Chapter 1

INTRODUCTION

1.1 Introduction to web

Web consists of billions of clients and server connected through wires and wireless networks. The web clients make requests to web server. The web server receives the request, finds the resources and returns the response to the client. When a server answers a request, it usually sends some type of content to the client. The client uses web browser to send request to the server. The server often sends response to the browser with a set of instructions written in HyperText Markup Language(HTML). All browsers know how to display HTML page to the client.

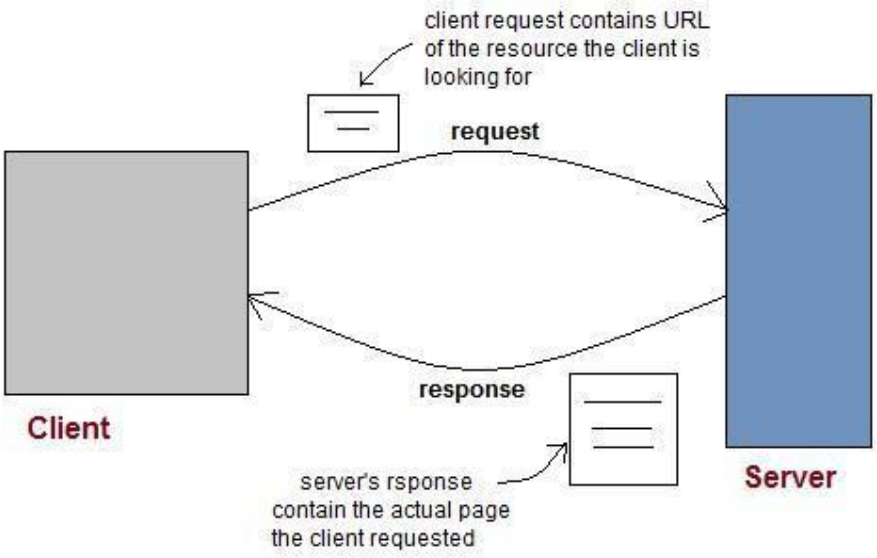


Figure 1.1 HTML—Client-Server communication

1.2 HTML

Hypertext Markup Language (HTML) is the standard markup language for creating web pages and web applications. HTML describes the structure of Web pages using markup. HTML elements are the building blocks of HTML pages.HTML elements are represented by

tags.HTML tags label pieces of content such as "heading", "paragraph", "table", and so on. Browsers do not display the HTML tags, but use them to render the content of the page.

1.3 PHP

PHP is a general-purpose server-side scripting language originally designed for Web development to produce dynamic Web pages. It is one of the first developed server-side scripting languages to be embedded into an HTML source document, rather than calling an external file to process data. Ultimately, the code is interpreted by a Web server with a PHP processor module which generates the resulting Web page. It also has evolved to include a command-line interface capability and can be used in standalone graphical applications.

PHP can be deployed on most Web servers and also as a standalone shell on almost every operating system and platform free of charge. A competitor to Microsoft's Active Server Pages (ASP) server-side script engine and similar languages, PHP is installed on more than 20 million Web sites and 1 million Web servers.

In this application, PHP is used for interacting the webpage with database. Through PHP, the user can meet the server through the HTML page. Using PHP, we can store and retrieve the information from the database using the PHP commands.

1.4 Javascript

JavaScript (sometimes abbreviated **JS**) is a prototype-based scripting language that is dynamic, weakly typed, general purpose programming language and has first-class functions. It is a multi-paradigm language, supporting object-oriented, imperative, and functional programming styles.

JavaScript was formalized in the ECMA Script language standard and is primarily used in the form of client-side JavaScript, implemented as part of a Web browser in order to provide enhanced user interfaces and dynamic websites. This enables programmatic access to computational objects within a host environment. JavaScript's use in applications outside Web pages for example in PDF documents, site-specific browsers, and desktop widgets is also significant.

Server Side JavaScript

Meanwhile, Netscape also introduced the language for server-side scripting in Netscape Enterprise Server, first released in December, 1994.

1.5 XML

Extensible Markup Language (**XML**) is a markup language that defines a set of rules for encoding documents in a format that is both human-readable and machine-readable. It is defined in the XML 1.0 Specification produced by the W3C, and several other related specifications, all gratis open standards.

The design goals of XML emphasize simplicity, generality, and usability over the Internet. It is a textual data format with strong support via Unicode for the languages of the world. Although the design of XML focuses on documents, it is widely used for the representation of arbitrary data structures, for example in web services.

Many application programming interfaces (APIs) have been developed for software developers to use to process XML data, and several schema systems exist to aid in the definition of XML-based languages. As of 2009, hundreds of XML-based languages have been developed, including RSS, Atom, SOAP, and XHTML.

XML-based formats have become the default for many office-productivity tools, including Microsoft Office (Open Office) OpenOffice.org and LibreOffice (Open Document), and Apple's iWork. XML has also been employed as the base language for communication protocols, such as XMPP.

1.6 MySql

MySQL ("My S-Q-L", officially "My Sequel") is the world's most used relational database management system (RDBMS) that runs as a server providing multi-user access to a number of databases. It is named after developer Michael Widenius daughter, my. The SQL phrase stands for Structured Query Language.

The MySql development project has made its source code available under the terms of the GNU General Public License, as well as under a variety of proprietary agreements. MySql was owned and sponsored by a single for-profit firm, the Swedish company MySql AB, now owned by Oracle Corporation.Free-software-open source projects that require a full featured database management system often use MySql. For commercial use, several paid editions are available, and offeradditional functionality. Applications which use MySql databases include: TYPO3, Joomla, WordPress, phpBB, Drupal and other software built on the LAMP software stack.

