ONLINE ELECTION SYSTEM

 \mathbf{BY}

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This Report Presented in Partial Fulfillment of the Requirements for the Degree of Bachelor of Science in Computer Science and Engineering

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APPROVAL

This Project designate "ONLINE ELECTION SYSTEM", submitted by MD: Shahazan Shahid ID No: 151-15-4999 to the Department of Computer Science and Engineering, Daffodil International University, It has been preferred as all right for the full contentment of the preoccupations for the division of B.Sc. in Computer Science and Engineering also chosen as to its approach and cargo.

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We herewith convey that; this concern has been fulfilled by me under the supervision of MS. Most. Hasna Hena, Senior Lecturer of CSE Daffodil International University. I also profess that not at all this designate nor yet a little slice of this setup has been buckle formerly for allotment of part of rung or shingle.

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ABSTRACT

This report is based on the project work I have done to complete the **ONLINE ELECTION SYSTEM.** The system has its own features and advantages. Details about the system are described in this report.

This system is designed for the election management and voter to use. Users can sign up in the system using their nid or username and password provided by election management. Then they can login. User can see the candidates and voted. They can show the election result. The admin user has the power to delete a voter and candidates. Admin can save voter information their database also can registration voter id. Admin can update voter and candidates information. Moreover, The system gives more security to election.

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CHAPTER 1

Introduction

1.1 Introduction

Online election system decide on voter have to sign in up, voter must have to verified there document. For candidate and voters admin generated there profile and enter the system. Admin login panel will be take care of by election commission. Receive the unique id and Password by voter, voter can vote a candidate only once per election. This project is helpful for the election commission. Voters can get information also know about the candidate background. Voter can select sagely. The admin are able to scrutiny individual Candidate fine points and eyeball the script. After verifying candidate's document admin add the candidate. The election management system allows voters to opening the file and information of candidates. Admin can pleasant and blot out any details not connected with the election rules.

1.2 Motivation

The motivation comes from how I can help to improve the election system of our country. There are many government and local election held in our country. I have seen lot of cases people don't like to go any were for vote. In this modern time, we try to do everything on online, for transportation, shopping, parcel delivery, online education, etc. Everyone thinking now so why not online voting?

I feel the necessity of a system that will manage voting system and provide maximum security to the question. This will change the tradition of voting system and also the tradition of election leakage.

1.3 Objectives

The capital objective of online election system king of system which very easy and fast away of call the tune election. Voters can view the background also take information of all of candidate. Admin can substantiate the script and fine points of candidate. System give rise to one and only id and password provide extra secure logins.

1.4 Expected Outcome

My project is to build a system that voter can vote online. At the end of the project I want a fully online election system. This will improve the election system of our country and make election system on online.

1.5 Report Layout

Chapter 1: Introduction

Introduction chapter I try to introduction about my online election system project. Why I motivate to build this project, also I explain why we need online voting. Expected outcome of this project. How can help this project in our real life work.

Chapter 2: Background

In this background chapter I try to explain about this project how it save our time and effective roll. Find out which people and company they already work for build this project. I find out the problem I face and people will be face in future. At last I explain the challenges I face when I build this online election system.

Chapter 3: Requirement specification

This chapter I show business process modeling (BPM) for user and admin. Requirement collection and analysis the dada user requirements and admin requirements. Make a use case modeling and description for non admin and the admin user. In this chapter I also explain the logical data model and design I require when I work to build this project.

Chapter 4: Design Specification

In this chapter name design specification. At first I explain the front end design requirement for the interface I use html css. In back end design I use php, wicked pdf, actually this project base core php. For interaction design and ux I use bootstrap and scss. To build this project I require hardware dual core processor at least, 2 GB ram or higher, 1.5 GHZ processor or above. I also use some software like windows, text editor, etc.

Chapter 5: Implementation and Testing

In this chapter implement the database tables I create for work the back end. I try to show the home page also how a voter vote their self. After see this chapter every one can understand how a voter completely vote their self. I check each and every option its successfully work or not.

Chapter 6: Conclusion and Future Scope

The future scope for development. Which fetcher I want to add in the future.

