

**VISUAL PROGRAMMING LAB**

**CSL 313**

**BSE 5A**

**FALL 2023**

**PROJECT REPORT**

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# Project Report: Online Voting System

## Project Overview

The Online Voting System is designed to streamline the voting process, making it more accessible and efficient. The primary objectives include providing a secure and user-friendly interface for both administrators and voters, ensuring the integrity of the voting process, and maintaining accurate records of candidate information.

## Methodology:

*Technologies Used:*

- **Programming Language:** C#
- **Database Management System:** Microsoft SQL Server
- **User Interface:** Windows Forms Application
- **Version Control:** Git

*Project Components:*

1. **Form1 (Main Menu):** Provides options for administrator and voter login.
2. **Form2 (Voter Registration):** Allows voters to register, capturing essential information and storing it in the database.
3. **Form3 (Admin Login):** Provides access to the admin interface for managing candidate approvals and voter requests.
4. **Form4 (Voter Login):** Allows registered voters to log in and cast their votes.
5. **Form5 (Admin Dashboard):** Displays pending voter requests with options to approve or reject them.
6. **Form6 (Voter Interface):** Enables voters to select candidates and cast their votes.
7. **Form7 (Admin Candidate Selection):** Allows admins to add candidates to the system.

## Results:

1. **User Registration and Authentication:** Implemented a secure user registration process, including proper validation and storage of voter information.

2. **Admin Dashboard:** Created an admin dashboard to manage pending voter requests, facilitating the verification process.
3. **Voter Interface:** Developed a user-friendly interface for voters to cast their votes, ensuring a smooth voting experience.
4. **Candidate Management:** Implemented functionality for admins to add candidates, including uploading candidate images and associating them with specific constituencies.

## Challenges Faced:

1. **Database Integration:** Connecting and managing the SQL Server database posed challenges initially, resolved through thorough debugging and testing.
2. **Data Validation:** Ensuring proper validation of user inputs to prevent invalid or malicious data entry.
3. **User Authentication:** Implementing a robust authentication system to secure both admin and voter logins.

## Conclusion and Future Work:

In conclusion, the Online Voting System project successfully achieves its primary goals of providing a reliable platform for voters to cast their votes and administrators to manage the election process efficiently. Future enhancements may include:

1. **Enhanced Security Features:** Implementing advanced encryption methods for sensitive data.
2. **Real-time Updates:** Introducing real-time updates on the voting status and candidate approvals.
3. **Usability Improvements:** Conducting user testing for further improvements in the user interface and experience.