MySql is also used in many high-profile, large-scale World Wide Web products, including Wikipedia, Google (though not for searches), Facebook, and Twitter.

Uses of MySql

MySql is a popular choice of database for use in web applications, and is a central component of the widely used LAMP open source web application software stack— LAMP is an acronym for "Linux, Apache, MySql, Perl/PHP/Python".

MySql is an open source database management system and is used in some of the most frequently visited websites on the Internet, including Flickr, Nokia.com, YouTube and as previously mentioned, Wikipedia, Google, Facebook and Twitter.

Chapter 2

SYSTEM ANALYSIS

2.1 Introduction to mini project

This project is aimed to build a web application for college voting system and helps to manage information about various positions of different student branches in a particular college.

Online Voting System is a web based system that facilitates the running of elections online. This Project is developed for the threat free and user oriented Online Voting System. It is made for the students of a particular college where an individual wants to vote for his/her representative. In certain colleges there exists few Student branches which are handled by students in turn guided by a faculty head. IEEE, CSI, IS are the examples for such student branches. These branches consist of various positions, such as Chairperson, Vice-Chairperson, Treasurer, Secretary, Vice-Secretary etc.

The election can be conducted in two ways the paper ballot election and the automated ballot elections. The automated ballot elections are called the electronic voting. The online voting system is highly developed and the online polling system can be replaced by accurately and directly voting online and immediate results.

The online voting system is done by the internet so it can be called the Internet Voting. By using this application time can be saved, voting percentage can be increased and high security can be implied for preventing false voting. Project is implemented with all latest web based tools and technologies like Xamp Server, It has various fields: Home, About, Contact, Student registration, Student login.

2.2 Resource requirement

Software Requirements

Software used in the project are as follows:

- Front End tools: HTML, JavaScript, CSS, PHP
- Back End tools: MYSQL database
- Browser that supports HTML and JavaScript
- IIS or apache server(Xampp Server)

Hardware Requirements

Hardware used in the project are as follows:

- CPU: Pentium processor and above
- RAM: 2 GB
- HDD: 40 GB

About XAMP SOFTWARE

Stands for "Windows, Apache, MySQL, and PHP." XAMP is a variation of LAMP for Windows systems and is often installed as a software bundle (Apache, MySQL, and PHP). It is often used for web development and internal testing, but may also be used to serve live websites.

The most important part of the XAMP package is Apache which is used run the web server within Windows. By running a local Apache web server on a Windows machine, a web developer can test webpages in a web browser without publishing them live on the Internet.
XAMP also includes MySQL and PHP. Which are two of the most common technologies used for creating dynamic websites. MySQL is a high-speed database, while PHP is a scripting language that can be used to access data from the database. By installing these two components locally, a developer can build and test a dynamic website before publishing it to a public server.

Chapter 3

SYSTEM DESIGN

3.1 System Perspective

Taking into account all of the behaviors of a system as a whole in the context of its environment is the systems perspective. While the concept of system itself is a more general notion that indicates separation of part of the universe from the rest, the idea of a systems perspective is to use a non-reductionist approach to the task of describing the properties of the system itself.

In the systems perspective, once one has identified the system as a separate part of the universe, one is not allowed to progressively decompose the system into isolated parts. Instead, one is obligated to describe the system as a whole. If one uses separation into parts, as part of the description of the system properties, this is only part of a complete description of the behavior of the whole, which must include a description of the relationships between these parts and any additional information needed to describe the behavior of the entire system. Further, in a systems perspective one should be careful about considering the system in the context of the environment and not as an isolated entity. Thus one should include the interactions and relationships between the system and the environment.

3.2 Architecture Diagram

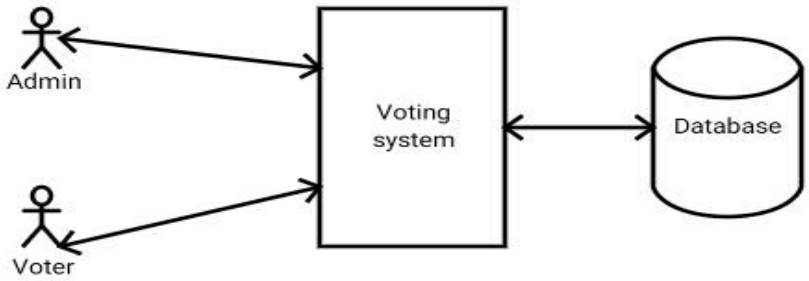


Figure 3.2 Architecture of Online Voting system

Figure 3.1 represents the architecture for Online voting system here admin can view and modify the online voting system system and voter can login and view the details posts and candidates information. All the details are saved in database.

3.3 Use Case Diagram

Admin Usecase

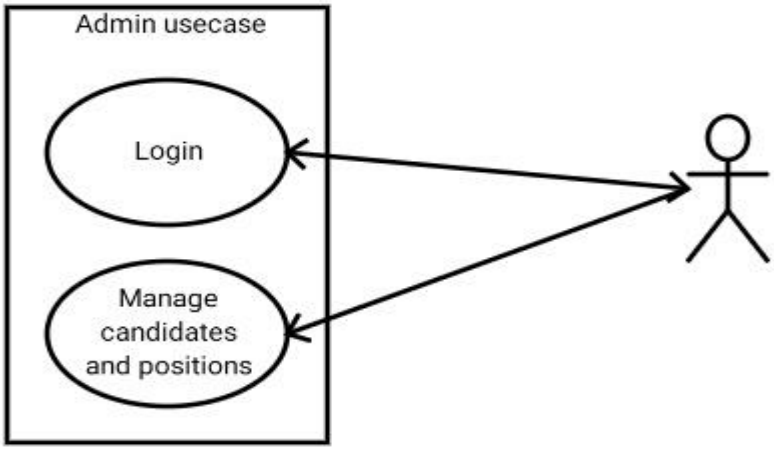


Figure 3.3 Admin Use case diagram

Figure 3.2 represents the use case diagram for admin, here admin can login and manage the candidates and position details.

