

PROJECT REPORT ON

“Online Voting System”

Submitted by:
Argho Deb Das
Roll: 1807066

Under The Guidance Of:

Sunanda Das
Assistant Professor
Department of Computer Science
and Engineering
Khulna University of Engineering
& Technology

Prottoy Saha
Assistant Professor
Department of Computer Science
and Engineering
Khulna University of Engineering
& Technology



Department of Computer Science and Engineering

Khulna University of Engineering & Technology, Khulna

Objectives:

- To Design a Website named *Online Voting System*.
- To Implement HTML for creating the structure of the website.
- To Implement CSS for designing the website
- To Implement JavaScript for making the website more dynamic.
- To implement PHP for the backend work.
- To implement the use of PHP Cookies & Sessions.
- To implement MYSQL database management for database handling.

Introduction:

A website (also written as web site) is a collection of web pages and related content that is identified by a common domain name and published on at least one web server. Websites are typically dedicated to a particular topic or purpose, such as news, education, commerce, entertainment, or social networking. Hyperlinking between web pages guides the navigation of the site, which often starts with a home page. There are two types of website:

1. Static Website
2. Dynamic Website

A dynamic website is a website that displays different types of content every time a user views it. This display changes depending on a number of factors like viewer demographics, time of day, location, language settings, and so on.

The website I built is a dynamic website. The name of the website is **Online Voting System**. It's a web-based platform that allows users to cast their vote online. High-quality online voting system balance ballot, accessibility, and the overall requirements if an organization's voting event. A person can send out electronic ballots to all of your voters in just a few clicks. And once the voting period is over, the system will automatically tally the results, so you don't have to do it yourself, saving your organization a lot of time and money. User can register to cast vote. With online voting, they can see the results in real-time, making them feel more engaged in the process.

To build this website HTML, CSS, JavaScript, JQUERY and BOOTSTRAP was used as frontend language and PHP was used as backend language. We also used MySQL database management system to store and manipulate data. XAMPP web server was used for PHP and MySQL.

In order to develop this website a **Database Management System** is needed. We will store Candidate list, Election list, Id request list, Result list in the Database. Here **MySQL** is used on this purpose. MySQL comes with the assurance of 24x7 uptime and offers a wide range of high-availability solutions, including specialized cluster servers and master/slave replication configurations. MySQL is globally recognize the most secure and reliable database management system used in popular web applications including WordPress, Drupal, Joomla, Facebook and Twitter.

For above advantages **MySQL** is selected for Database-operation.

For code writing environment I used **Visual Studio Code** known as VS Code. With support for hundreds of languages, VS Code helps you be instantly productive with syntax highlighting, bracket-matching, auto-indentation, box-selection, snippets, and more. Intuitive keyboard shortcuts, easy customization and community-contributed keyboard shortcut mappings let you navigate your code with ease. That's why I used VS code.

For Backend I used **PHP**. PHP (Hypertext Preprocessor) is known as a general-purpose scripting language that can be used to develop dynamic and interactive websites. It was among the first server-side languages that could be embedded into HTML, making it easier to add functionality to web pages without needing to call external files for data. PHP is highly flexible whether it is during an ongoing project or after completing the project. PHP is compatible with a large majority of operating systems. It can easily run on different platforms, including UNIX, Solaris, and Linux. Compared to other programming languages, PHP allows the website developer to have more control. For these reasons I worked with PHP in the backend of my web-page.

Implementation:

1. Description:

By Starting My website, there will be a Front page welcoming the user. The page has 4 sections. Home, Features, Services, Testimonials and about us. In the Home Section, there is two buttons:

- Admin
- User

By clicking in the Admin Button, one can go to the Admin Section. There are 3 sections in the Admin panel.

- ADD New Election
- Add Candidate
- ID Request

By login in the Admin Section with Correct Admin ID and Password Admin can access in the above 3 sections. In the *Add New Election* Section, Admin can add new election with Starting date and Ending date of the Election. Thus admin can set an election that will be started in the future period. In the *Add Candidate* Section, Admin can ADD one or more than one Candidate to an Election anytime. In the *ID Request* Section, Admin can grant a user with an ID who requested for a ID in the past. Using that ID user can login into the Election and cast vote. If admin click logout button in the *navbar* , he/she will be logged out and will be redirected to Home Page.

