NEXT GEN EMPLOYABILITY PROGRAM

Creating a future-ready workforce

Team Members

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CAPSTONE PROJECT SHOWCASE

Project Title

Voting Application using Django Framework

Abstract | Problem Statement | Project Overview | Proposed Solution | Technology Used | Modelling & Results | Conclusion

Abstract

Django for Secure Online Voting :

This presentation explores building secure online voting applications with Django, a powerful Python web framework. We'll showcase:

- Rapid Development
- Secure Voting
- Scalability

Explore user registration, voting security, and administrative controls. See how Django creates secure online voting systems.

Problem Statement

Developing a secure question-answer platform with Django poses challenges in:

- Ensuring data integrity
- Safeguarding user confidentiality
- Addressing scalability concerns

The challenge is to:

- Create a secure question-answer platform using Django
- Facilitate seamless user engagement
- Implement robust security measures
- Scale effectively to accommodate increasing user interactions

Project Overview

Title : Voting Machine with Django

Developer : Nelviesh Willson A

Objectives : Develop secure online voting with Django, ensuring integrity, scalability, and trust.

Structure : Setup, Authentication, Poll Management, Voting Interface, Results.

Materials : Django, database, HTML/CSS, Python.

Outcome : Secure, scalable system, showcasing Django expertise.

Proposed Solution

Solution Overview:

- Develop a web-based voting application using Django framework.
- Implement secure user authentication and authorization.
- Create an intuitive user interface for casting votes securely.
- Ensure data integrity and confidentiality throughout the voting process.
- Utilize Django's robust features for scalability and administrative control.

Speaker Notes:

Our proposed solution is to develop a secure online voting system using Django:

- Django offers rapid development capabilities, enabling us to build the system efficiently. Its built-in features for authentication, database management, and templating simplify development.
- Implementing robust security measures, such as encryption, authentication, and access controls, ensures data integrity and confidentiality throughout the voting process.
- Leveraging Django's scalability capabilities, we can design the system to handle large voter bases and accommodate increasing user interactions seamlessly.

Technology Used

Front-end

Back-end

Modelling & Results

Modelling :
System Architecture:

- Client-server architecture with Django as the backend framework.
- Database schema for storing user data, polls, and voting results.
- Frontend interface using HTML/CSS for user interaction.

Results :

- Response time: Measure system responsiveness to user actions.
- Scalability: Assess system's ability to handle increasing user loads.
- Security: Evaluate effectiveness of security measures in protecting user data.

Homepage

Key Elements:

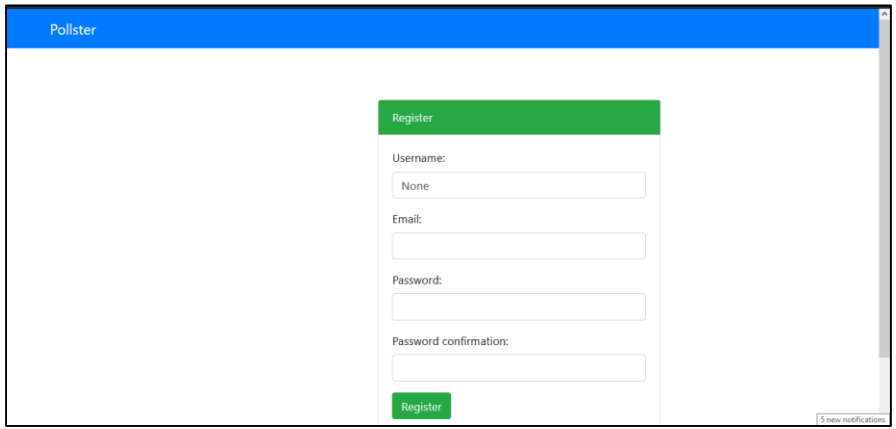
- User login and registration options.
- "Add Question" and "Add Choices" buttons for all registered users.
- Featured polls for upcoming elections.
- Navigation menu for easy access to different sections, including admin panel (Admin only).

Speaker Notes:

- Homepage emphasizes interaction.
- All registered users can contribute questions and choices.
- Admin-exclusive features restricted to administrators.