Voter Use Case

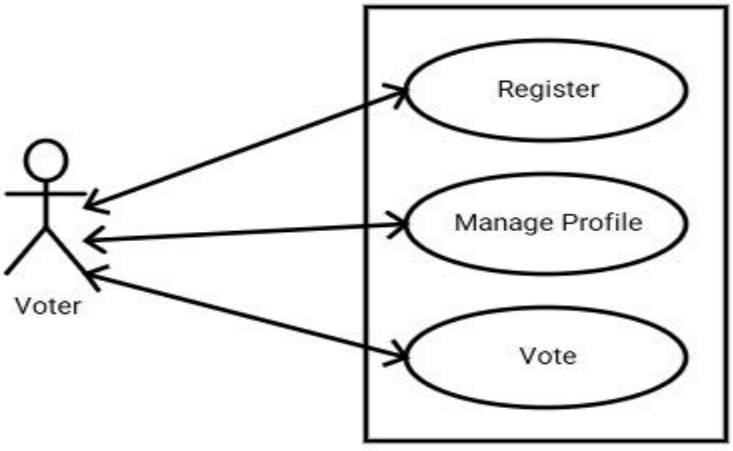


Figure 3.3 Voter Use case diagram

Figure 3.3 represents the use case diagram for voter, here voter have to register and login with registered user name and password. After login voter can view the candidates details and cast their vote.

3.4 Activity Diagram

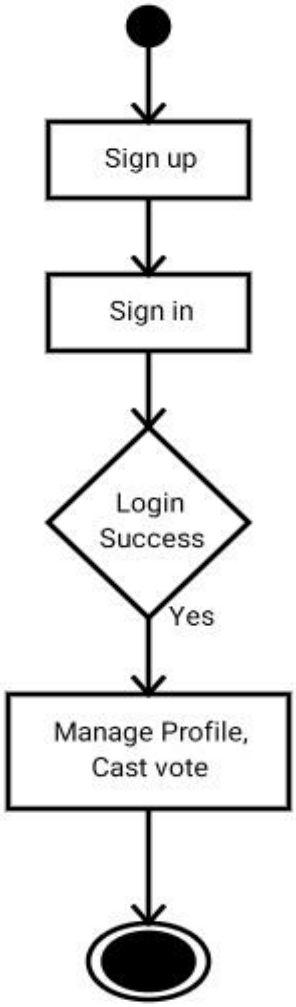


Figure 3.4 Activity Diagram for Voter

Figure 3.4 represents the activity diagram for voter, here voter have to register and the login with registered user name and password. After login voter can cast their vote manage their profile.