Chapter 2

Background

2.1 Introduction

The **Admin panel** and **user dashboard** are the main backgrounds of this system and also some tasks are happening in the background. The Admin panel task is always hidden from the users, where the users are voter. All the task of Admin panel here does in the background. User task hidden from admin. On the other hand admin task hidden from other voter. Actually most of the task of this online election system happens in the background.

2.2 Related Works

My project "online election system" is a kind of automation system. Voter will vote their candidates on online. [16]

Analysis of an Electronic Voting System submitted by d Rubin dan and s. awllach in their university final project February 27, 2004. [16] The national committee Electronic voting system Tallinn 2005. Online Election System Project nevon Projects 2010. Institution for information steknolog Department of Information Technology August 2011. [16]

2.3 Comparative Studies

A room or box in a opinion terminal voting booth is where voters submit their vote in confidential. But is a complex process. Online election system is a simple and efficient way of voting system. The system performs very quickly without any complexity. The system generation for take voter vote and show the vote result.

The CSES is a collaborative program of research among election study teams from around the world. This system save voter data and admin verified there document and register the NID user name and password. To use this information voter can voted their candidates.

2.4 Scope of the Problem

Problem I face when creating online election system given as below-

- 1. Chances of hacking candidate or voters account
- 2. Each one does not have personal computer and internet connection, voters can go online and submit their vote privately.

2.5 Challenges

The challenges for me in developing this system are-

- 1. Make the system security.
- 2. Not everyone have pc or net connection. So this is difficult vote on online. This system is online. Reach the system and available internet.
- 3. I start at a beginning level to build this system. I face many challenges each and every time. Because everything is new to me.
- 4. Correct feedback to improve the system.

Chapter 3

Requirement Specification

3.1 Business process Modeling:

The analytical representation of an organization or system in known as business process modeling. There are two models in this system, User and Admin.

BPM for User:

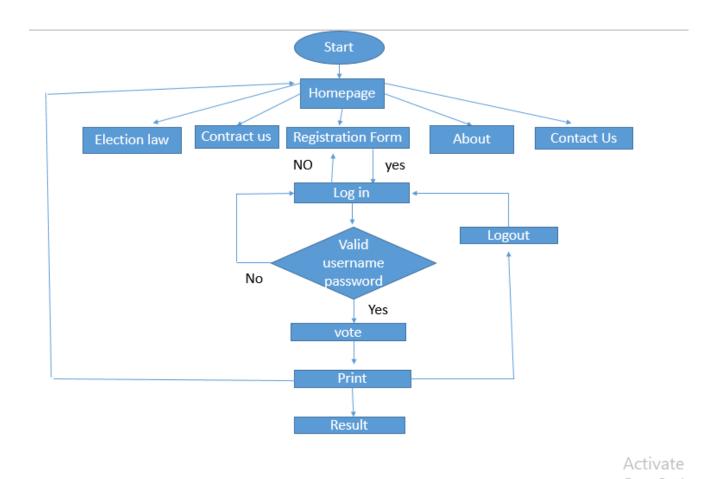


Figure 3.1.1: BPM for user

BPM for Admin:

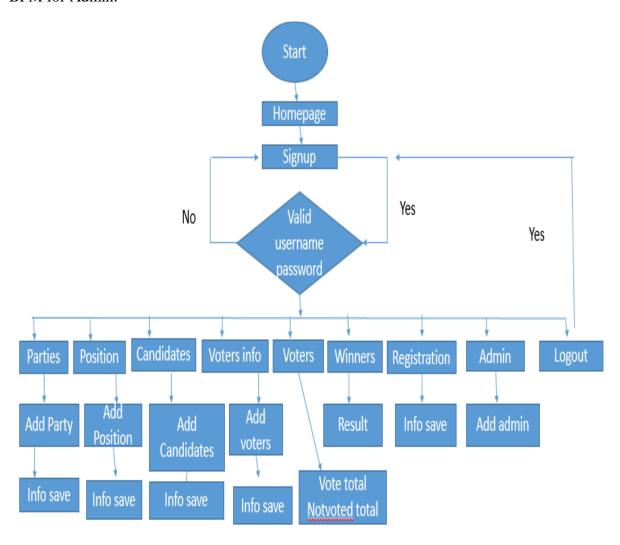


Figure 3.1.2: BPM for admin

3.2 Requirement Collection and Analysis

The requirement collection and analysis is the first step of online election system. Two type of requirement of this system one is functional and other one is non-functional.

