($_POST['password']).'")');

        if (!$sql2) {

            die (mysqli_error($con));

        }

        else {

            echo "Successfully Registered! <a href= 'login.php'>Clich here to Login </a>";

        }

```



```
}  
  
else {  
  
    $error="<center><h4><font color='#FF0000'>Registration Failed Due To  
Error !</h4></center></font>";  
  
    include"register.php";  
  
}?>
```

Register:-

```
<scriptsrc='https://www.google.com/recaptcha/api.js'></script>  
  
<?php include "header.php";  
  
if(!isset($_SESSION)) {  
  
    session_start();  
  
}  
  
if (isset($_SESSION['SESS_NAME'])!="") {  
  
    header("Location: voter.php");  
  
}  
  
?>  
  
<br>  
  
<br>  
  
<center>  
  
<legend><h3> Register </h3></legend></center>
```

```
<?php global $nam; echo $nam; ?>
```

```
<?php global $error; echo $error; ?>
```

```
<center><font size="4" >
```

```
<form action= "reg_action.php" method= "post" id="myform" >
```

Firstname:

```
<input type="text" name="firstname" value="" />
```

```
<br>
```

```
<br>
```

Lastname:

```
<input type="text" name="lastname" value="" />
```

```
<br>
```

```
<br>
```

Username:

```
<input type="text" name="username" value="" />
```

```
<br>
```

```
<br>
```

Password:

```
<input type="password" name="password" value="" />
```

```
<br>
```

```
<br>
```

```
<input type="submit" name="submit" value="Next" />
```

```
</form>
```

```
</font>
```

```
</center>
```

```
<script type= "text/javascript" >
```

```
varfrmvalidator = new Validator("myform");
```

```
frmvalidator.addValidation("firstname","req","Please enter  firstname");
```

```
frmvalidator.addValidation("firstname","maxlen=50");
```

```
frmvalidator.addValidation("lastname","req","Please enter  lastname");
```

```
frmvalidator.addValidation("lastname","maxlen=50");
```

```
frmvalidator.addValidation("username","req","Please enter  username");
```

```
frmvalidator.addValidation("username","maxlen=50");
```

```
frmvalidator.addValidation("password","req","Please enter  password");
```

```
frmvalidator.addValidation("password","minlen=5","Password must not be less  
than 5 characters.");
```

```
</script>
```

Submit_vote:-

```
<?php

include "connection.php";

session_start();

if(empty($_POST['lan'])){

$error="<center><h4><font color='#FF0000'>Please select a language to
vote!</h4></center></font>";

include"voter.php";

exit();

}

$lang = $_POST['lan'];

$sess = $_SESSION['SESS_NAME'] ;

$lang = addslashes($_POST['lan']);

$lang = mysqli_real_escape_string($con, $lang);

$sql = mysqli_query($con, 'SELECT * FROM voters WHERE
username="'.$_SESSION['SESS_NAME'].'" AND status="VOTED");

if(mysqli_num_rows($sql) > 0 ) {

    $msg="<center><h4><font color='#FF0000'>You have already been voted,
No need to vote again</h4></center></font>";

        include 'voter.php';

        exit();
```

```

}

else{

$sql1 =mysqli_query($con, 'UPDATE languages SET votecount = votecount + 1
WHERE fullname = "._POST['lan'].");

$sql2 =mysqli_query($con, 'UPDATE voters SET status="VOTED" WHERE
username="._SESSION['SESS_NAME'].");

$sql3 = mysqli_query($con, 'UPDATE voters SET voted= "._POST['lan'].'"
WHERE username="._SESSION['SESS_NAME'].");

    if(!$sql1 && !$sql2){

        die("Error on mysql query".mysql_error());

    }

    else{

        $msg="<center><h4><font color='#FF0000'>Congratulation, you have
made your vote.</h4></center></font>";

        include 'voter.php';

        exit();