3.5 ER Diagram

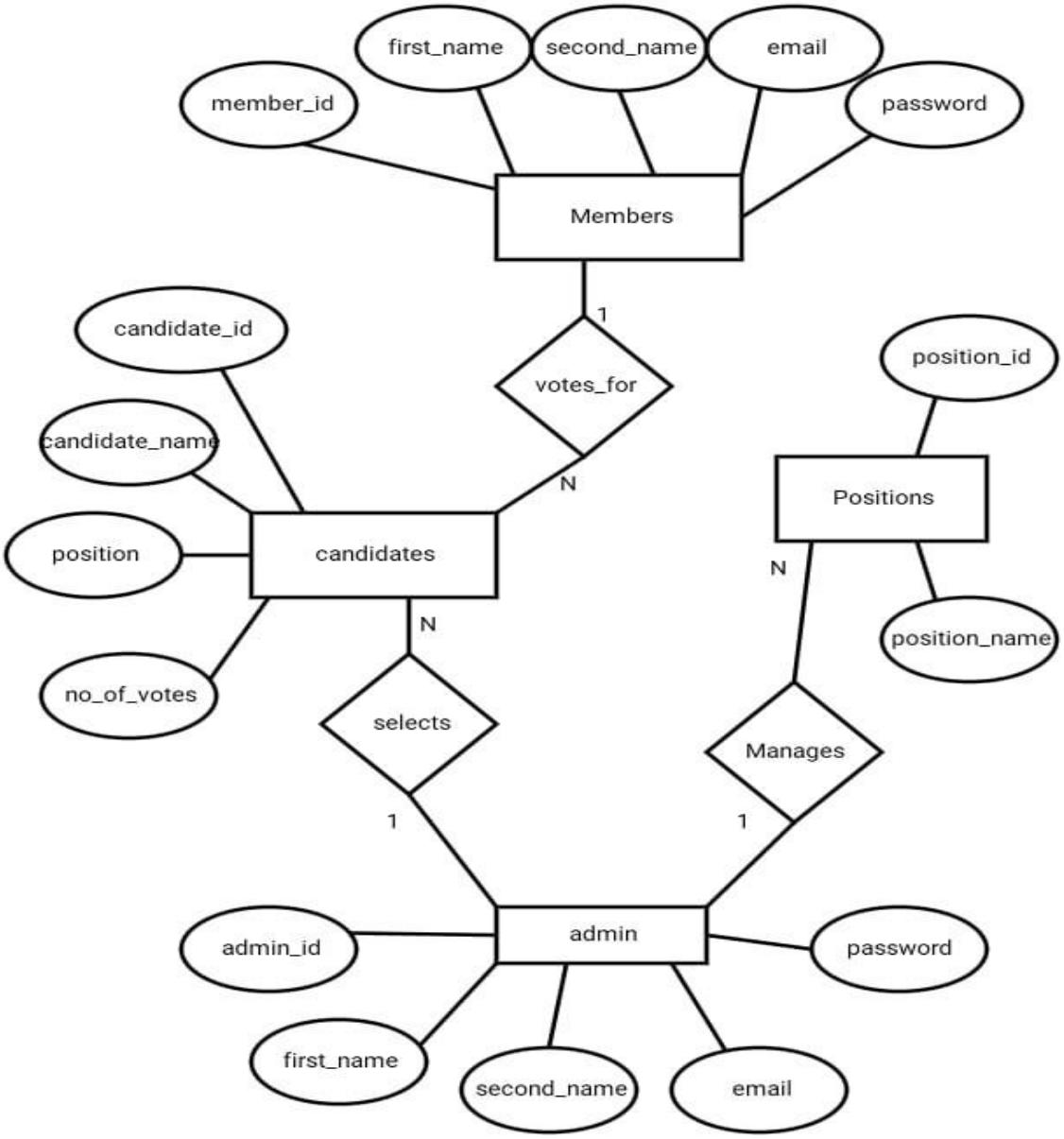


Figure 3.5 ER diagram for Online Voting system

Figure 3.6 represents the entity relationship diagram, usually referred to as an ER diagram represents the attributes, entities and relationships in a relational schema design. Here user is nothing but voter who will be voting in Online Voting System.

Chapter 4

IMPLEMENTATION

Implementation is the process of defining how the system should be built, ensuring that it is operational and meets quality standards. It is a systematic and structured approach for effectively integrating software based service or component into the requirements of end users.

4.1 Discussion of code segment

This project uses different html tags like heading tags <h1> to<h6>, Division tag , Image tag <img>, table tag <table>.

Image tag

Syntax :

<img src= — — alt= — — >

The <img> tag is used to insert image in HTML document.

Example :

4.2 Database connection

```
<?php
        $servername = "localhost";
        $username = "root";
        $password = "";
        // Create connection
        $con = new mysqli($servername, $username, $password);
        // Check connection
        if (!$con) {
                die("Connection failed: " . $conn->connect_error);
        }
        echo "Connected successfully";
```

```
?>
```

Here server name is localhost, username is root, password is nothing in our case.

4.3 Admin login

```
<?php
session_start();
ini_set ("display_errors", "1");
error_reporting(E_ALL);
$con = mysqli_connect("localhost","root","","poll");

if (!$con)
{
die('Could not connect: ' . mysqli_error($con));
}
mysqli_select_db($con,"poll");
$tbl_name="tbAdministrators";

$myusername=$_POST['myusername'];
$mypassword=$_POST['mypassword'];
$encrypted_mypassword=md5($mypassword);

$myusername = stripslashes($myusername);
$mypassword = stripslashes($mypassword);

$sql="SELECT * FROM $tbl_name WHERE email='$myusername' AND
password='$mypassword'" or die(mysqli_error());
$result=mysqli_query($con, $sql); //$mysqli->query($sql);
echo "done query";

$count=mysqli_num_rows($result);
 echo "string";

if($count==1){
            if(isset($_POST['remember']))
            {
               setcookie('$email',$_POST['myusername'], time()+30*24*60*60);
               setcookie('$pass', $_POST['mypassword'],time()+30*24*60*60);
               $_SESSION['curname']=$myusername;
               $_SESSION['curpass']=$mypassword;

               $user = $result->fetch_assoc();
              $_SESSION['admin_id'] = $user['admin_id'];
               header("Location:admin.php");
               exit;
```

```
            }
  else
{
          $log1=11;
           $_SESSION['log1'] = $log1;
           $_SESSION['curname']=$myusername;
              $_SESSION['curpass']=$mypassword;

              $user = $result->fetch_assoc();
                              $_SESSION['admin_id'] = $user['admin_id'];

              header("Location:admin.php");
              exit;
 }
}
else {
   echo "<br> <br> <br> ";
   echo "<center> <h3>Wrong Username or Password<br><br>Return to <a href=\"index.php\">login</a> </h3></center>";
}
ob_end_flush();

?>
```

4.4 Registration form

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

$myFirstName = addslashes( $_POST['firstname'] ); //prevents types of SQL injection
$myLastName = addslashes( $_POST['lastname'] );
$myEmail = $_POST['email'];
$myPassword = $_POST['password'];
//$myVoterid = $_POST['voter_id'];

$newpass = md5($myPassword); //This will make your password encrypted into md5, a high security hash

$sql = mysqli_query($con, "INSERT INTO tbMembers(first_name, last_name, email, password) VALUES ('$myFirstName','$myLastName', '$myEmail', '$newpass')" )
or die( mysqli_error() );


die( "You have registered for an account.<br><br>Go to <a href=\"login.php\">Login</a>" );
}
```

4.5 Visitor login

```
<?php
ini_set ("display_errors", "1");
error_reporting(E_ALL);
ob_start();
session_start();

$con = mysqli_connect("localhost","root","","poll");

if (!$con)
{
die('Could not connect: ' . mysqli_error($con));
}

mysqli_select_db($con,"poll");

$myusername=$_POST['myusername'];
$mypassword=$_POST['mypassword'];
$encrypted_mypassword=md5($mypassword);
$myusername = stripslashes($myusername);
$mypassword = stripslashes($mypassword);

$sql="SELECT * FROM tbmembers WHERE email='$myusername' and
password='$mypassword'" or die(mysqli_error());
$result= mysqli_query($con,
$sql) or die(mysqli_error());

$count=mysqli_num_rows($result);

if($count==1){
$user = mysqli_fetch_assoc($result);
$_SESSION['member_id'] = $user['member_id'];
header("location:voter.php");
}

else {
echo "Wrong Username or Password<br><br>Return to <a href=\"login.php\">Login</a>";
}
ob_end_flush();