Functional Requirement

An internal activity that's the system can perform it's called functional requirements. Functional requirements like, an Admin section, a login section where only admin can access, a dashboard for maintaining admin profile. Dashboard also contains more other portion like, reset password, add new admin. When user access user can connect with authority.

Non-functional Requirement

On the other hand, Nonfunctional requirement define the behavior of an system. It defines performance issue of the system and how much the system is efficient.

Non-functional are help to being more efficient; load on quickly as possible to my web application, smoother operation. Application should be excellent for user experience

Feasibility Study

Feasibility is the most important part before development. I study many several things and I get the best solution. The study helps me to get the exact requirements for developing my application. We also get the exact idea that out application is how much different, helpful in current competitive market for farmers.

In developing stage, the system requires for all tool and platform describe to advance the new system like server and text editor. I confident to develop a new system, which stands the needs of the voting problems. Then we realize that there is a great need to develop a new system. I decided to develop my web application in PHP and coding as a programming language and MySQL to storage my project data. I developed my project based on the requirement of XAMPP local server, Bracket. [16]

3.3. Use Case Modeling and Description

Use case diagram:

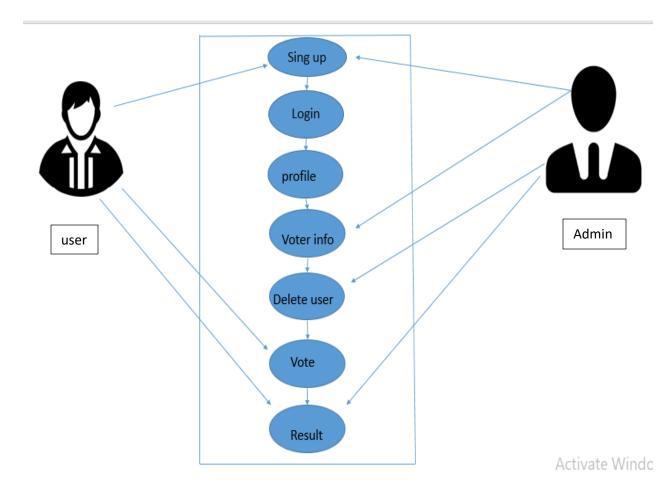


Figure 3.3.1 Use case diagram

Description:

In this system users have to sign up and vote into the system. They can view candidate profile and vote this party. They can also see other candidates profile. Admins also sign up and sign in in to the system. User can insert voters and candidates, view all candidates and voter profile. User also have access to edit the user profile. User can delete voter and candidates.

3.4 Logical Data Model:

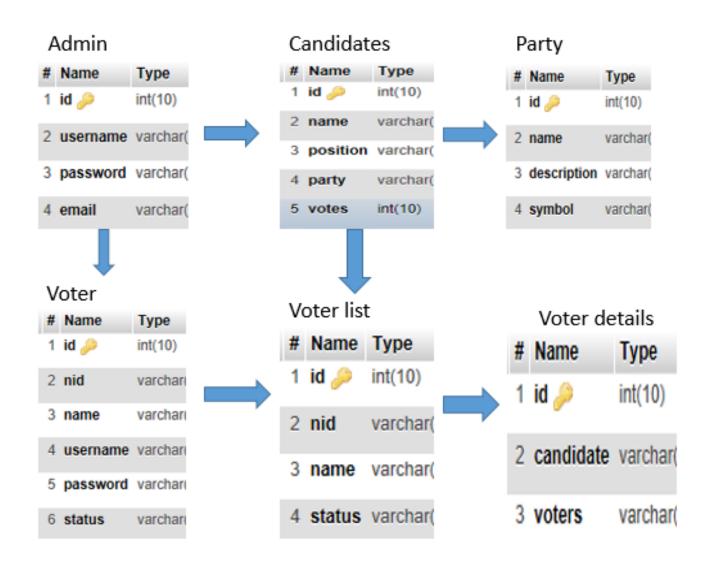


Figure 3.4.1: Logical data model

3.5 Design Requirement:

- 1. In online election system, I have an authentication for our admin. So I have a login system design.
- 2. In this system, there are two types of user like Admin and other person is user. Only Admin can get add candidate and voter in this this system. But the other user can only view the candidate also give their vote.
- 3. After login Admin can add, update voter and candidate information.
- 4. User can register and vote directly.
- 5. Admin can allow users voting problem solve.