    }

}

?>

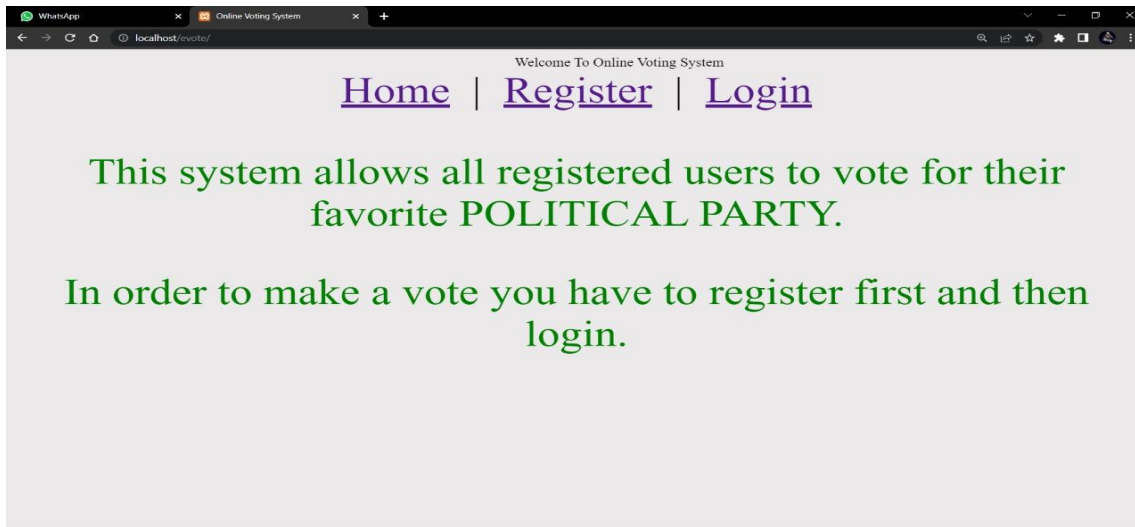
```

Voter:-

```
<?php
if(!isset($_SESSION)) {
session_start();
}
include "auth.php";
include "header_voter.php";
?>
<h4> Welcome <?php echo $_SESSION['SESS_NAME']; ?></h4>
<h3>Make a Vote </h3>
<form action="submit_vote.php" name="vote" method="post" id="myform" >
<center><font size='6'> What is your favorite political party? <BR>
<input type="radio" name="lan" value="BJP"> BJP<BR>
<input type="radio" name="lan" value="CONGRESS">CONGRESS<BR>
<input type="radio" name="lan" value="AAP">AAP<BR>
<input type="radio" name="lan" value="SHIVSENA">SHIVSENA<BR>
<input type="radio" name="lan" value="NOTA">NOTA<BR>
</font></center><br>
<?php global $msg; echo $msg; ?>
<?php global $error; echo $error; ?>
<center><input type="submit" value="Submit Vote" name="submit"
style="height:30px; width:100px" /></center>
</form>
```

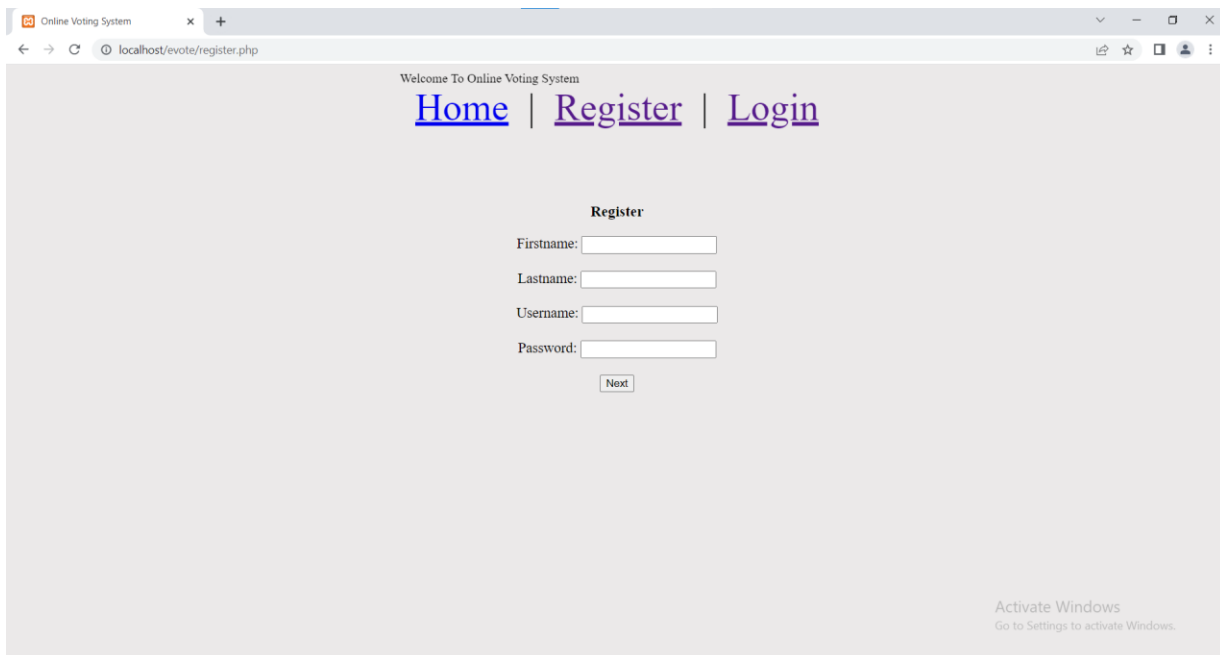
Input Output Screen

Home page:-



This is home page for online voting system.

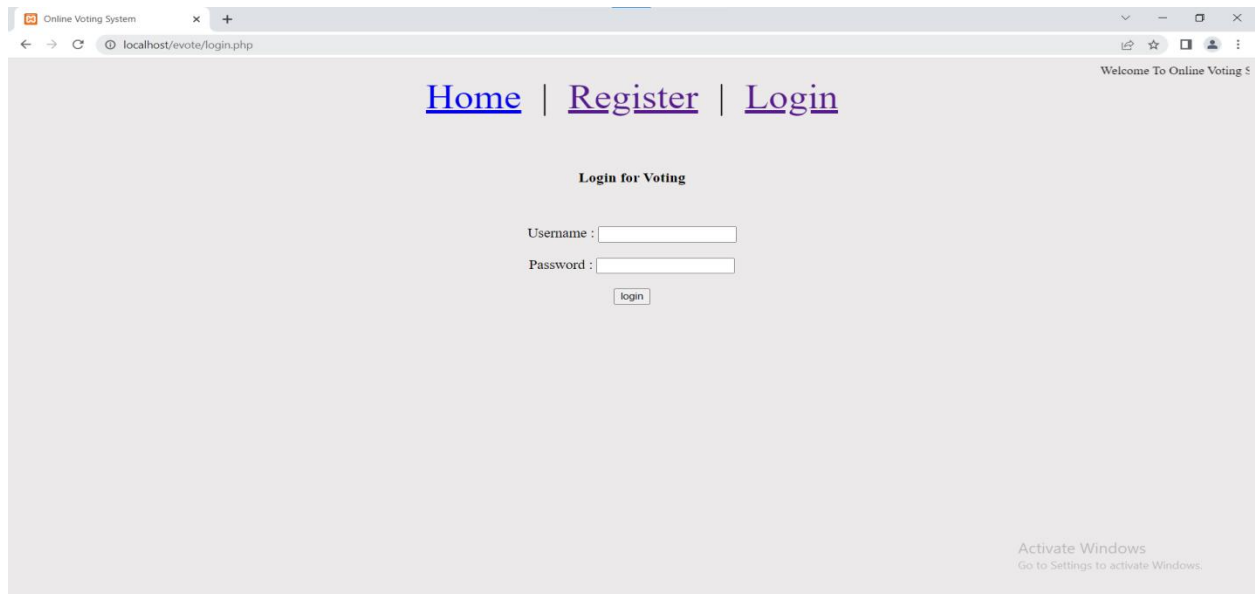
Registration page:-



Here user need to register themselves for vote.

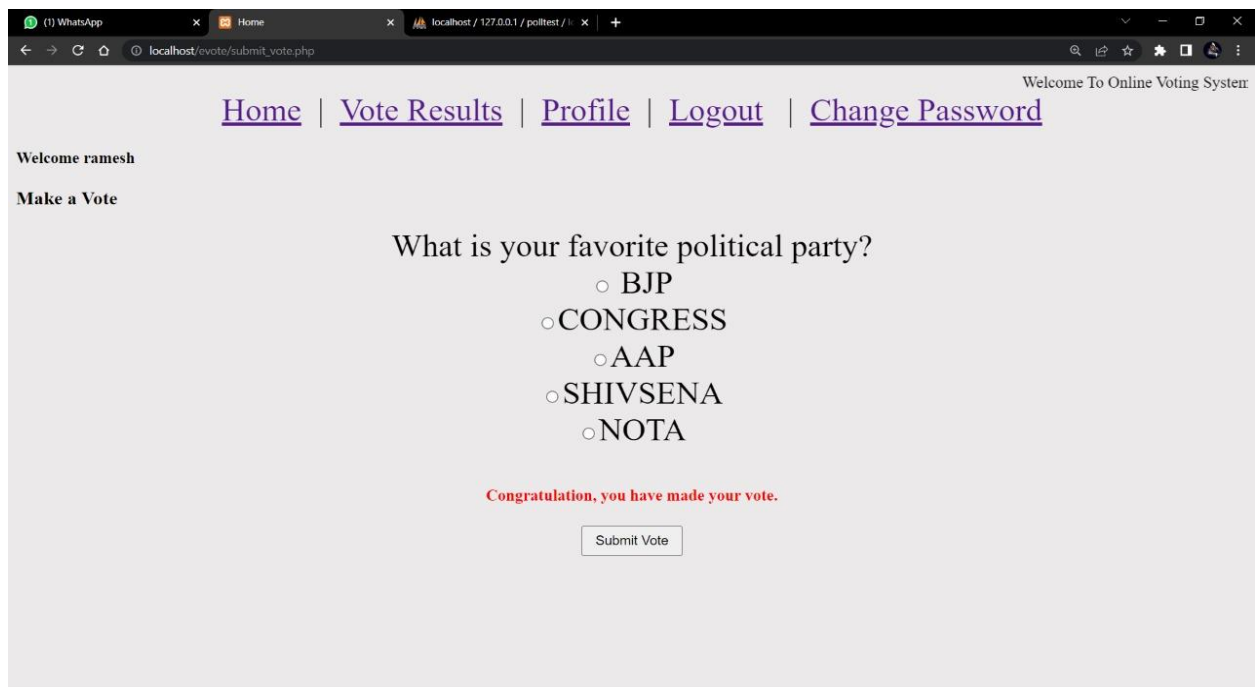
Login Page:-

The user needs to fill the information to access the voting page.



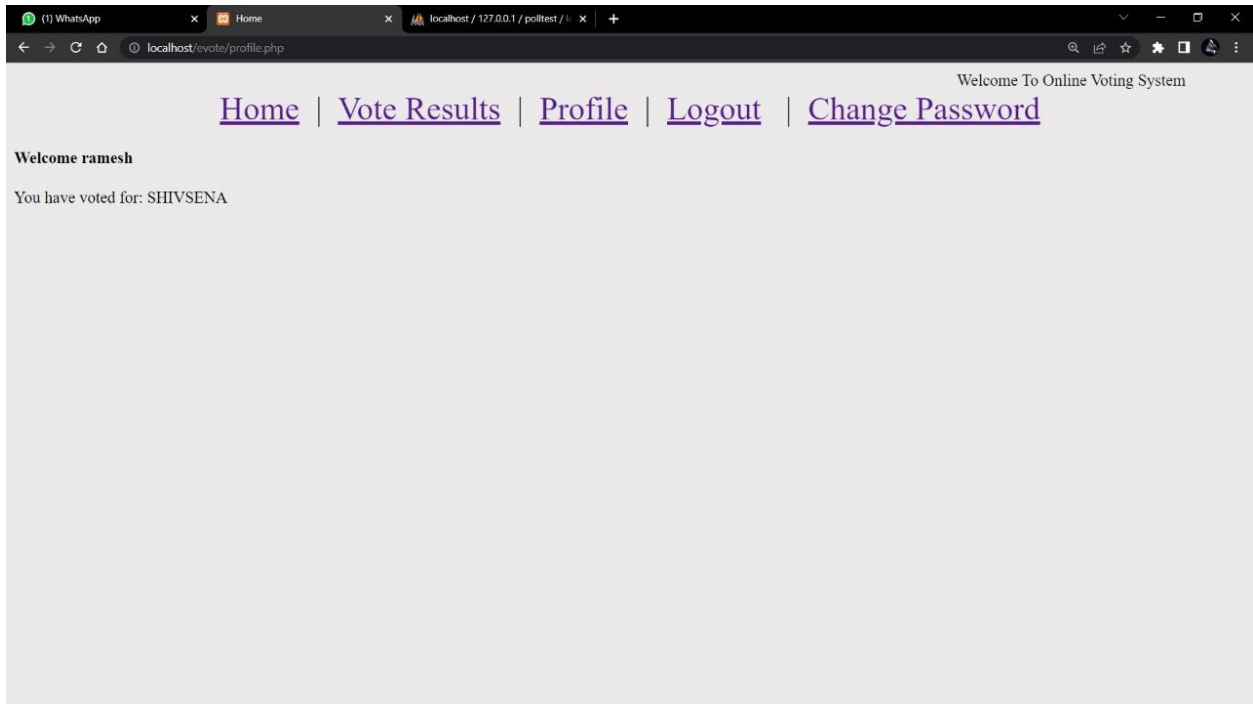
A screenshot of a web browser showing the login page of an Online Voting System. The browser's address bar displays 'localhost/evote/login.php'. The page features a navigation menu with links for 'Home', 'Register', and 'Login'. Below the menu, there is a 'Login for Voting' section with two input fields: 'Username' and 'Password', followed by a 'login' button. The page also includes a 'Welcome To Online Voting System' message in the top right corner and an 'Activate Windows' watermark in the bottom right corner.

Here the user can vote according to his opinion.

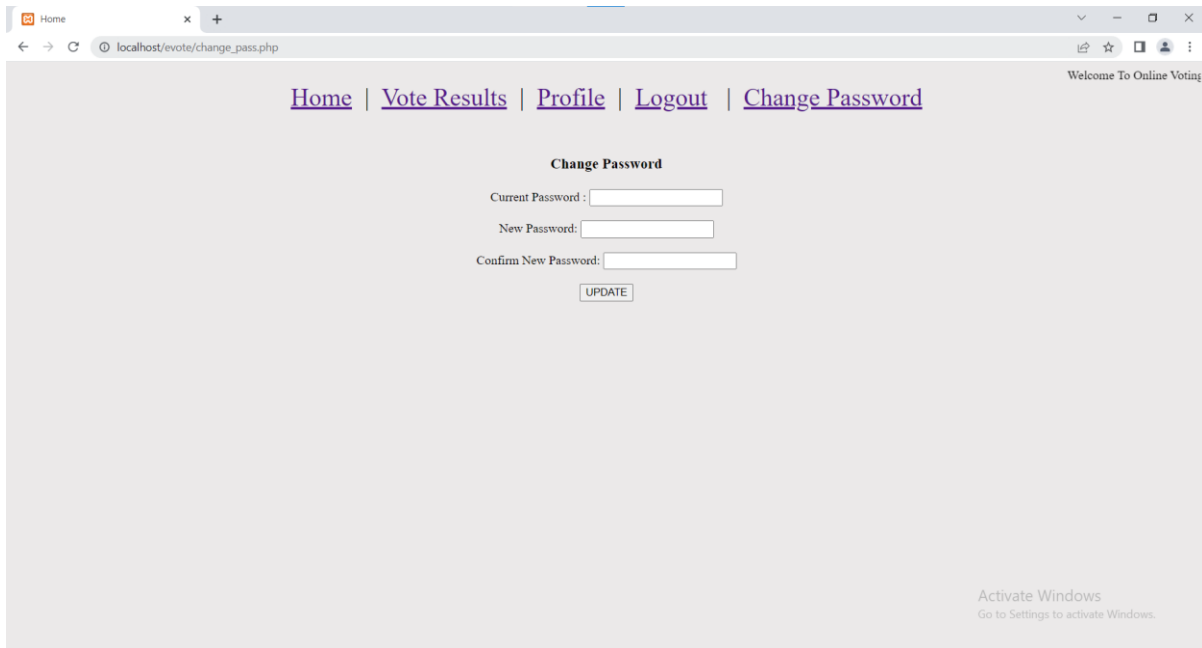