?>
```

4.6 Table description

Admin table

Table 4.1 Admin Table

ATTRIBUTES	DATATYPE
admin_id	int(5)
first_name	varchar(45)
second_name	Varchar(45)
Email	varchar(45)
Password	Varchar(45)

Position Table

Table 4.2 Position Table

ATTRIBUTES	DATATYPE
position_id	int(5)
position_name	varchar(45)

Candidate Table

Table 4.3 Candidate Table

ATTRIBUTES	DATATYPE
candidate_id	int(5)
candidate_name	varchar(45)
candidate_position	Varchar(45)
Candidate_cvotes	int(11)

Member Table

Table 4.4 Member Table

ATTRIBUTES	DATATYPE
member_id	int(5)
First_name	varchar(45)
Last_name	Varchar(45)
Email	varchar(45)
Password	Varchar(45)

4.7 Software Testing

Software testing is an investigation conducted to provide stakeholders with information about the quality of the product or service under test. Software testing can also provide an objective, independent view of the software to allow the business to appreciate and understand the risks of software implementation. Test techniques include, but are not limited to, the process of executing a program or application with the intent of finding software bugs (errors or other defects).

Block Box Testing

Black-box testing tests functional and non-functional characteristics of the software without referring to the internal code of the software. It uses external descriptions of the software like SRS (Software Requirements Specification), Software Design Documents to derive the test cases.the validation (Project design and play), verification (Accessing application in multiple system throughout the organization), and general usability testing‘s (User interface, Bug free and faster access).