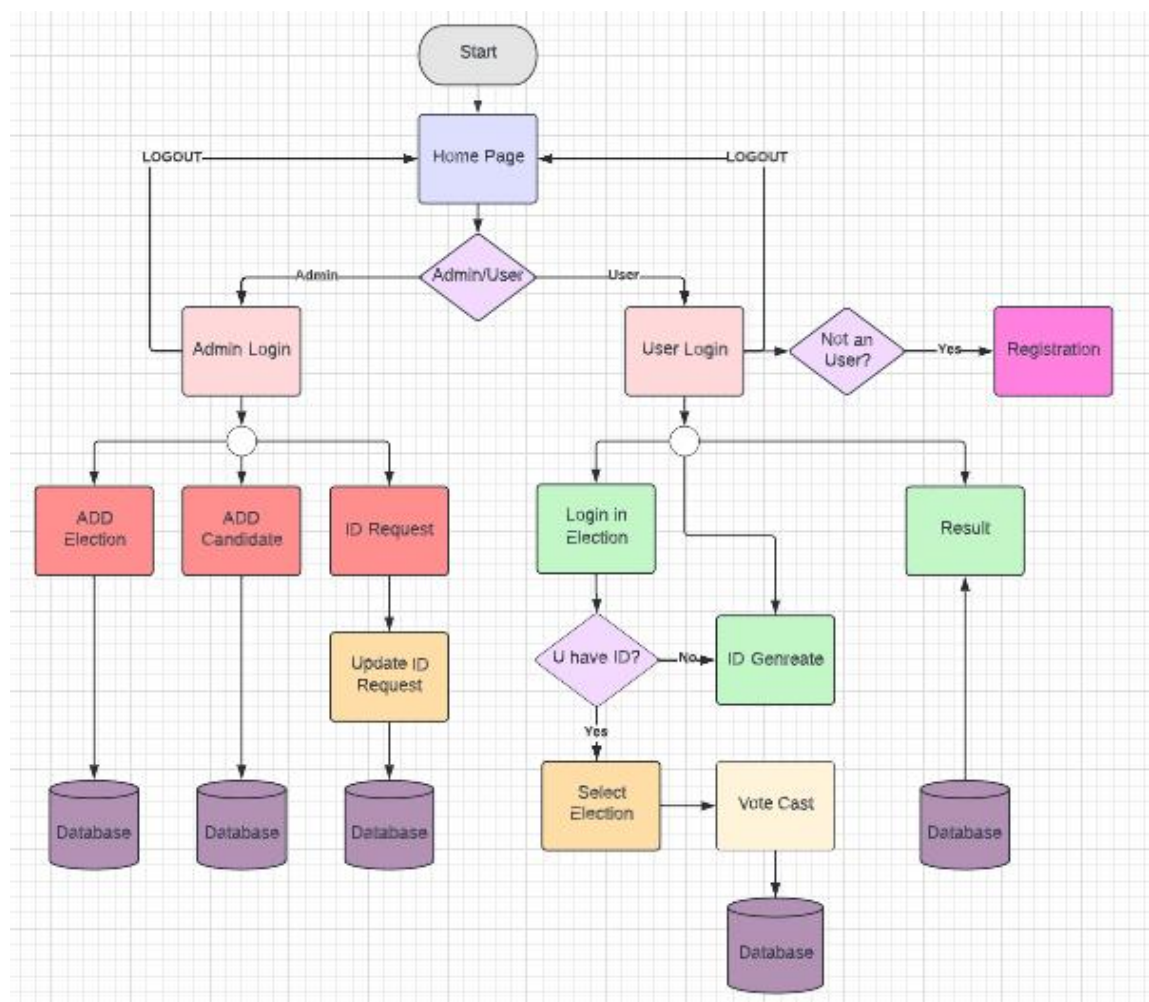
By clicking the User Button, one can go to the User Panel. There are 5 sections in the User Panel.

- Login
- Registration
- Election
- Vote Cast
- ID Generate
- Result

User can *Login* with their Email and Password. If she/he is a new user, then he/she needs to be registered first to access User facilities in the *Registration* Section. In the *ID Generate* Section, user can Request for Voter ID to the Admin. If admin grants his/her request then there will be an ID auto generated in this page. User can save or print this ID for further use. In the *Election* page, there is a login section, user can access through Election page only by submitting his/her Voter ID and Password. After login in Election,

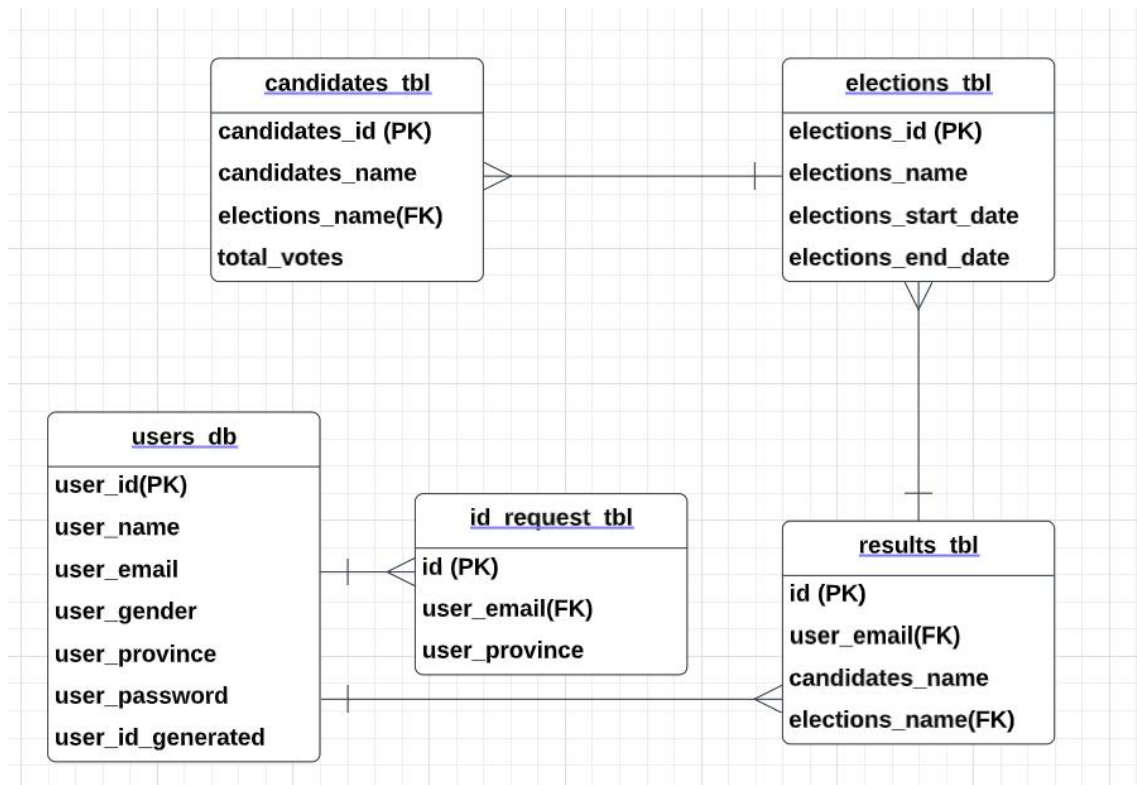
there will be a page named *Select Election*, user can select election as their choice to cast vote. But user can only cast vote in those elections which are ongoing. After choosing their desired election, they can go to *Vote Cast* Section. Here user can cast vote against their favorite candidate. One user can cast only one vote against one election. By clicking Logout button, user will be logged out and will be redirected to Home Page.