A screenshot of a web browser showing the submit vote page of an Online Voting System. The browser's address bar displays 'localhost/evote/submit_vote.php'. The page features a navigation menu with links for 'Home', 'Vote Results', 'Profile', 'Logout', and 'Change Password'. Below the menu, there is a 'Welcome ramesh' message and a 'Make a Vote' section. The main content area asks 'What is your favorite political party?' and provides five radio button options: 'BJP', 'CONGRESS', 'AAP', 'SHIVSENA', and 'NOTA'. Below the options, there is a 'Congratulation, you have made your vote.' message and a 'Submit Vote' button. The page also includes a 'Welcome To Online Voting System' message in the top right corner.

Here user can see which party is it voted for.



Here user can change password in case he/she needs to change.



Testing And Validation

Testing And Validation:-

Validation testing is the process of ensuring if the tested and developed software satisfies the user needs. The business requirement login or scenarios have to be tested in details. All the critical functionalities of an application must be tested here.

Validation put it control over the data. It stops the input of the invalid data and also guide during input of data. Whenever the invalid data or wrong data enter by the user it will show the error message.

The validations provided on our software are:

1.Error Message: In our system we have provided all the validation that will guide the user for entering valid data when the user enters the incorrect data into system. If user enter a wrong input, they will not get the desired output. To avoid this problem we have introduced “error messages” to guide user to enter the correct data.

2.Username: We have also provided the validation for the username. Teachers and students can register only by the username provided by the admin. If the enter the wrong username they cannot register themselves in the system.

3.Duplication of values: In our project, we provide the validation of duplicate values. When the user entered the value which is already present in the database then the error message will be displayed that the data already exists.