Chapter 4

Design Specification

4.1 Front- end Design

Front-end design of a web application involves tools and techniques to develop the frontend of the application. The tools and techniques used in this project are-

⇔ HTML

⇔ CSS

HTML:

HTML means Hyper Text Markup language. This gibberish is the accepted markup gibberish for invent web pages. It is also invent and applications. HTML Distinguish the system of a web page. For developing any web application interface and outlook we can use HTML. [1]

CSS:

CSS means cascading style sheets. It is a style sheet language nearly new for characterize the narration of a file penned in a markup language. CSS and HTML are related each other. Without CSS we can't design HTML. [1]

4.2 Back-end Design

The back-end of an application requires more of coding and logical parts. Any kind of development that does not involve any kind of code that produces a user interface can be called back-end design. The tools and techniques used in this project are-

⇔ PHP

\$ SQL

♥ WICKED_PDF

⇔ Some other tools

JAVASCRIPT:

An object-oriented computer programming language more often than pre-owned to generate related accouterments within web browsers.

PHP:

PHP (recursive acronym for *PHP: Hypertext Preprocessor*) is a universally adoption exposed authority general-purpose scripting language that is chiefly suited for web development and can be fixed into HTML.

Wicked PDF:

Wicked PDF is tool used for converting html pages to pdf file format.

4.3 Interaction Design and UX

While working with interaction design and UX, the most important thing to remember is user experience and interaction. The usability and accessibility are chanced in this part of development. The tools and techniques used in the project are-

⇔ Bootstrap

\$ SCSS

Bootstrap:

Bootstrap is an open source front-end web framework for designing websites and web applications. It has no concern to back-end development. [5]

SCSS:

SCSS stand for sassy CSS. It has a great syntax of styling. SCSS file use the extension. SCSS [6]

4.4 Implementation requirements

Hardware requirement:

\$ 2GB RAM or higher

Software requirement:

- $\ \, \ \, \hbox{Text editor (Dreamweaver/ atom/sublime/notepad++)} \\$

Chapter 5

Implementation and Testing

5.1 Implementation of Database

Database name: Development (default)

Tables:

- **☆** admin
- **☆** candidates
- **☆** party
- **☆** position
- **☆** vote details
- **☆** voters
- **☆** voter list



Figure 5.1.1: Database tables and indices

5.2 Implementation of Front-end Design

Home page:

The homepage shows a welcome message. It also give registration and login for the user.

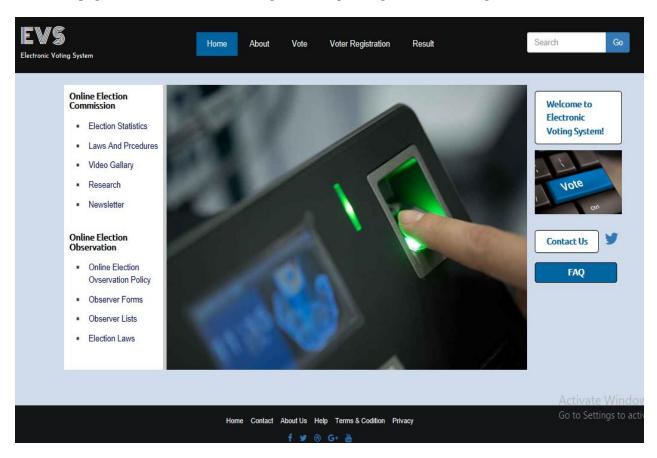


Figure 5.2.1: Home page

User registration:

For registration user has to fill the form with nid, username, password. The username and password must be the election commission provided. This ensure that only the real user can get access to the system. The form will show error messages upon invalid inputs.