## Git Repository:

<https://github.com/AyeshaMalik07/Project-Report.git>

## Uploaded Files:

1. Form1.cs
2. Form2.cs
3. Form3.cs
4. Form4.cs
5. Form5.cs
6. Form6.cs

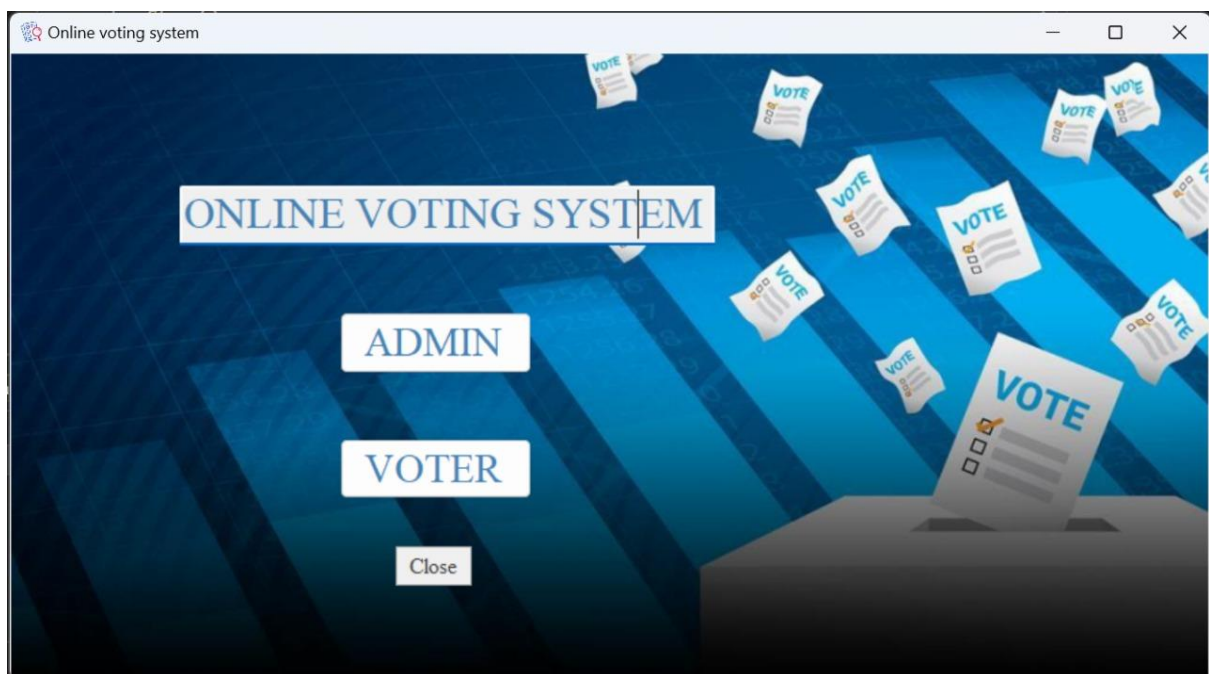
7. Form7.cs
8. Project Report

## Version Control:

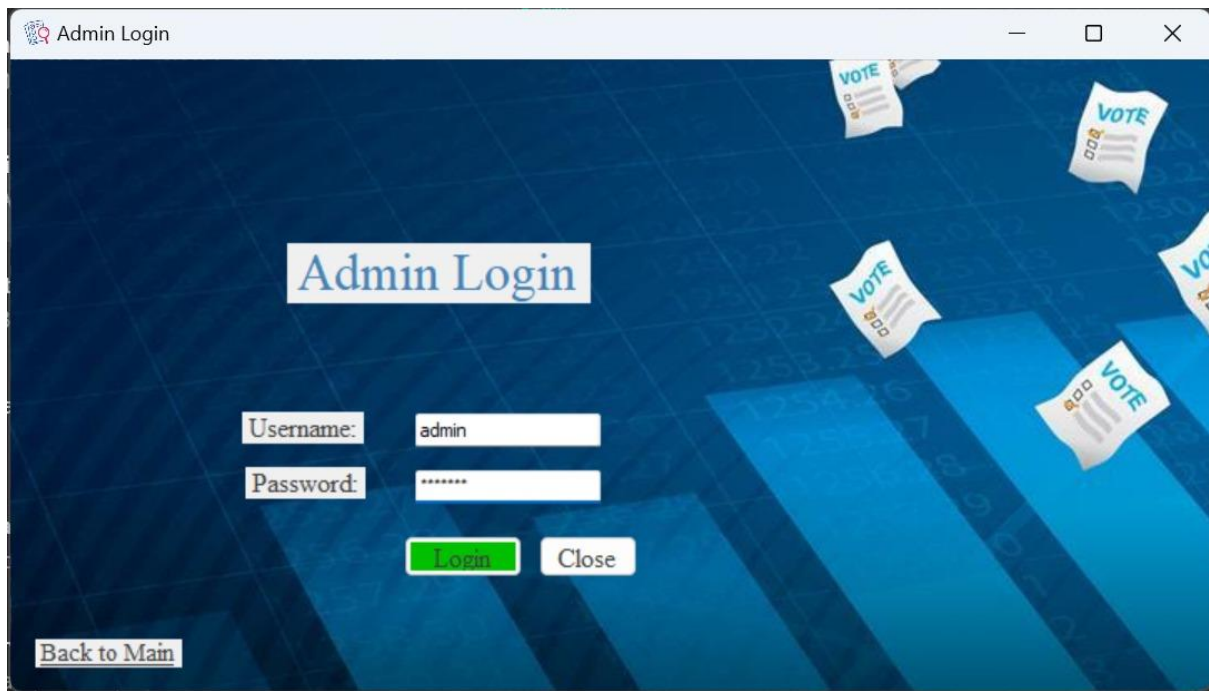
Commits are well-documented and follow a logical progression, detailing the implementation of each form and feature. Clear commit messages aid in understanding the project's evolution.