System securities Measures

System securities Measures:-

In order to maintain the security regarding the confidential data in our system we provide some security measures to overcome this.

All the data in the system are confidential and it must be secured from unauthorized access. Confidential information should be kept secret and inaccessible. Following are some security measures that we have taken in our project:

1.Password:- Application must have the password facility with this no one can enter into our system without using a password. The password should be unique and only to the system. By entering the correct password user can login to system and if user enter the wrong password, they will get the message “Invalid Username and Password”.

2.Username:- Our application also provides the username facility without it users cannot enter into our system or project. Teachers and students have unique usernames they can only login with that username otherwise they will get the error message “Invalid Username and Password”.

Implementation Evaluation And Maintenance

Implementation:

After you have carefully planned your project , you will be ready to start the project implementation phase. The implementation phase involves putting the project plans into action. Implementation as an activity has to be carefully managed. The System implementation stands for the conversion of three types

- 1.System conversion of manual system into computerized system in the way to understand by the user of the project made by us being access.

- 2.Conversion of existing computerized system into modified version of hardware and software both are checked by us for better performance.

- 3.Keeping the hardware and implementing the new techniques is where we checked other hardware i.e., Ram, Hard disk for better performance.

Maintenance:-

In project, maintenance is done implementation problem to rectify design, coding and implementation problem detected after the problem generally surfaces immediate attention as it hampers the day-to-day work of end users. Proper planning and interaction with the end user during system development can minimize corrective maintenance. Preventive maintenance, is done to prevent system failure by bringing changes to software for the system safe and easy maintenance comes under preventive maintenance.

Evaluation:-

After the implementation stage, another important stage in project development is evaluation. After keeping the project in the working condition for the sometime all the errors that are showing in the computer program should be removed. The programmer needs to correct them so that same error should not be repeated. The evaluation process includes the study of the existing system their drawbacks and the various option to improve the system.

The system is evaluated on the basis of:

1. System Availability
2. Compatibility
3. Correcting Errors
4. Resolving necessary changes
5. Specification changes
6. Enhance or modifying the system maintenance.

Future scope of Project

Future scope of Project

It is focused on studying the existing system of voting in Kenya and to make sure that the peoples vote is counts, for fairness in the elective positions. This is also will produce:

- Less effort and less labor intensive, as the primary cost and focus primary on creating, managing, and running a secure web voting portal.
- Increasing number of voters as individuals will find it easier and more convenient to vote, especially those abroad.

Old Methods Of Voting:-

- 1. Paper-based voting:** The voter gets a blank ballot and use a pen or a marker to indicate he want to vote for which candidate. Hand-counted ballots is a time and labor consuming process, but it is easy to manufacture paper ballots and the ballots can be retained for verifying, this type is still the most common way to vote.
- 2. Lever voting machine:** Lever machine is peculiar equipment, and each lever is assigned for a corresponding candidate. The voter pulls the lever to poll for his favorite candidate. This kind of voting machine can count up the ballots automatically. Because its interface is not user-friendly enough, giving some training to voters is necessary.