2. Flow Chart:



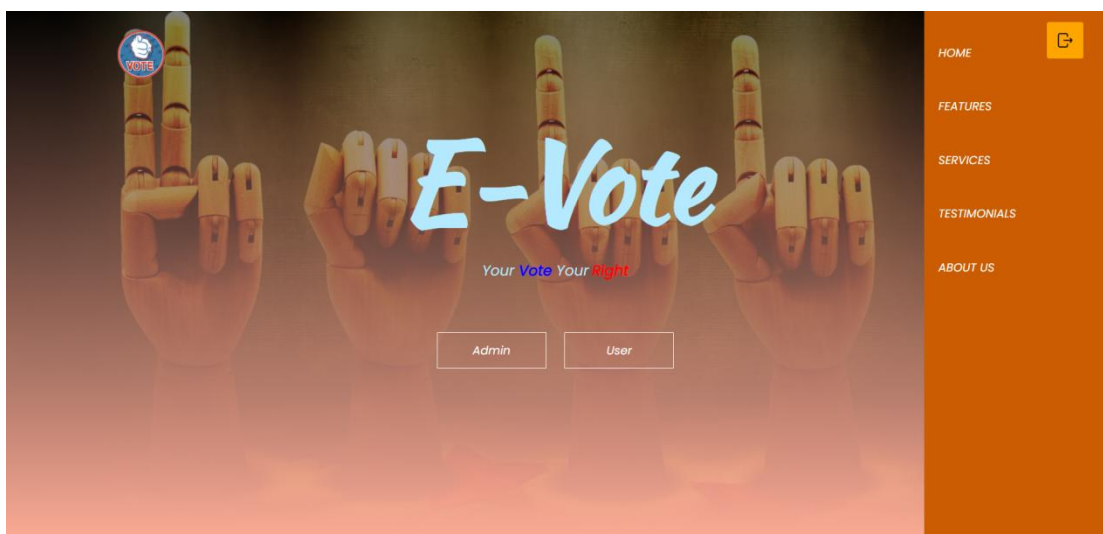
Fig(1): Flow Chart of Online Voting System Website.

3. Schema Diagram:

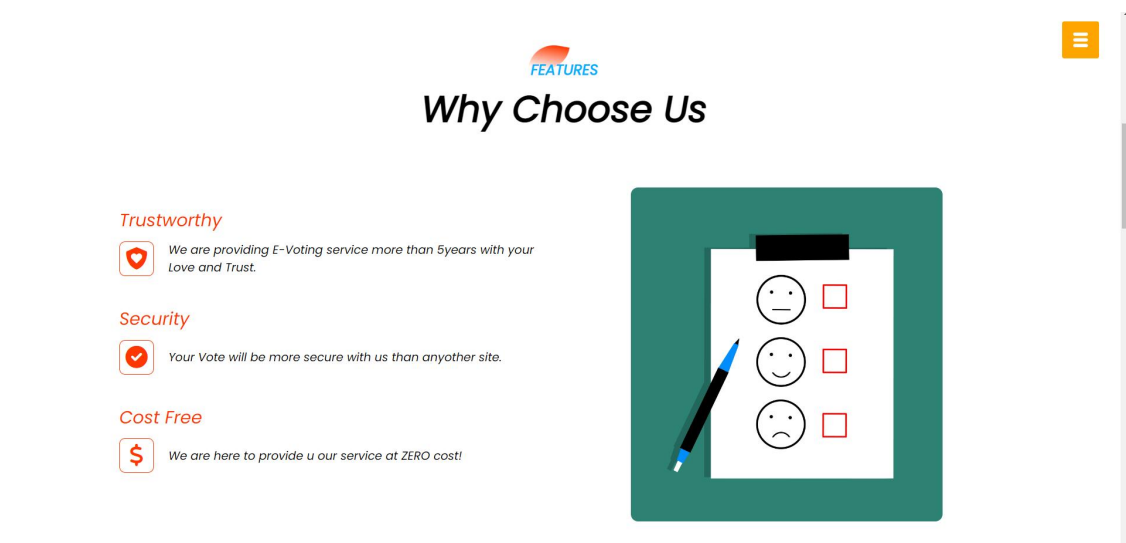


Fig(1): Schema Diagram of the Database of Online Voting System Website.

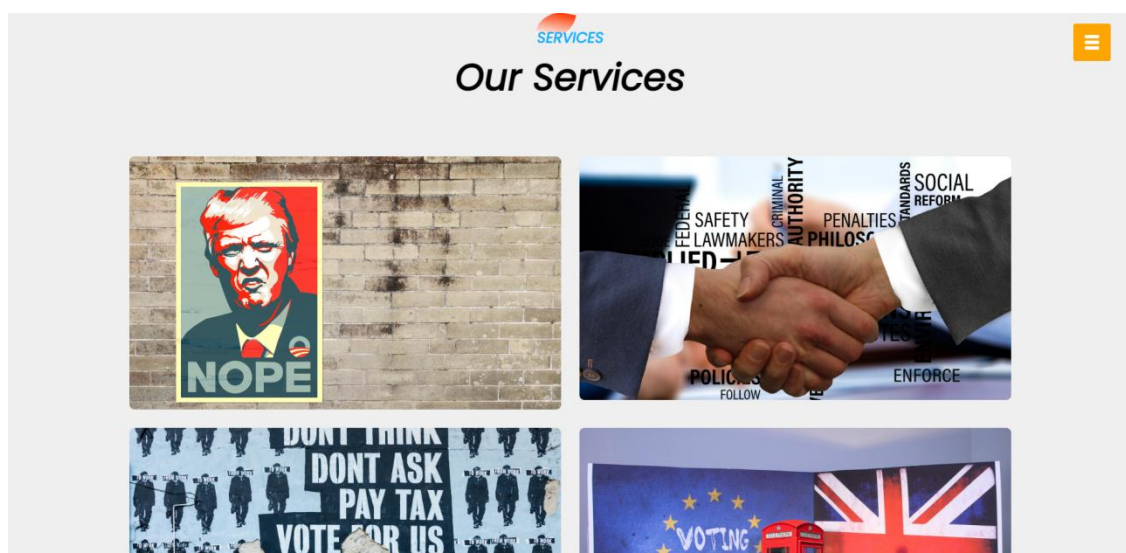
4. Detailed Visualization:



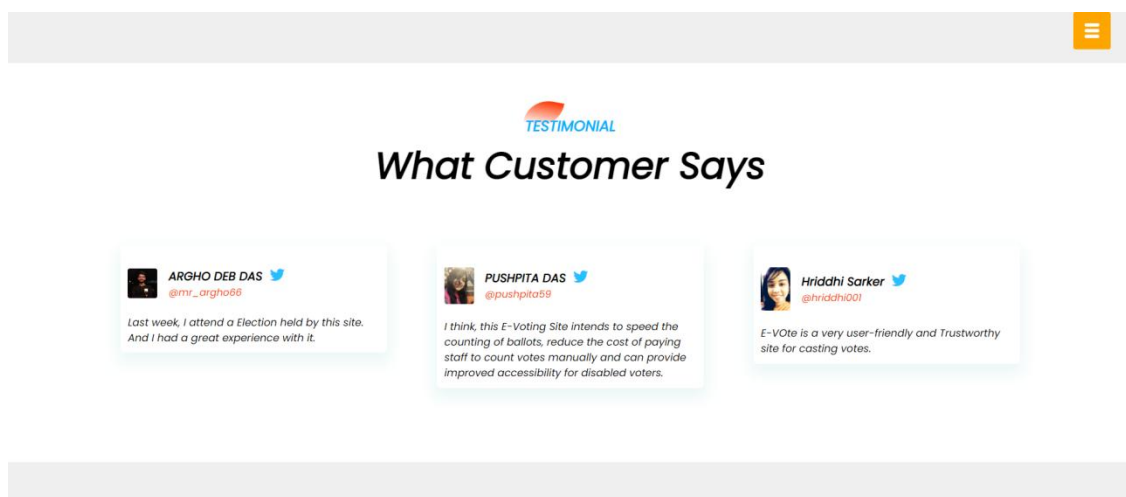
Fig(3): Header section of Home Page.



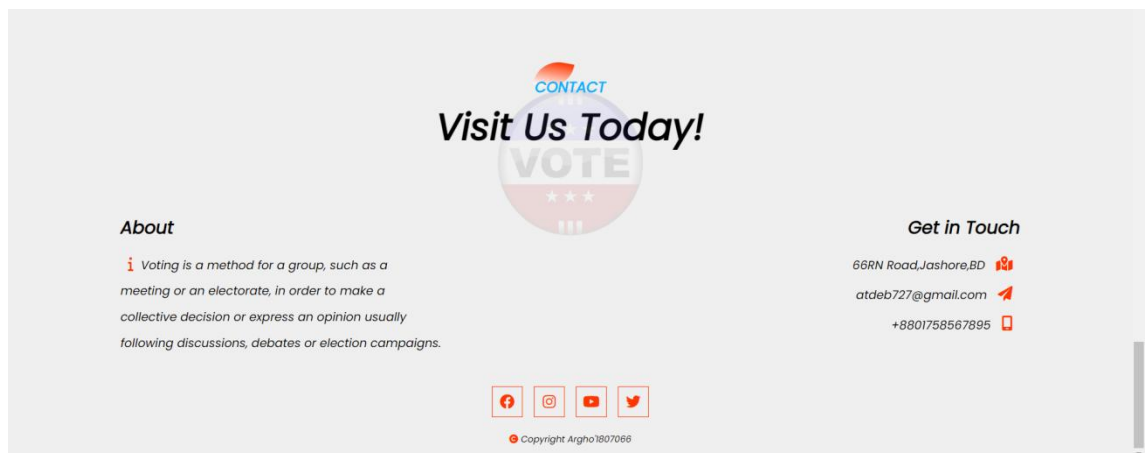
Fig(4): Feature section of Home Page.



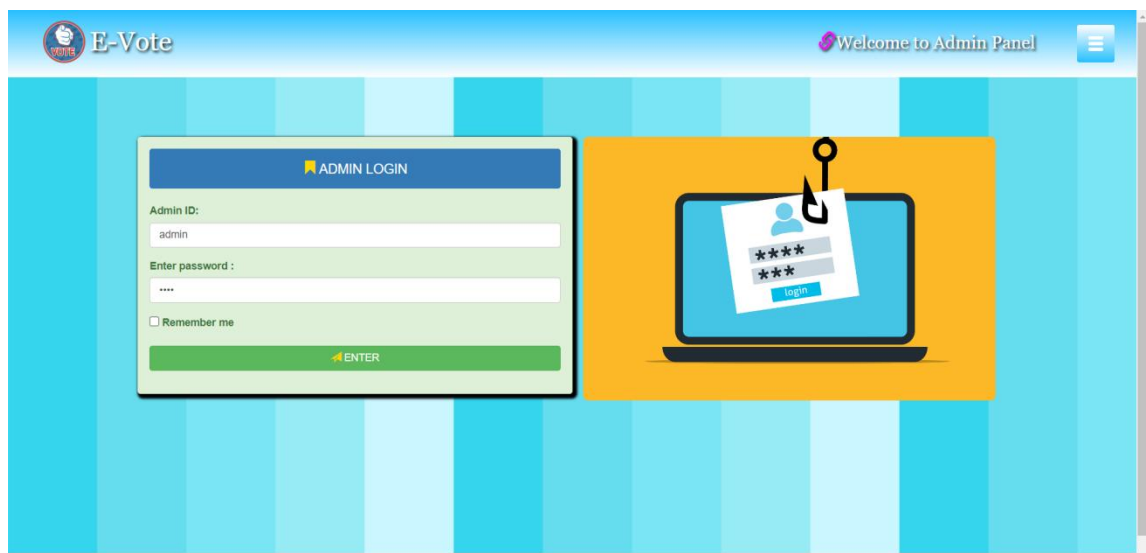
Fig(5): Services section of Home Page.