White Box Testing

The proposed application contains various different modules and integrated successfully. All independent paths within a module, logical decisions, loops at their

boundaries and within their operational bounds and Database internal data structures and validations are working as per the client requirements.

Unit Testing

The unit testing is the process of testing the part of the program to verify whether the program is working correct or not. In this part the main intention is to check the each and every inputs which are inserting to our file. Here the validation concepts are used to check whether the program is taking the inputs in the correct format or not.

Test cases

Table 4.5 Unit testing for all modules

Case _id	Description	Input Data	Expected output	Actual Output	Status
1.	Enter the information for registration	Valid User name Password Email Gender Mobile Number Address Verification Code	Registered	Registered	Pass
2	Enter information for registration	Enter the wrong Verification Code	Wrong Verification Code, try again!	Wrong Verification Code, try again!	Pass

Integration Testing

Integration testing is also taken as integration and testing is the major testing process where the units are combined and tested. Its main objective is to verify whether the major parts of the program is working fine or not the application includes many and different constraints of functionalities and these modules are integrated and tested as per the client

requirements. The administrators can interact with the Database and dynamically working for add, update, delete, modify, and manipulation purpose.

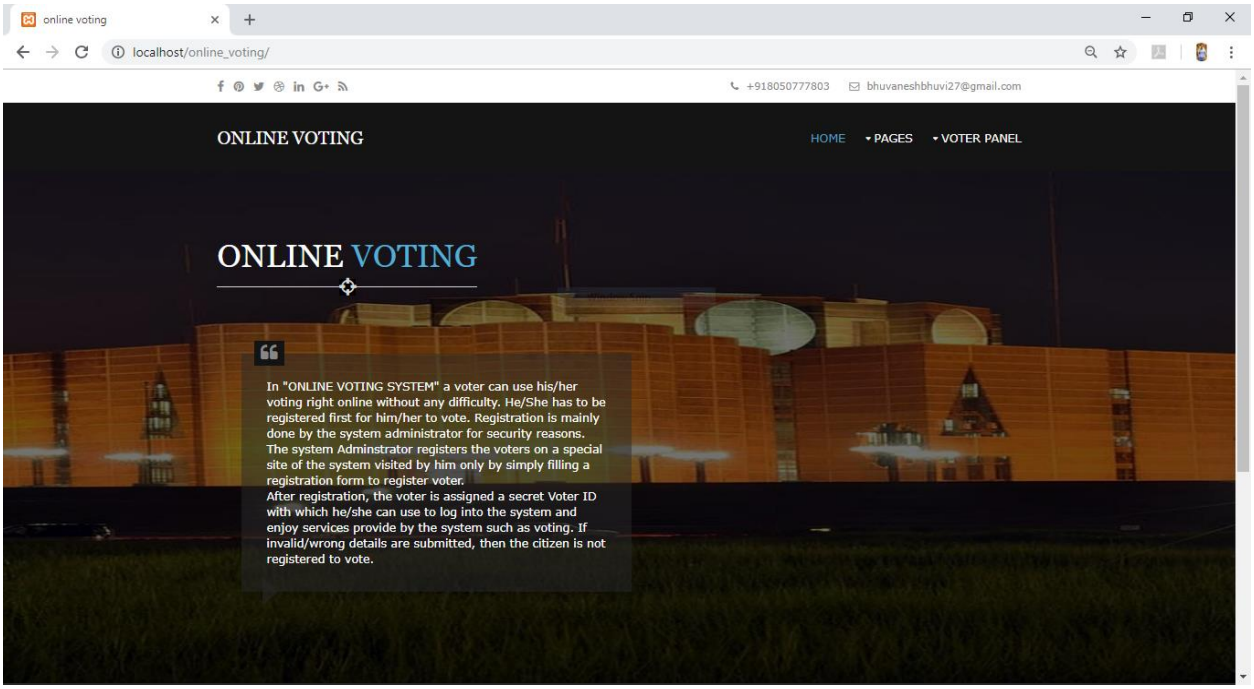
Table 4.6 Integration testing for Online Voting system Page

Case_ Id	Description	Input Data	Expected Output	Actual Output	Status
1	Enter the information for Login	Enter the user name and password	Welcome user name	Welcome user name	Pass
2	Enter the information for Login	Enter the user name and leave blank password	Please fill out this field	Please fill out this field	Pass
3	Enter the information for Login	Leave blank user name and enter the password	Please fill out this field	Please fill out this field	Pass

Chapter 5

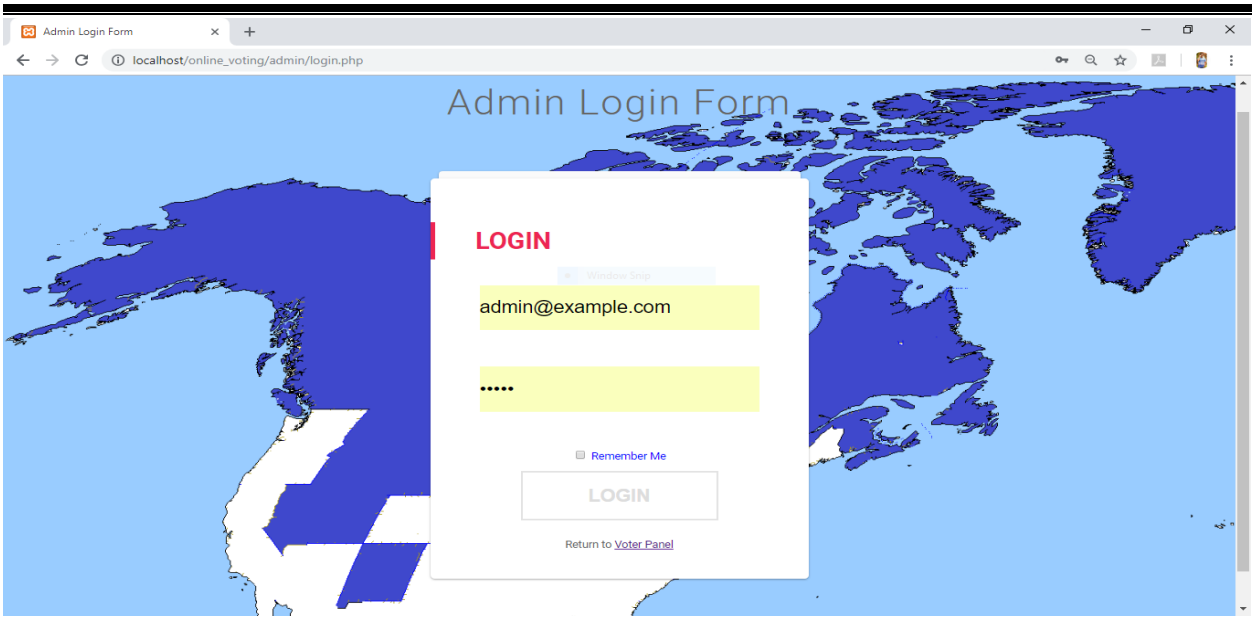
DISCUSSION OF THE RESULTS

5.1 Screen Shots



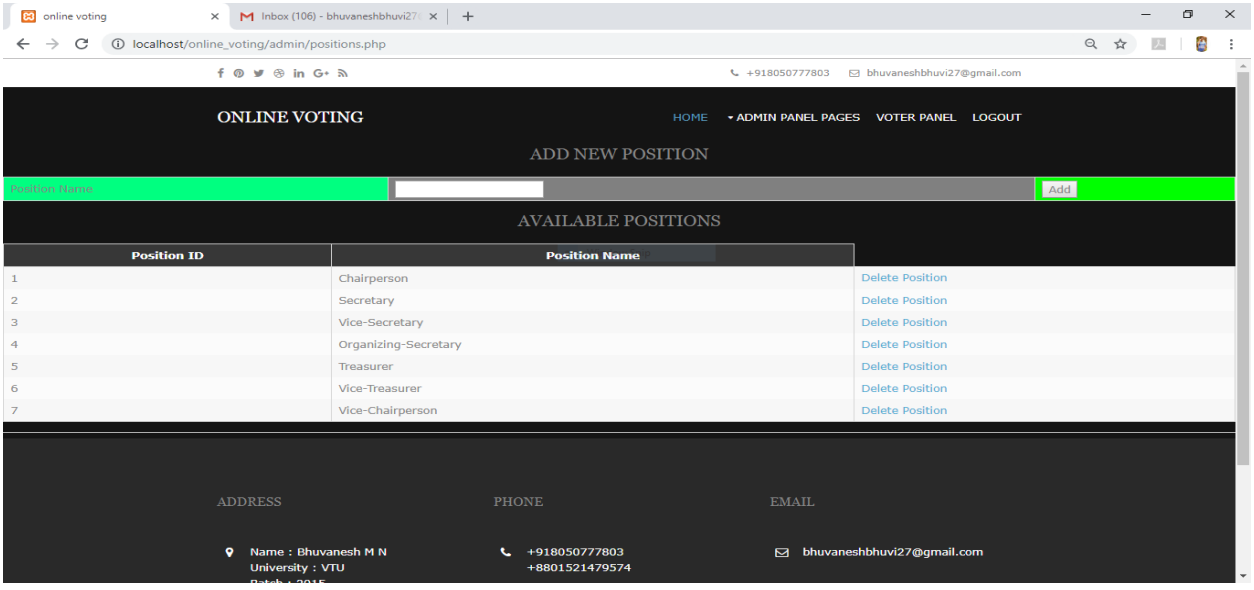
Screenshot 5.1 Home page

As show in the Figure 5.1 home page, user and admin will get this page whenever he/she opens the Online Voting system page. This page is connected to all the subpages like admin login, user login, voter panel, results page etc. If user clicks on any button related page will be displayed.



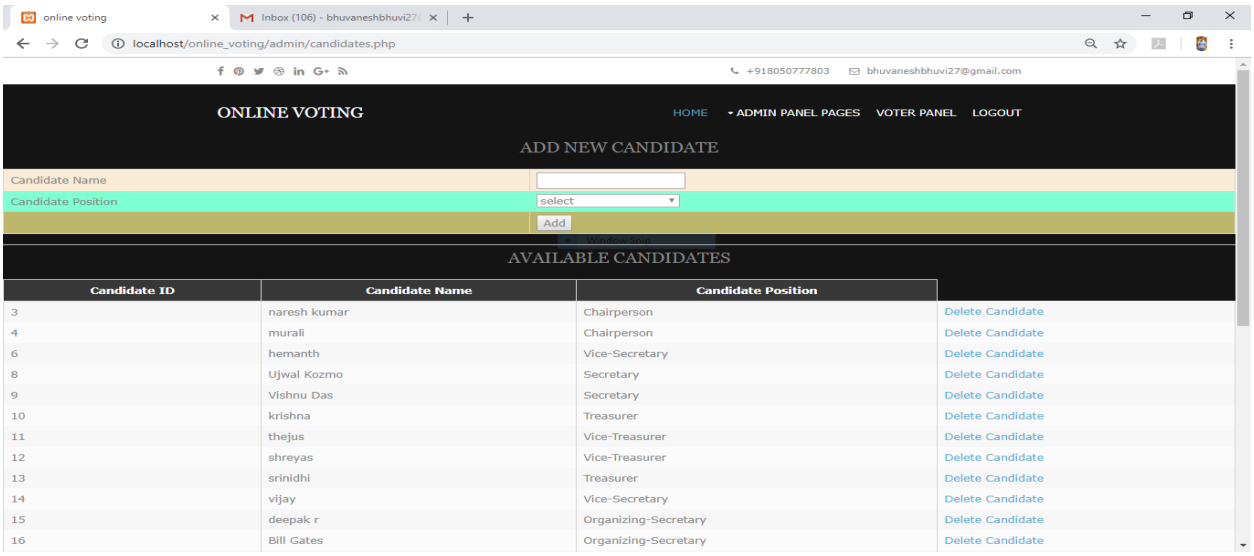
Screenshot 5.2 Admin login page

As show in the Figure 5.2 admin page, in this page authorized admins can login and mange candidate positions, members, results.



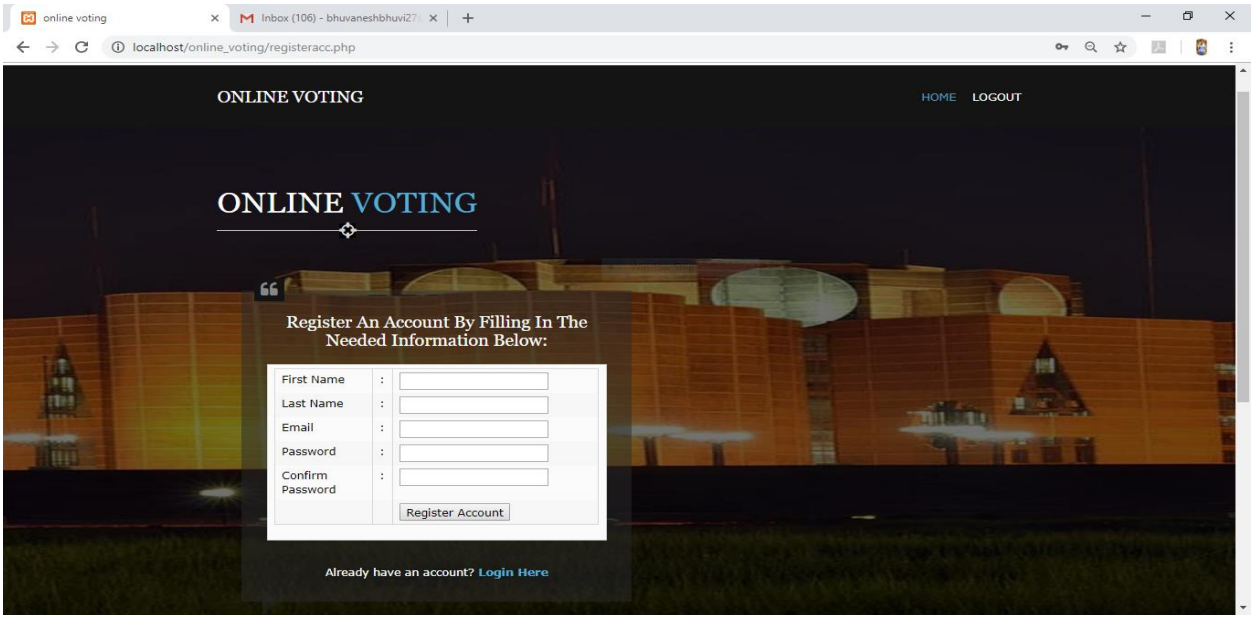
Screenshot 5.3 Positions page

As shown in the figure 5.3 Positions page, in this page admin can manage different positions available and insert or delete positions.



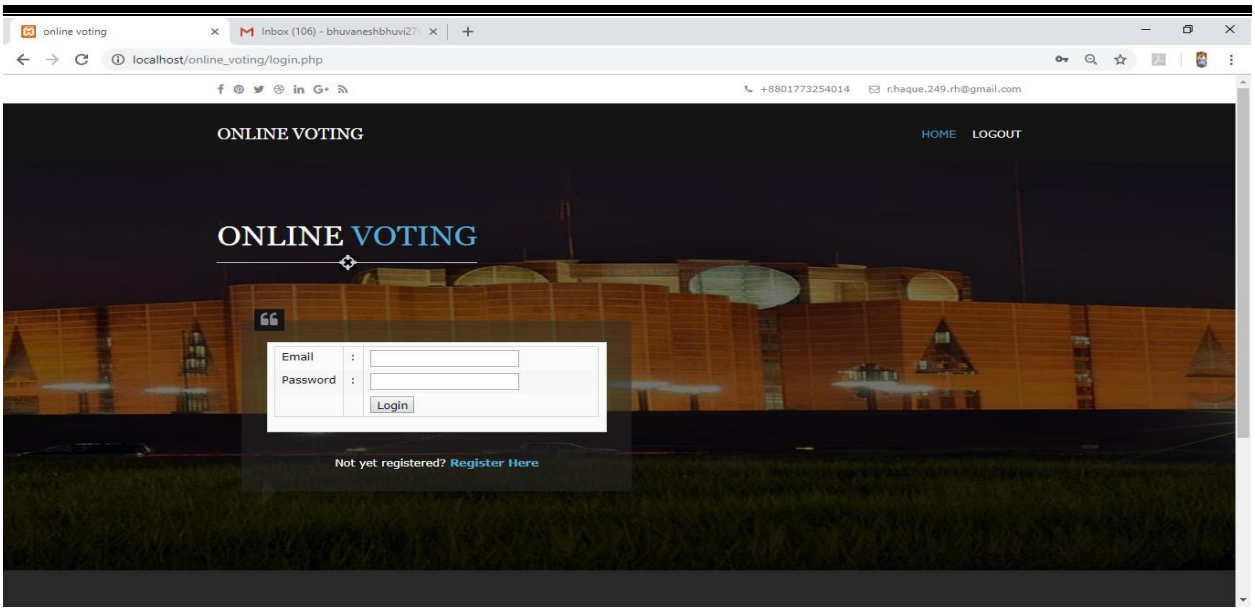
Screenshot 5.4 Candidate page

As show in the Figure 5.4 candidate page, in this page admin can manage different candidates available and add or delete candidates.