- 3. Direct recording electronic voting machine:** This type, which is abbreviated to DRE, integrates with keyboard; touch screen, or buttons for the voter press to poll. Some of them lay in voting records and counting the votes is very quickly. But the other DRE without keep voting records are doubted about its accuracy.

4. **Punch card:** The voter uses metallic hole-punch to punch a hole on the blank ballot. It can count votes automatically, but if the voter's perforation is incomplete, the result is probably determined wrongfully.
5. **Optical voting machine:** After each voter fills a circle correspond to their favorite candidate on the blank ballot, this machine selects the darkest mark on each ballot for the vote then computes the total result. This kind of machine counts up ballots rapidly. However, if the voter fills over the circle, it will lead to the error result of optical-scan.

Recent years, a considerable number of countries has adopted E-voting for their official elections. These countries include; America, Belgium, Japan and Brazil.

Conclusion

Conclusion:-

This Online Voting system will manage the Voter's information by which voter can login and use his voting rights. The system will incorporate all features of Voting system. It provides the tools for maintaining voter's vote to every party and it count total no. of votes of every party. There is a DATABASE which is maintained by the ELECTION COMMISSION OF INDIA in which all the names of voter with complete information is stored.

In this user who is above 18 year's register his/her information on the database and when he/she want to vote he/she has to login by his id and password and can vote to any party only single time. Voting detail store in database and the result is displayed by calculation. By online voting system percentage of voting is increases. It decreases the cost and time of voting process. It is very easy to use and It is vary less time consuming. It is very easy to debug.