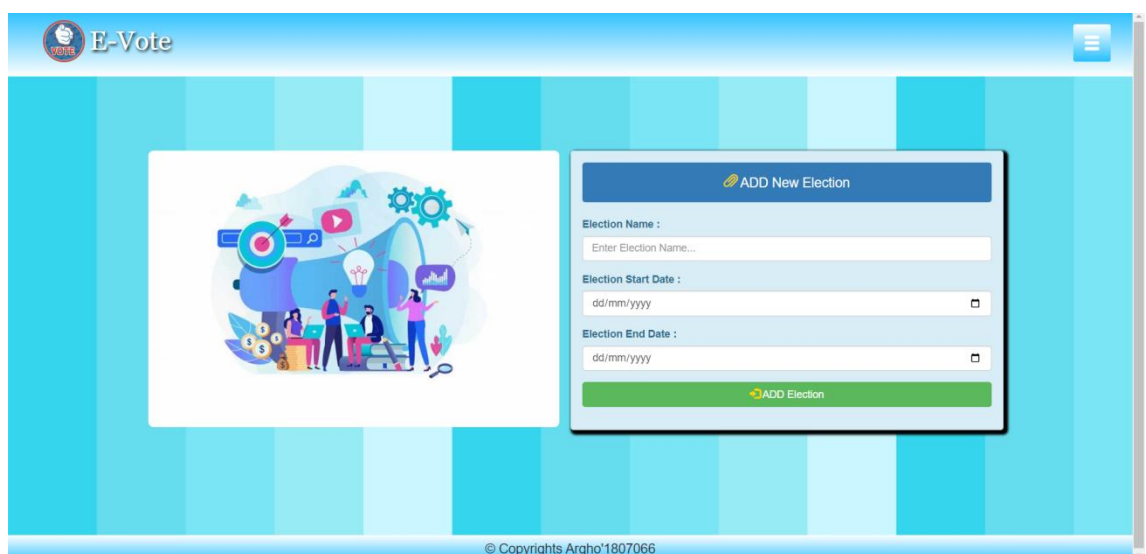
Fig(6): Testimonial section of Home Page.



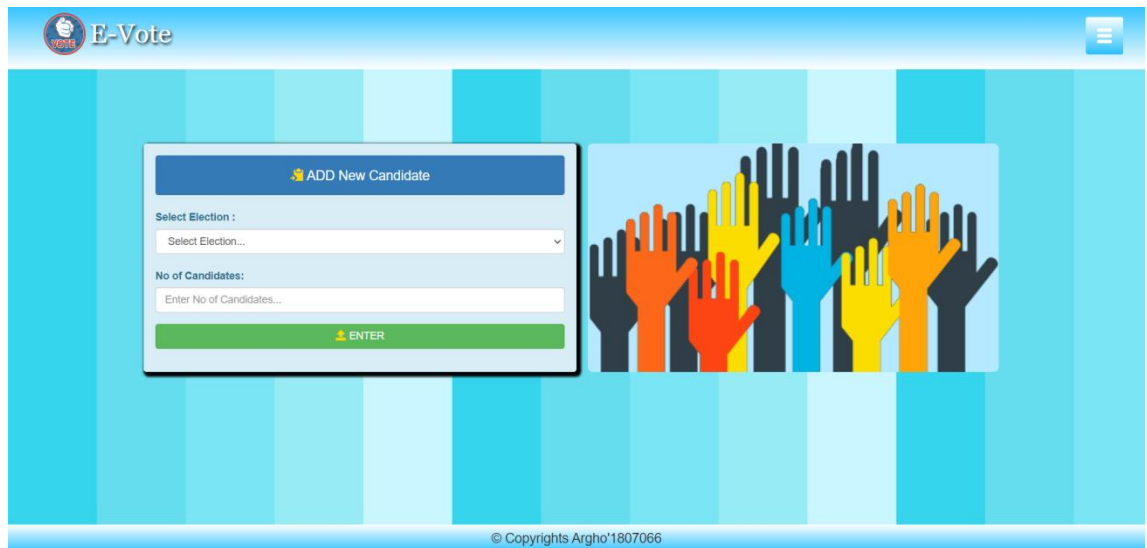
Fig(7): Footer section of Home Page.