## Screenshots:

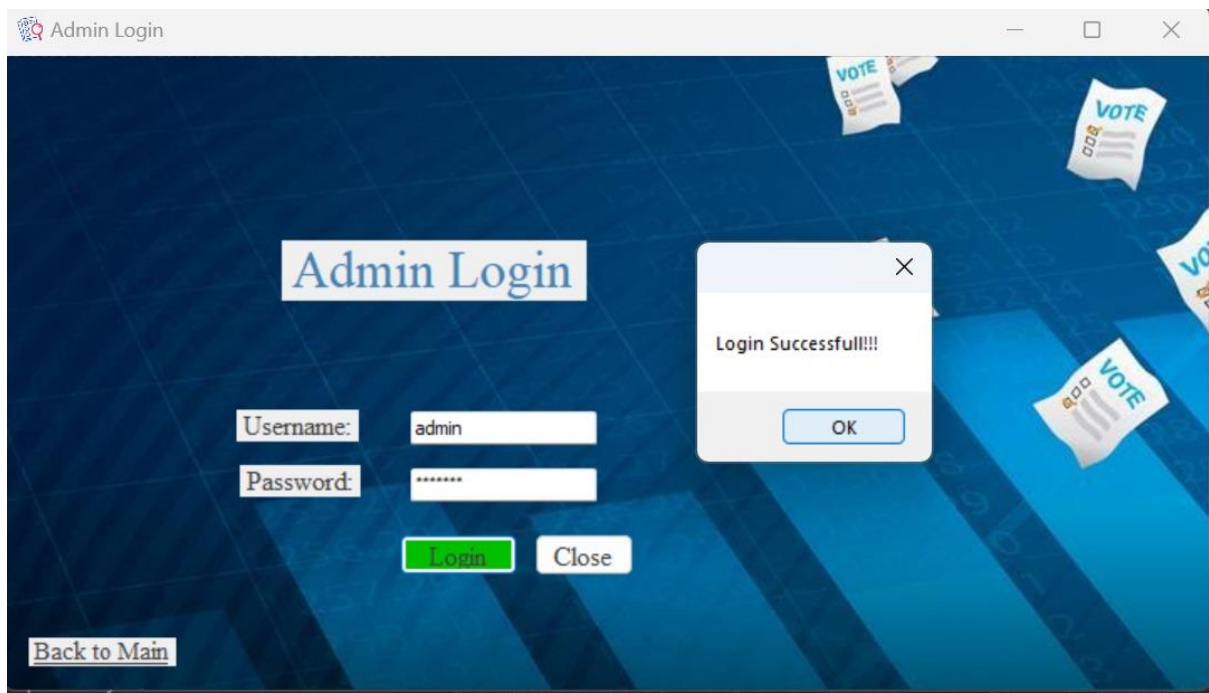
Main Menu:



## Admin Login:



A screenshot of a web application window titled "Admin Login". The window has a blue background with a grid pattern and several "VOTE" ballots floating on the right side. In the center, there is a white box with the text "Admin Login". Below this, there are two input fields: "Username:" with the value "admin" and "Password:" with the value "\*\*\*\*\*". To the right of these fields are two buttons: a green "Login" button and a white "Close" button. At the bottom left, there is a link labeled "Back to Main".



A screenshot of the same "Admin Login" window, but with a small dialog box open in the center-right. The dialog box has a title bar with a close button (X) and contains the text "Login Successfull!!!" (note the typo). Below the text is an "OK" button. The background of the window remains the same as in the previous screenshot.

### Candidate:

Candidates

Choose

Constituency Candidate Name Party

NA-71 Nawaz Sharif PMLN

Add

Back Main Menu

### Voter Login:

Voter Login

CNIC

6110165520146

Password

\*\*\*\*\*

Login Cancel

Not Registered?

Back to Main

Ayesha Malik  
6110165520146  
NA-47

OK



## Voter Registration:

The screenshot shows a web browser window titled "Registration". The background is a blue geometric pattern with floating "VOTE" papers. The registration form includes the following fields and options:

- First Name:** Somana
- Last Name:** Maqsood
- CNIC:** 422011759976
- Email:** somanamaqsood03@gmail.com
- Password:** (masked with asterisks)
- Day:** 1
- Month:** Apr
- Year:** 2003
- Gender:** ☐ Male ☒ Female
- State/Province:** Punjab
- Division:** Rawalpindi
- Agency:** (dropdown menu)
- Agree to Terms and Conditions:** ☒
- Buttons:** "Back to Main" (blue), "Register" (green), "Already Registered?" (blue)

A modal dialog box is displayed in the center with the text "Request sent for Verification" and an "OK" button.

## Voter Interface:

The screenshot shows a web browser window titled "Vote". The background is a blue geometric pattern with floating "VOTE" papers. The voter interface displays the following information and options:

- Voter Name:** Somana Maqsood
- Consititency:** NA-57
- CNIC:** 422011759976
- Party Selection:**
  - PMLN:** ☐ Nawaz Sharif
  - PTI:** ☐ Imran Khan
  - PPP:** ☐ Asif Zardari
- Buttons:** "Back to Main" (blue), "VOTE" (green)

Each party selection option includes a small portrait photo of the party leader.

Vote

Voter Name  
Somana Maqsood

Consitituency  
NA-57

CNIC  
422011759976

  
PMLN  
☐ Nawaz Sharif

  
PTI  
☒ Imran Khan

  
PPP  
☐

[Back to Main](#)

[VOTE](#)

Vote Registered Successfully!!!

OK

Voters

	Division	District	Constituency	Actions
al ...	Islamabad	Islamabad	NA-46	<a href="#">Remove</a>
▶	Rawalpindi	Rawalpindi	NA-57	<a href="#">Remove</a>
•				

[Back to Main](#)

[Go to Candidates](#)

Voter Approved!!!

OK