About us:

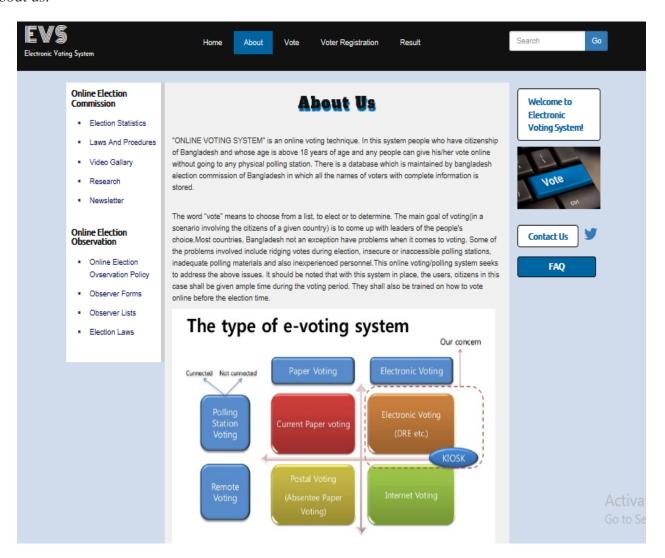


Figure 5.2.2: About us

Contact us:

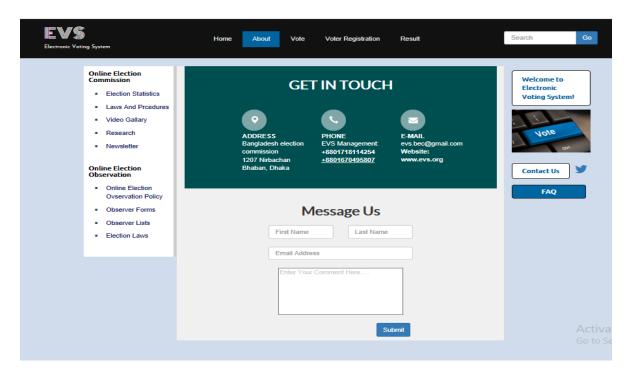


Figure 5.2.3: Contact us

Vote:

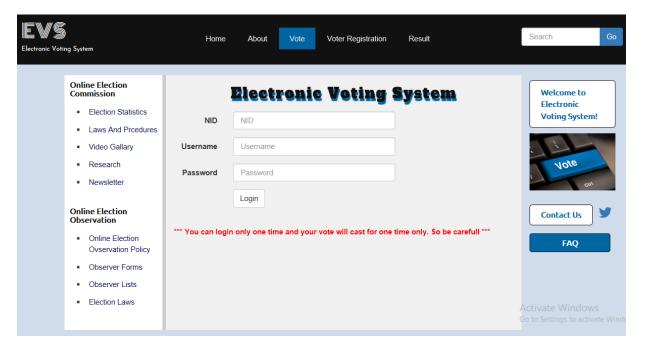


Figure 5.2.4: Vote

Voter registration process:

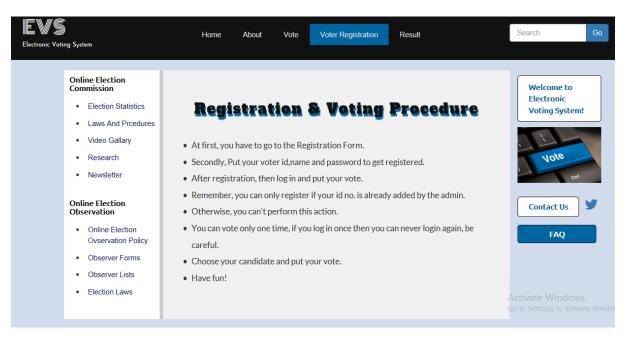


Figure 5.2.5: Voter registration process

After registration:

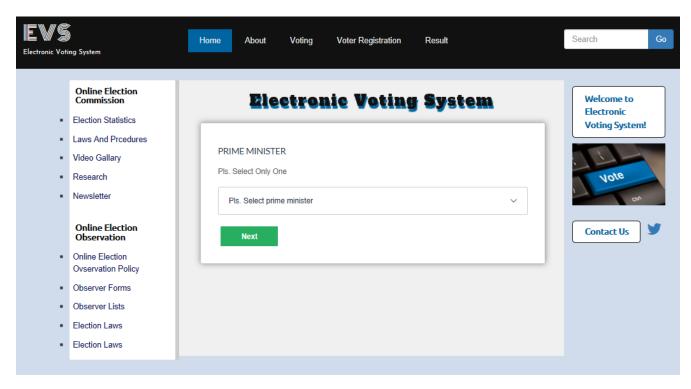
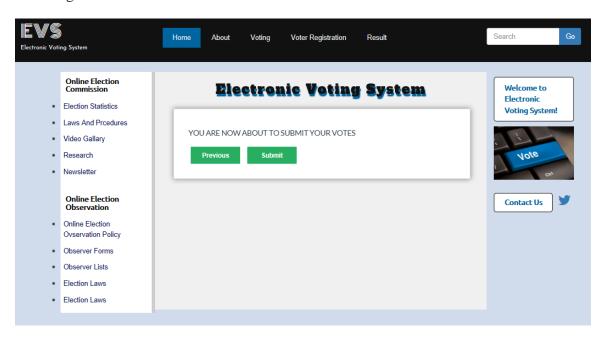


Figure 5.2.6: After registration

Selecting candidates:



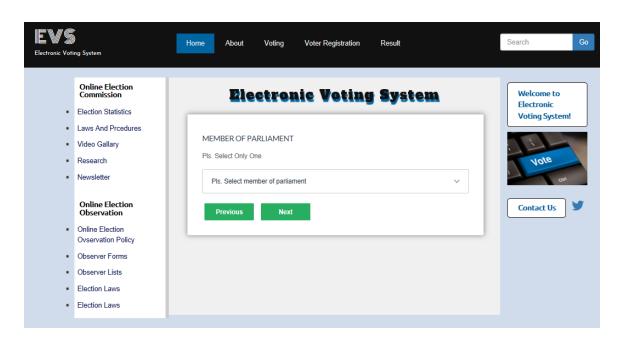


Figure 5.2.7: Selecting candidates

Final confirmation for selecting candidates:

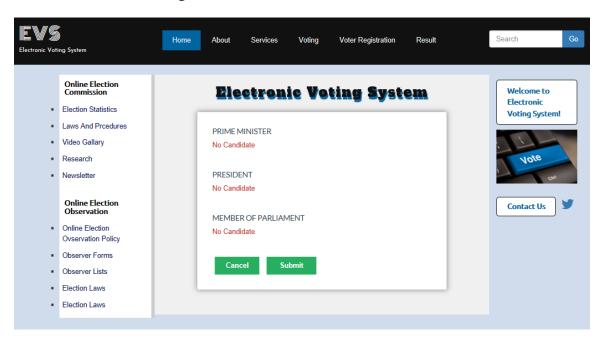


Figure 5.2.8: Finish selecting candidates

Complete voting:

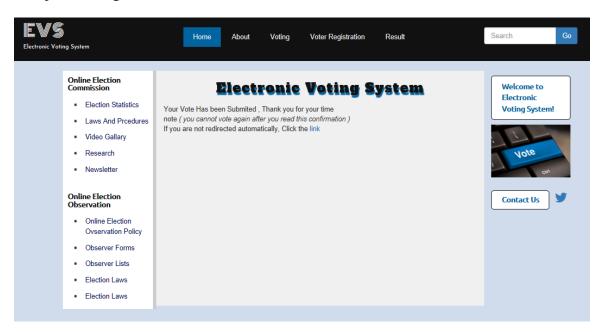


Figure 5.2.9: Complete voting

FAQ:

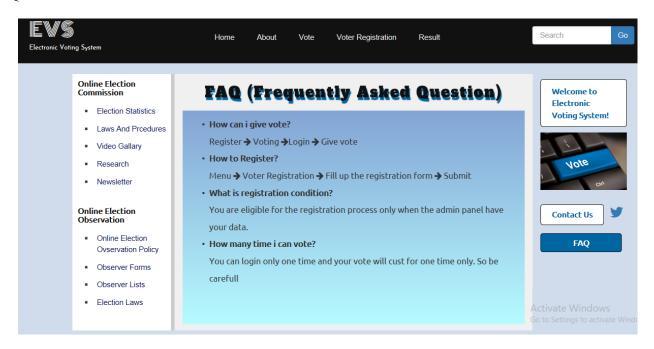


Figure 5.2.10: FAQ

Result:

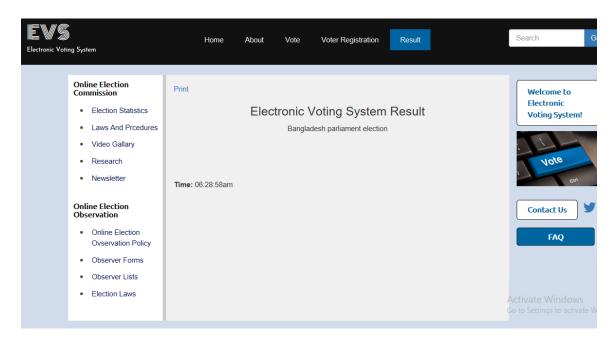


Figure 5.2.11: Result

5.3 Implementation of Interactions

Successfully registration:

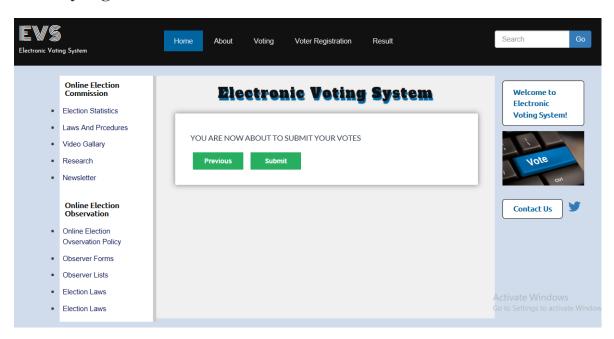


Figure 5.3.1: Successfully registration

Error registration:

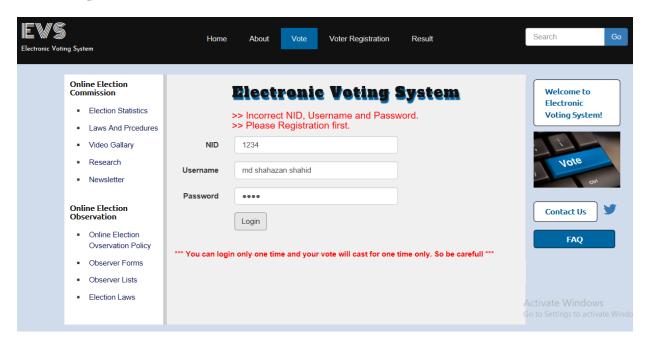


Figure 5.3.2: Error registration

5.4. Testing implementation

Test plan:

Table 5.4.1: Test plan

1.	To check whether the system starts properly.
2.	To check if the home page displays all navigation options.
3.	To check if the registration form correctly rendered.
4.	To check if an invalid input shows error message.
5.	To check if a valid registration successful.
6.	To check if registration successful voter can vote.
7.	To check if the registration form correctly rendered.
8.	To check if the invalid login input shows error message
9.	To check if the correct input registration successful.
10.	To check if the registration successful voter shows vote page.
11.	To check if the insert vote form shows error for invalid input.
12.	To check if the insert vote successful for valid input.
13.	To check if the admin can delete voter.
14.	To check if the admin can update voter id.
15.	To check if the admin can delete candidates.
16.	To check if the admin can update candidates information.
17.	To check if the user can see the result.
18.	To check if the admin can see the result.

Test:

Table 5.4.2: Test 1

Test case	system starts properly
Test objective	To check whether the system starts properly.
Test data	Start server and go to system URL.
Expected result	Homepage should display successfully.
Test result	Homepage displays successfully.
Conclusion	Expected result matches actual result.

Table 5.4.3: Test 2

Test case	home page displays all navigation options
Test objective	To check if the home page displays all navigation options.
Test data	Go to homepage.
Expected result	All navigation options should display.
Test result	Navigation options displays correctly.
Conclusion	Expected result matches actual result.

Table 5.4.4: Test 3

Test case	Registration form correctly rendered
Test objective	To check if the registration form correctly rendered.
Test data	Click the registration button.
Expected result	registration form should display correctly.
Test result	Displays signup form successfully.
Conclusion	Expected result matches actual result.

Table 5.4.5: Test 4

Test case	Invalid input shows error message
Test objective	To check if invalid information input shows error message.
Test data	Give some invalid inputs
Expected result	Should display error messages.
Test result	Displays error messages successfully.
Conclusion	Expected result matches actual result.

