NEXT GEN EMPLOYABILITY PROGRAM

Voting Application Using Django Framework

Team Members

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College Name

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CAPSTONE PROJECT SHOWCASE

Project Title

Voting Web Application using Django Framework

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

Abstract

In the realm of web development, the Django framework stands as a formidable tool for crafting dynamic and feature-rich applications. Django's robust ecosystem accelerates development through its "batteries included" approach, providing built-in solutions for common tasks like authentication and database management. The framework's Object-Relational Mapping (ORM) simplifies database interactions, enhancing productivity while ensuring security through its in-built protection mechanisms.

Source :

Problem Statement

Theproblemstatementfora votingapplication usingDjangoframeworkwould beto developa web-basedplatformwhereuserscan createpolls,vote on existingpolls, and view resultsin real-time. Theapplicationshouldensuresecurity, scalability, and user-friendlyinterfacewhile allowing forcustomizationand flexibility in poll creation and management.

Source :

Project Overview

- With a focus on user engagement and transparency, the application's key features include robust user authentication and registration functionalities, ensuring secure access to the voting platform.

1.project structure
2.Authentication
3.poll creation
4.voting
5.Result display
6.Admin panel
7.security
8.User experience
9.Scalability
10.Testing&deployment

Source :

Proposed Solution

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1.Setup beginning project:

beginup creating new Djangoprojectusing the `django-admin`command-lineutility.

2.DefineModels:

define model structure are voting application.Forexample,you might have modelsforUsers,Polls,Choices,and Votes.

3. AdminInterface:

Utilize Django’sadmin interfaceto managethe data models.Thisallows administratorsto add, edit,and deletepolls,choices,and userseasily.

Source :

Result and display:

templates to display the resultsofthe pollsto users.You can use charts or graphs to visualize the data if needed.

Testing:

Horoughlytest your application to ensurethat it works as expectedandhandlesedge l Asesgracefully.

Deployment:

Deploy your Djangoapplicationto a webserveror cloudplatformsothat userscan access it online.Throughoutthe developmentprocess,adheretobestpracticessuchas following the Djangoprojectstructure, writing cleanand readablecode,and applyingsecurity measuresto protectuserdata. Additionally,considerscalability and performapnceoptimizationsas your application grows.

Source :

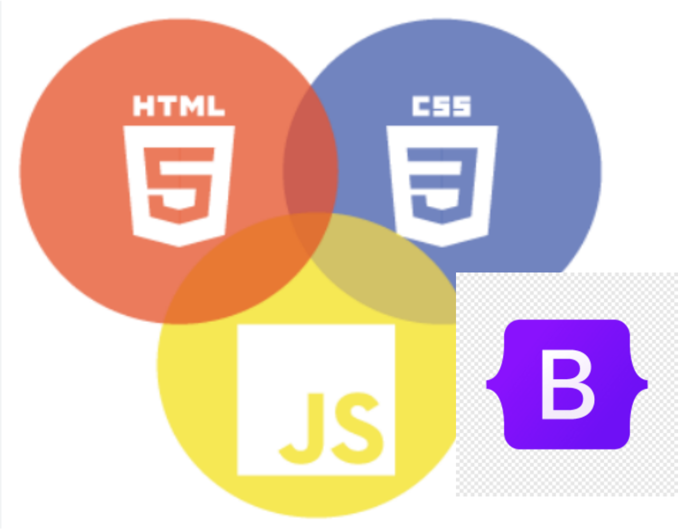
Advantages:

- **Efficiency: Utilizing the Django framework allows for rapid development of the voting application, thanks to its built-in features and conventions. This accelerates the development process and reduces time-to-market.**
- **Security: Django incorporates security features by default, such as protection against common web vulnerabilities like SQL injection and cross-site scripting (XSS). Additionally, Django's authentication system helps in securely managing user accounts and permissions.**
- **Community Support: Django has a large and active community of developers who contribute to its ecosystem. This ensures the availability of extensive documentation, third-party packages, and community support, making it easier to troubleshoot issues and implement new features.**

Source :