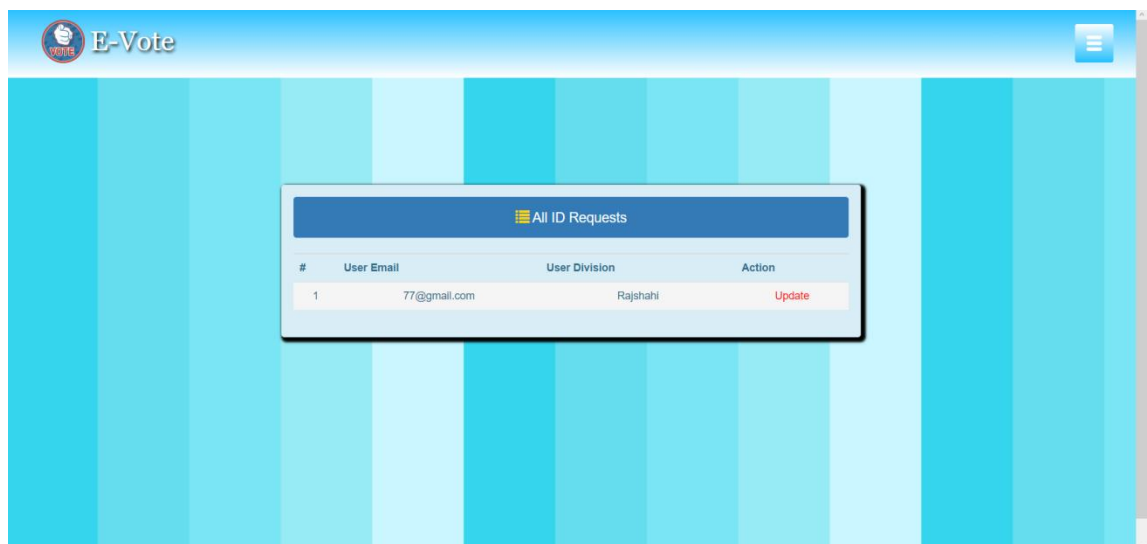
Fig(8): Login Page of Admin Section.



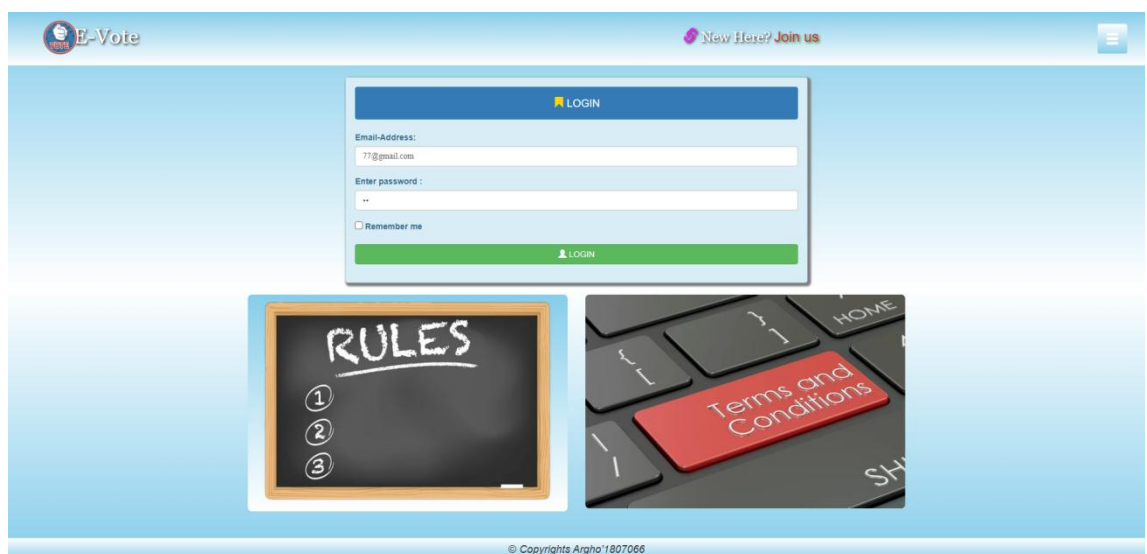
Fig(9): Add Election Page of Admin Section.



Fig(10): Add Candidate Page of Admin Section.



Fig(11): ID Request Page of Admin Section.

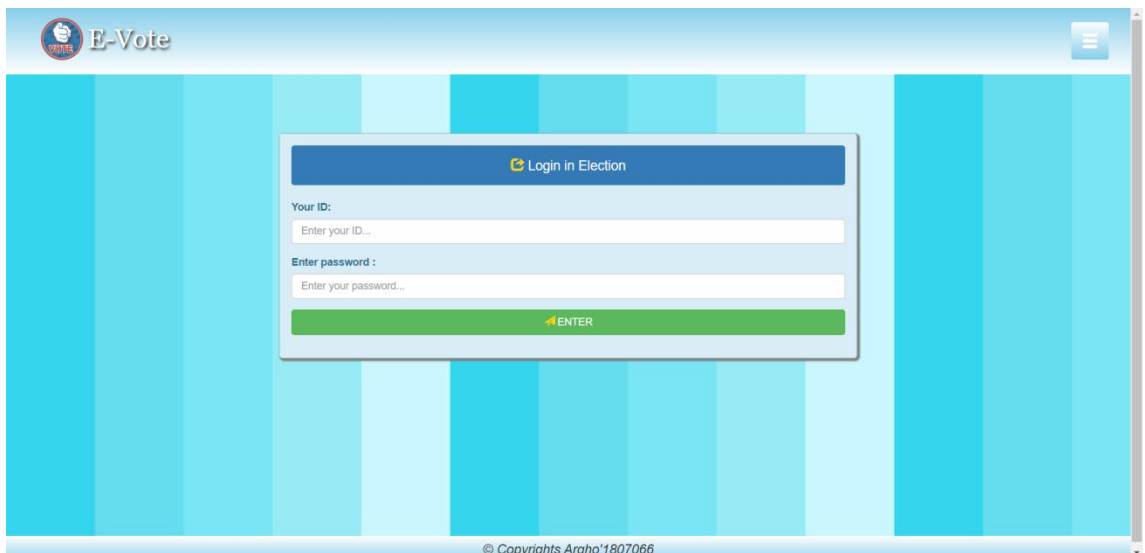


Fig(12): Login Page of User Section.