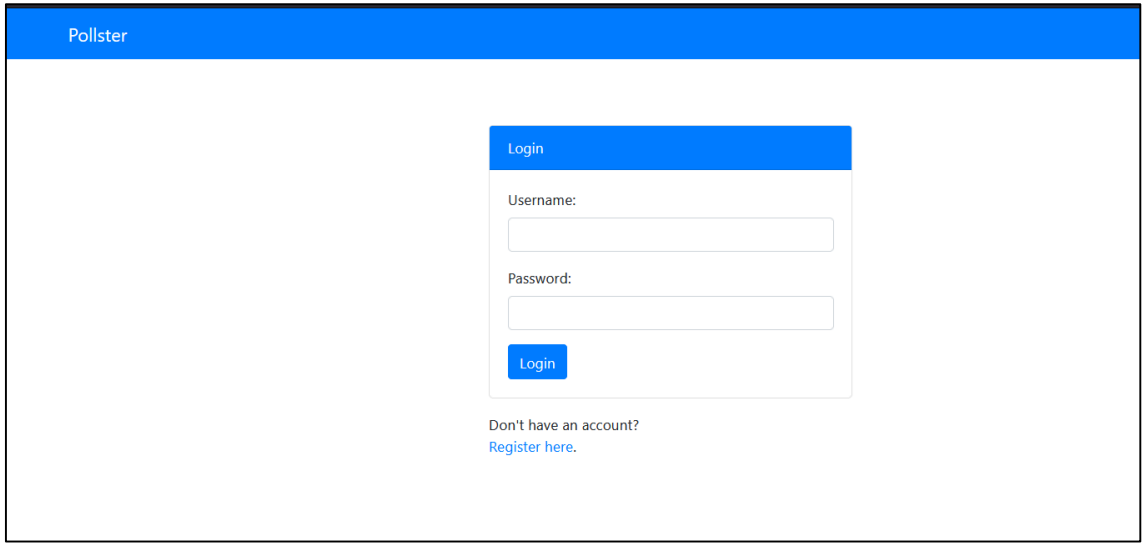
Registration Page :

- New users sign up to join the community.
- **Form :** Users enter username, email, and password.
- **Benefits :** Access exclusive content, personalized features.
- **Encouragement :** Emphasize value of joining.



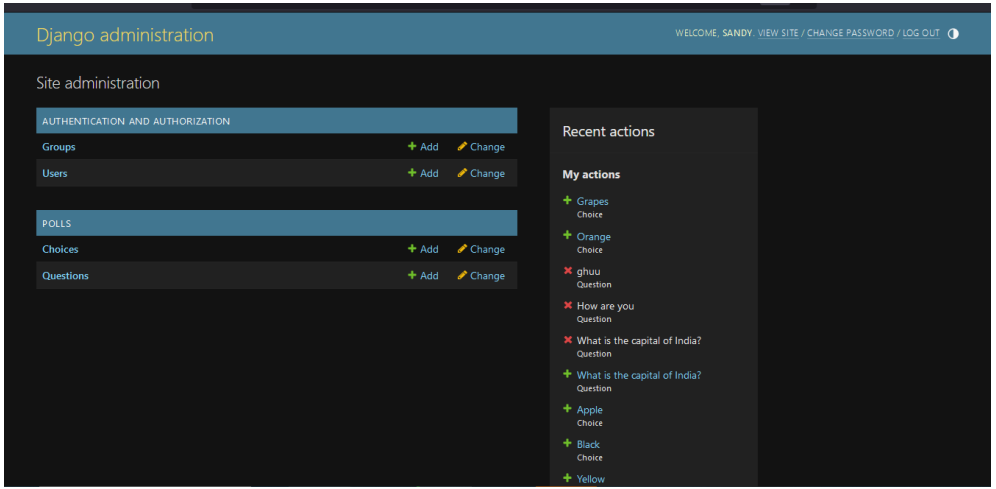
Login Page :

- Gateway for secure account access.
- Users enter credentials for authentication.
- Emphasize security: Encryption, authentication.
- Crucial for account integrity and confidentiality.



Admin Page

- Backend access for website management.
- **Tasks:** Content, user, and site management.
- **Importance:** Maintaining integrity, managing interactions, ensuring compliance.
- **Empowerment:** Customizing site for community needs, ensuring smooth operation.



Blog Page

Functionality : Users contribute by adding questions and choices.

Admin Privileges : Only administrators add users and groups.

Special Login : Users access enhanced features.

Speaker Notes:

- Blog page enables community interaction.
- Users add questions and choices.
- Admins manage users and groups.
- Special login grants users enhanced features.

Future Enhancements:

Enhanced Profiles: Personalize with avatars and bios.

Voting Analytics: Insights into user trends.

Community Forums: Facilitate user interaction.

Mobile App: Extend accessibility.

Speaker Notes:

- Enhance profiles for personalization.
- Provide voting analytics for insights.
- Add community forums for interaction.
- Develop a mobile app for wider accessibility.

Conclusion :

Title: Advancing Online Voting

Recap : Highlight key features and benefits.

Commitment: Promise ongoing improvements.

Engagement: Encourage user participation.

Appreciation: Thank users for their support.

Speaker Notes:

- Encourage user engagement and contributions.
- Express gratitude for user support in building a stronger platform.

Thank You!