Technology Used

Front-end



Back-end

python™
django

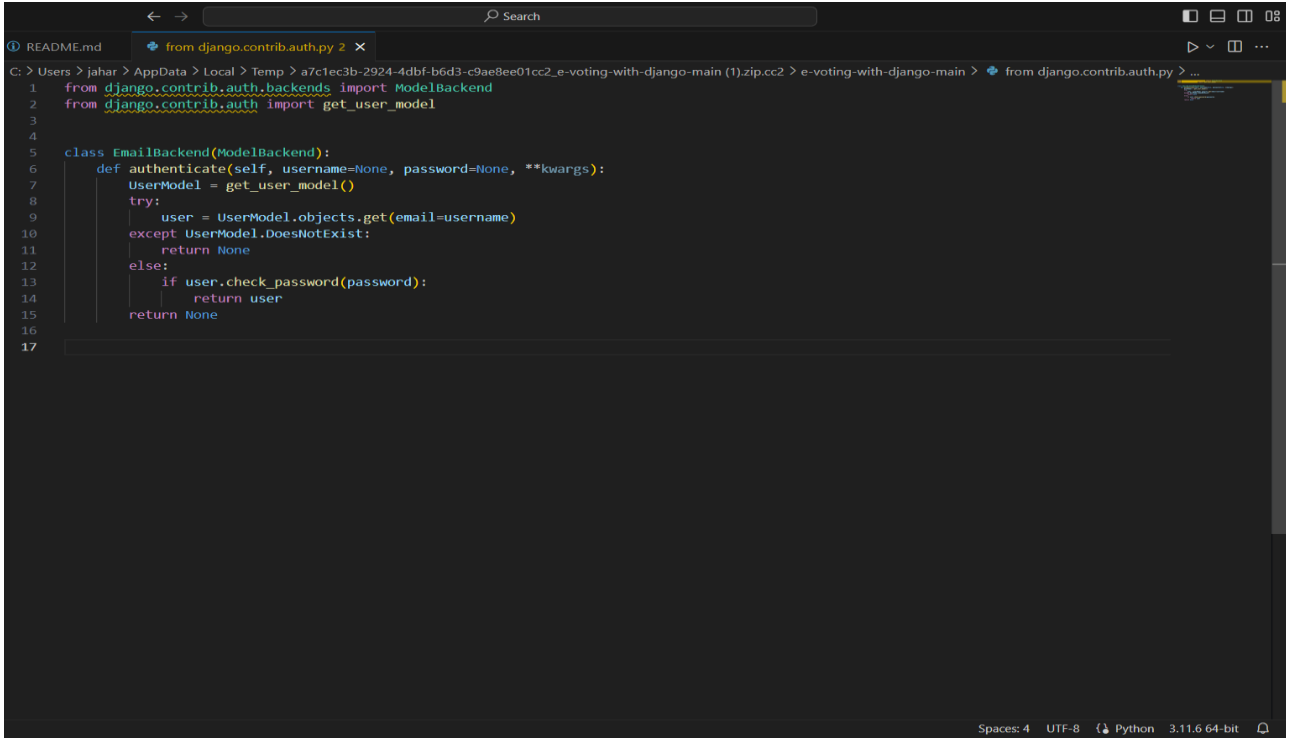
Source :

Modelling & Results

- In developing a voting application using Django, meticulous attention is directed towards both modeling the underlying data structure and effectively presenting the voting results to users.
- Through Django's model system, the application's data architecture is meticulously crafted, typically featuring models like Question and Choice to represent the polls and available choices.
- Once users have participated in the voting process, conveying the results to them becomes paramount.
- Furthermore, the application may utilize charting libraries or custom visualization techniques to elucidate the distribution of votes across different options, offering users valuable insights into the voting process's outcome.

Source :

Homepage



Search
README.md
from django.contrib.auth.py 2
C: > Users > jahar > AppData > Local > Temp > a7c1ec3b-2924-4dbf-b6d3-c9ae8ee01cc2_e-voting-with-django-main (1).zip.cc2 > e-voting-with-django-main > from django.contrib.auth.py > ...
Spaces: 4
UTF-8
Python
3.11.6 64-bit

```python
from django.contrib.auth.backends import ModelBackend
from django.contrib.auth import get_user_model


class EmailBackend(ModelBackend):
    def authenticate(self, username=None, password=None, **kwargs):
        UserModel = get_user_model()
        try:
            user = UserModel.objects.get(email=username)
        except UserModel.DoesNotExist:
            return None
        else:
            if user.check_password(password):
                return user
        return None

```

About-Us-Page

1.Credibility:

The "About Us" page establishes credibility by providing information about the organization's history, mission, and team members

2.Mission and Values:

It communicates the organization's mission, values, and objectives in promoting democratic participation and decision-making.