Table 5.4.6: Test 5

Test case	Admin can delete voter.
Test objective	To check if the admin can delete a voter.
Test data	Login from admin account and delete a voter.
Expected result	Should delete the user.
Test result	admin successfully deleted.
Conclusion	Expected result matches actual result.

Table 5.4.7: Test 6

Test case	Admin can update
Test objective	To check if the admin can update and delete questions.
Test data	View voter and candidate information.
Expected result	Should updates or delete the information.
Test result	Successfully updates or deletes the question.
Conclusion	Expected result matches actual result.

Table 5.4.8: Test 7

Test case	Voter can log out properly
Test objective	To check if the voter logout works correctly.
Test data	Click the logout link.
Expected result	Should log the user out.
Test result	Successfully logged out.
Conclusion	Expected result matches actual result.

Table 5.4.9: Test 8

Test case	Links can works
Test objective	To check if all the links work properly.
Test data	Click other links of the system.
Expected result	Should work properly.
Test result	Works properly.
Conclusion	Expected result matches actual result.

5.5 Test Results and Reports

Test results:

SL.NO	Test objective	Result
1.	To check whether the system starts properly.	Successful
2.	To check if the home page displays all navigation options.	Successful
3.	To check if the registration form correctly rendered.	Successful
4.	To check if a invalid input shows error message.	Successful
5.	To check if a valid registration successful.	Successful
6.	To check if registration successful voter can vote.	Successful
7.	To check if the registration form correctly rendered.	Successful
8.	To check if the invalid login input shows error message	Successful
9.	To check if the correct input registration successful.	Successful
10.	To check if the registration successful voter shows vote page.	Successful
11.	To check if the insert vote form shows error for invalid input.	Successful
12.	To check if the insert vote successful for valid input.	Successful
13.	To check if the admin can delete voter.	Successful
14.	To check if the admin can update voter id.	Successful
15.	To check if the admin can delete candidates.	Successful
16.	To check if the admin can update candidates information.	Successful
17.	To check if the user can see the result.	Successful
18.	To check if the admin can see the result.	Successful

Chapter 6

Conclusion and future Scope

6.1 Discussion and Conclusion

Now-a-days, modern technology has a great effect in our life. There are lot of technologies that are saving our time, giving more security and many more. My online election system in another example of technology which will save our time and ensures more security to our voting system. System with proper features and Security are required in this modern technology world. We have to come out with dynamic solutions and new features to fulfill the demand of this modern area.

6.2 Scope for Further Developments

I have developed my system considering a small voting. But there are more scopes of further development of this system. There are listed below-

- * Improve voter turnout
- * Voting integrity
- * Every type of vote
- * Election security

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- [11] Learn about PHP available at:<< https://www.w3schools.com/php/default.asp>>, last accessed on 4-8-2018 at 1:00pm.

[12] Learn more about PHP available at:

<< https://www.youtube.com/watch?v=v4SVKLTVNS8&list=PLTydW-y9HsbTHx5nDUZy6iKfnkFEqLb2F,>> last accessed on 4-8-2018 at 11:00am.

[13] Learn about Bootstrap available at:

<< https://www.w3schools.com/bootstrap/default.asp>> last accessed on 10-10-2018 at 10:00am.

[15] Learn more about Bootstrap available at :<< https://www.youtube.com/watch?v=--GXC-Hp43U&list=PLTydW-y9HsbRVSFe0cc7SoEhXFj95oRfh>>, last accessed on 10-10-2018 at 10:00am.

[16] Learn more about online election system available at:

<< https://en.wikipedia.org/wiki/Electronic voting>> , last accessed on 22-11-2018 at 10:00 am

APPENDIX

Appendix A: Project reflection

There are two types of users in the system. They are-

- * Admin
- * User

Admin can insert user and candidate. Admin can edit and update user and candidate profile. But candidate and user can't update and edit their profile. User vote the candidate. Candidate can't vote their self. User can view candidate profile.

Appendix B: Vote

The Online election system show in a web page. there are a option button vote. In vote option have candidate list and category. User can vote step by step. Finish the voting user are automatic go to the home page. Voter can print there vote confirmation.