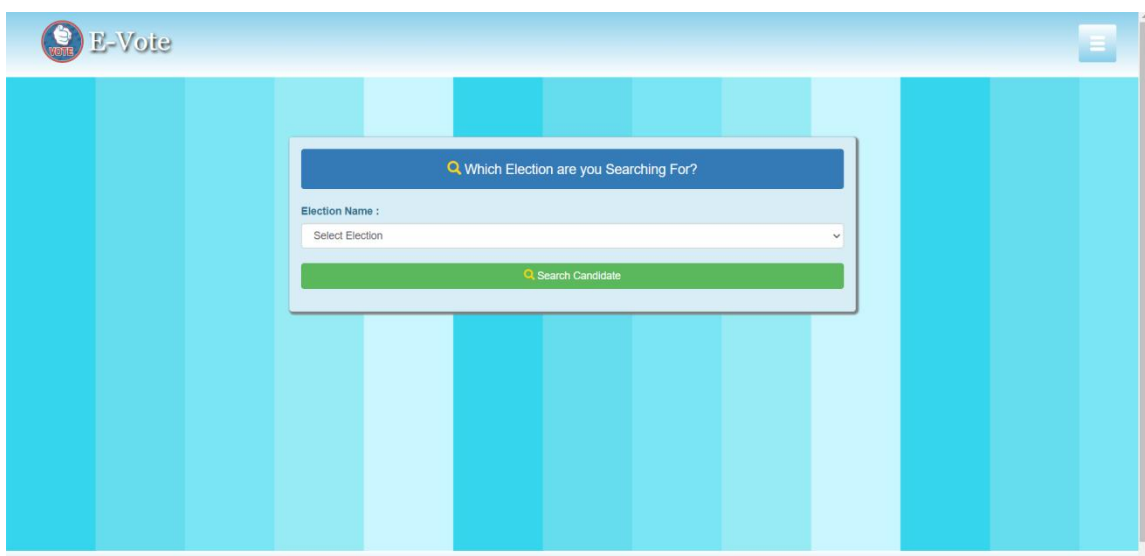
The registration page features a blue header with the 'E-Vote' logo and a hamburger menu icon. The main content area has a light blue background. On the left, a white registration form is displayed with a blue header bar labeled 'Registration'. The form includes fields for 'Full Name', 'Email-Address', 'Gender' (a dropdown menu), 'Division' (a dropdown menu), and 'Enter password'. A green 'SUBMIT' button is at the bottom of the form. To the right of the form is a photograph of a sign that reads 'REGISTER to VOTE' with a yellow 'LAST Day' sticker and the text 'Do it Here! Do it Now!'. The footer contains the copyright notice '© Copyrights Argho'1807066'.

Fig(13): Registration Page of User Section.



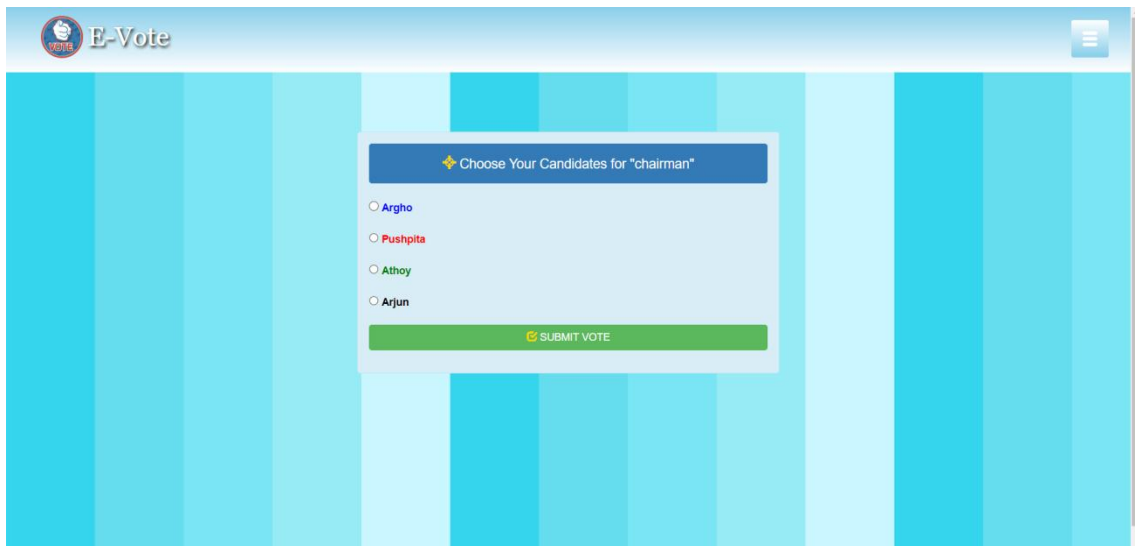
The election login page has a blue header with the 'E-Vote' logo and a hamburger menu icon. The background is a light blue with vertical stripes. A white login form is centered, featuring a blue header bar labeled 'Login in Election'. It contains fields for 'Your ID' and 'Enter password', followed by a green button with a left arrow and the text 'ENTER'. The footer displays the copyright notice '© Copyrights Argho'1807066'.

Fig(14): Election Login Page of User Section.