3. Community Engagement:

The page showcases the organization's commitment to community engagement and empowerment through the voting process, inspiring active participation.

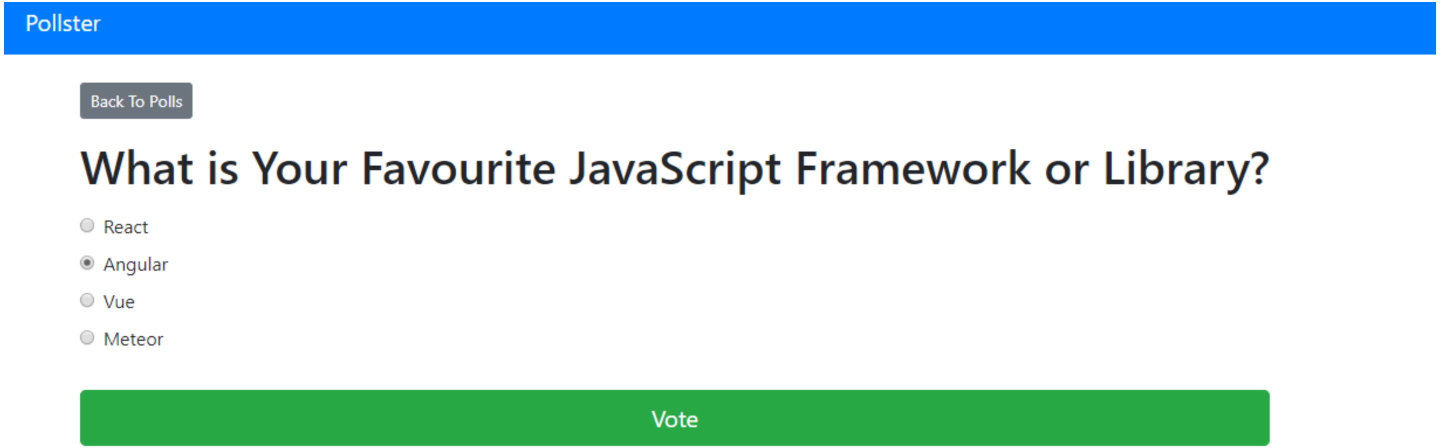
Service-Page

1. Header Section
2. Introduction section
3. User Services
4. Administrator Services
5. Organizational Services
6. Technical Services
7. Consulting Services
8. Call to Action Services

Departments-Page

- Header Section
- Introduction Section
- Department Listings
- Department Details
- Key Personnel
- Collaboration Opportunities
- Footer Section

Blog-Page



What is Your Favourite JavaScript Framework or Library?

○ React

● Angular

○ Vue

○ Meteor

Future Enhancements:

- One promising direction is the integration of advanced analytics tools, enabling administrators to glean deeper insights into voting behaviors, demographic trends, and predictive modeling for future electoral outcomes.
- Furthermore, the incorporation of social media integration could amplify user engagement by allowing participants to share their voting activities and poll results seamlessly across popular platforms, fostering a wider reach and encouraging community involvement.
- Real-time collaboration features offer another avenue for enhancement, empowering teams or committees to collaboratively create and refine polls, enhancing decision-making processes.

Conclusion

In conclusion, the development of the voting application using the Django framework has provided a solid foundation for facilitating democratic participation and decision-making processes. Through meticulous modeling of the data structure and thoughtful presentation of voting results, the application delivers a seamless and transparent user experience. However, the journey does not end here. By embracing future enhancements such as advanced analytics, social media integration, real-time collaboration, and mobile accessibility, the application can evolve to meet the evolving needs of its users and administrators. Ultimately, the voting application stands as a testament to the power of technology in fostering civic engagement, empowering individuals, and upholding the principles of democracy.

Source :

Thank You!