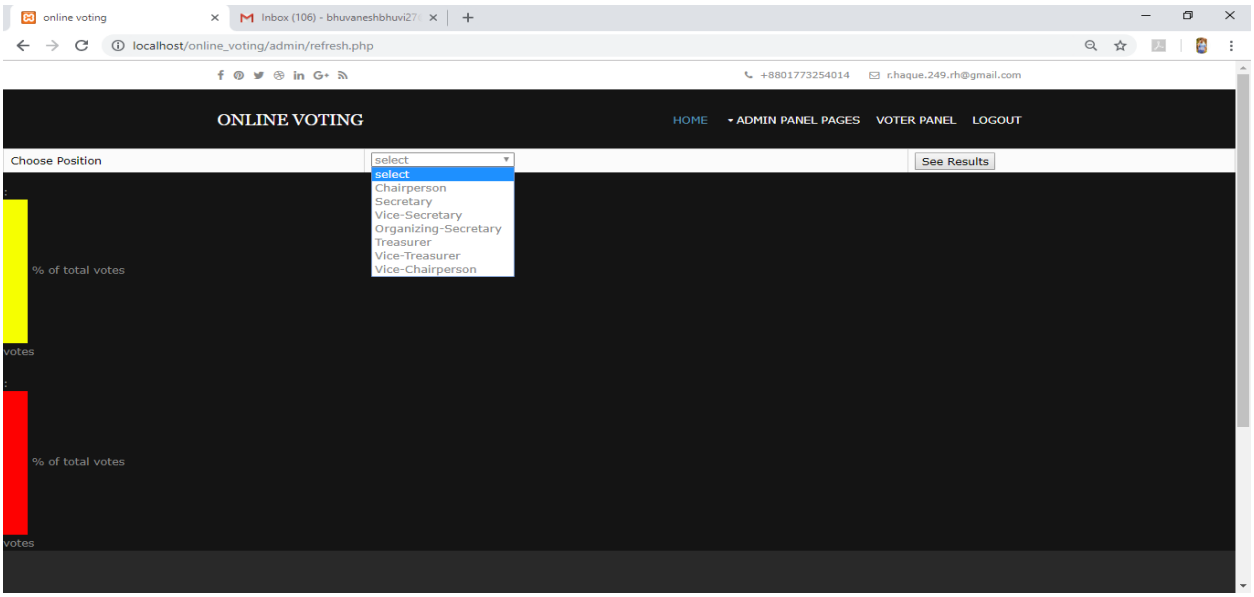
Screenshot 5.5 Voter Registration page

As shown in the figure 5.5 Voter registration, in this page user can register to our system providing required credentials.



Screenshot 5.6 Voter login page

As shown in the figure 5.6 Voter login page, in this page user can log in to our system and proceed to vote or manage her/his profile.



Screenshot 5.7 Results page

As shown in the figure 5.7 Results page, in this page admin can view the results.

CONCLUSION AND FUTURE ENHANCEMENT

The project work was designed and developed for automating the various day to day activities in an engineering college. The software takes care of all the requirements of displaying general information, Candidate information, and position details on the portal.

The system provides effective and efficient way of storing the data based on the query and also the retrieval of information related to college. The current application is developed using HTML, PHP, MySQL and JavaScript. In the proposed work, it considers a simple Voting System details module and stores the Candidates and Voter's information in the database.

In future, the system may include more modules on cultural and sports activities. The project can be implemented using Joomla or HTML5 templates for interactive or dynamic graphical user interface pages and also supporting single window system. Currently, the application is accessed via the intranet of an organization that may be deployed on Internet in order to access it globally

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