Bibliography

Bibliography:-

Books Used:-

1. PHP6 and MySQL

(By: Steve Suehring Tim Converse Joyce Park)

2. PHP Cookbook

(By: David Sklar Adam Trachtenberg)

Websites:-

www.google.com

www.youtube.com

www.wikipedia.com

www.tutorialpoint.com

www.w3school.com

APPROVED COPY OF SYNOPSIS

A
PROJECT SYNOPSIS
ON
“Online-Voting System”

Submitted to
G. S. COLLEGE OF COMMERCE & ECONOMICS, NAGPUR
AUTONOMOUS

In the Partial Fulfillment of
B.Com. (Computer Application) Final Year

Synopsis Submitted by
RitikMarghade

Aditya Bisen

Under the Guidance of
Pravin J. Yadao



G. S. COLLEGE OF COMMERCE & ECONOMICS, NAGPUR
AUTONOMOUS
2021-2022

1.Introduction:

“online voting system” is an online voting technique , in this system people who have citizenship of India 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.

2. Objectives of the project:

Develop an web based voting system to be used in ECE department or other departments.

Must be Database driven in order to keep track of voters.

Administrator and user level access.

Firmly understand web technology such as CGI,SQL and perl.

3 Project Category: Web Application

4. Tools/ Platform/ Languages to be used:

1.Front end : css,html(version 8.0.25)

2.Back end : MYSQL,PHP Server(Version8.025)

3.Tool: XAMPP Control Panel(Version 3.3.0)

5. Scope of future application: (Write 4 to 5 points)

It is focused on studying the existing system of voting in kenya and to make sure that the peoples vote is counts ,for fairness in the elective positions. This is also will produce:

Less effort and less labor intensive, as the primary cost and focus primary on creacting ,managing and running a secure web voting portal.

Increasing number of voters as individuals will find it easier and more convenient to vote,

Especially those abroad.

Name and Signature of student

RitikMargahde

Aditya Bisen

Approved by,

Prof. Pravin Yadao

Project Guide