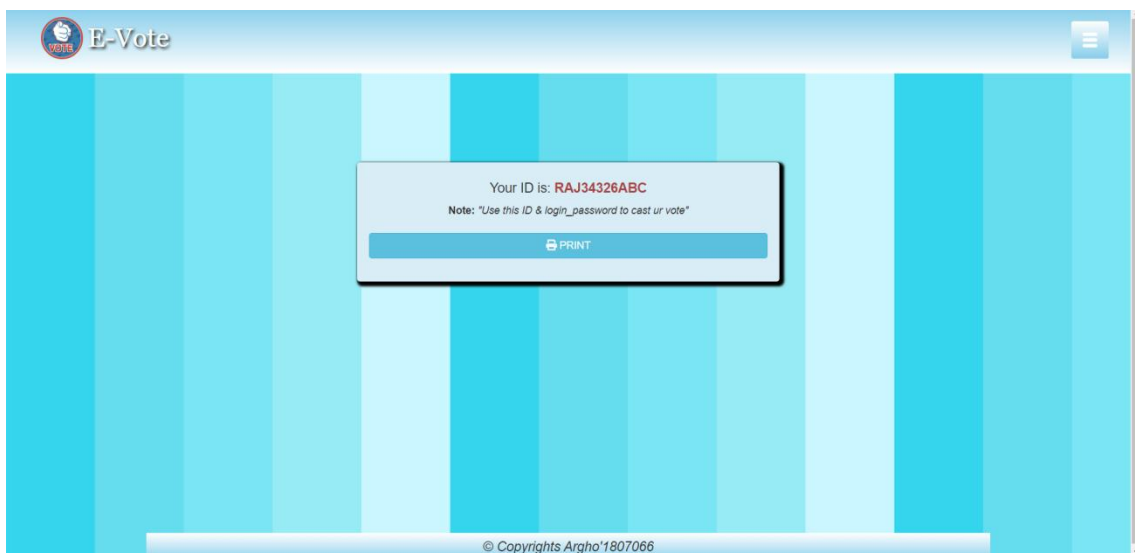


The select election page features a blue header with the 'E-Vote' logo and a hamburger menu icon. The background is a light blue with vertical stripes. A white form is centered with a blue header bar labeled 'Which Election are you Searching For?'. It includes a dropdown menu for 'Election Name' and a green button with a magnifying glass icon and the text 'Search Candidate'. The footer contains the copyright notice '© Copyrights Argho'1807066'.

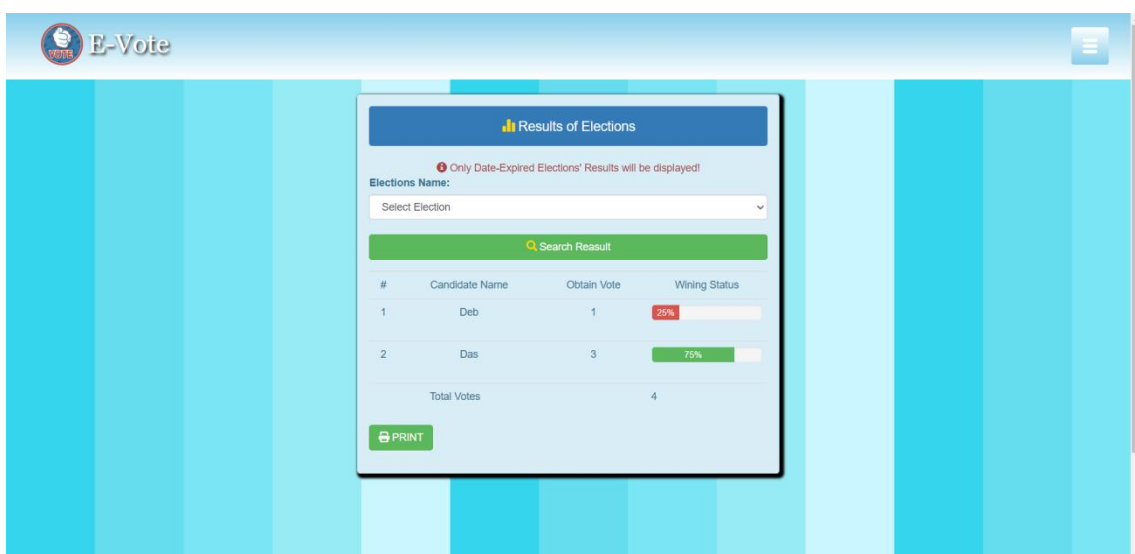
Fig(15): Select Election Page of User Section.



Fig(16): Vote Cast Page of User Section.



Fig(17): ID Generate Page of User Section.



Fig(8): Result Page of User Section.

Target vs Actual Accomplishment:

My goal was to build an *Online Voting website* where user can cast Vote against their desired election and admin can add elections as well as candidates to that election. I tried to make the website very user-friendly thus anyone can use this website in voting purpose. I wanted to add Image beside every candidate but didn't find any proper guideline to achieve that goal. Moreover, I faced some difficulties to connect Database. But later with the help of some online tutorial this problem was solved.

At last, I can say that my targets are accomplished *successfully*.

Risks and Issues:

There are some risks and issues with my website. It needs a strong and continuous connection with database. If somehow the connection with database is lost or database is deleted, the website won't work perfectly. There is a lack of security in the website. A professional hacker may hack into the system and know the user password and email. Moreover, there might be some minor bugs as some corner cases may not have tested.

Discussion and Conclusion:

The developed *Online Voting Website* is operating perfectly. Each pages is working without any kind of error. There is no unexpected error in the website. Firstly, some problem was faced, and I tried my best to overcome them. I faced some error while handing picture in the frontend code section. Later this was solved by using proper picture format. I also faced difficulties while working with cookies and sessions. But those problem were solved with the help of some YouTube tutorial.

Through this project, I got accustomed to HTML, CSS and JavaScript. I also learned to use frameworks like Bootstrap and JQuery. Moreover I learned a lot about PHP, PHP Cookies & Sessions.

The project played a great roll on developing my web development skills. This knowledge will surely help me in my future *Web Development Journey*.

References:

- <https://www.w3schools.com/php/default.asp>
- <https://www.youtube.com>
- <https://www.javapoint.com/php-tutorial>
- <https://getbootstrap.com>