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# NEXT GEN EMPLOYABILITY PROGRAM

| Creating a future-ready workforce

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# CAPSTONE PROJECT SHOWCASE

## Project Title

Voting Application using Django Framework-Shahul Hameed(4080,AEC)

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



## Abstract

The proposed voting application is a web-based platform that allows users to create and participate in online votes. The application is built using the Django framework, a popular and well-supported Python-based web framework that provides a robust foundation for building scalable and secure web applications . The application is also designed to be flexible and scalable, with a modular architecture that allows for easy customization and extension. This makes it suitable for a wide range of use cases, from small-scale internal votes to large-scale public elections . Overall, the proposed voting application is a secure, user-friendly, and flexible platform for conducting online votes. Its use of the Django framework ensures a robust and scalable foundation, while its focus on security and user experience makes it an ideal choice for a wide range of voting scenarios.

## Problem Statement

Online voting has become increasingly popular in recent years, with a growing number of organizations and governments turning to digital platforms to conduct elections and polls. However, online voting also presents a number of challenges, particularly in terms of security and integrity . Overall, the proposed voting application will address the challenges of security and integrity in online voting, while also providing a user-friendly platform for conducting online votes. Its use of the Django framework will ensure a robust and scalable foundation, while its focus on security and user experience will make it an ideal choice for a wide range of voting scenarios. In addition to its focus on security, the application will also prioritize user experience, with a clean and intuitive interface that makes it easy for users to create and participate in votes. The application will support multiple types of votes, including single-choice and multiple-choice votes, and will allow users to set deadlines and restrictions for each vote.

## Project Overview

The project overview for a voting application using the Django framework involves creating a secure and user-friendly online voting system. The application allows users to register, vote, and view real-time results. Here is a steps involved in building the voting application:

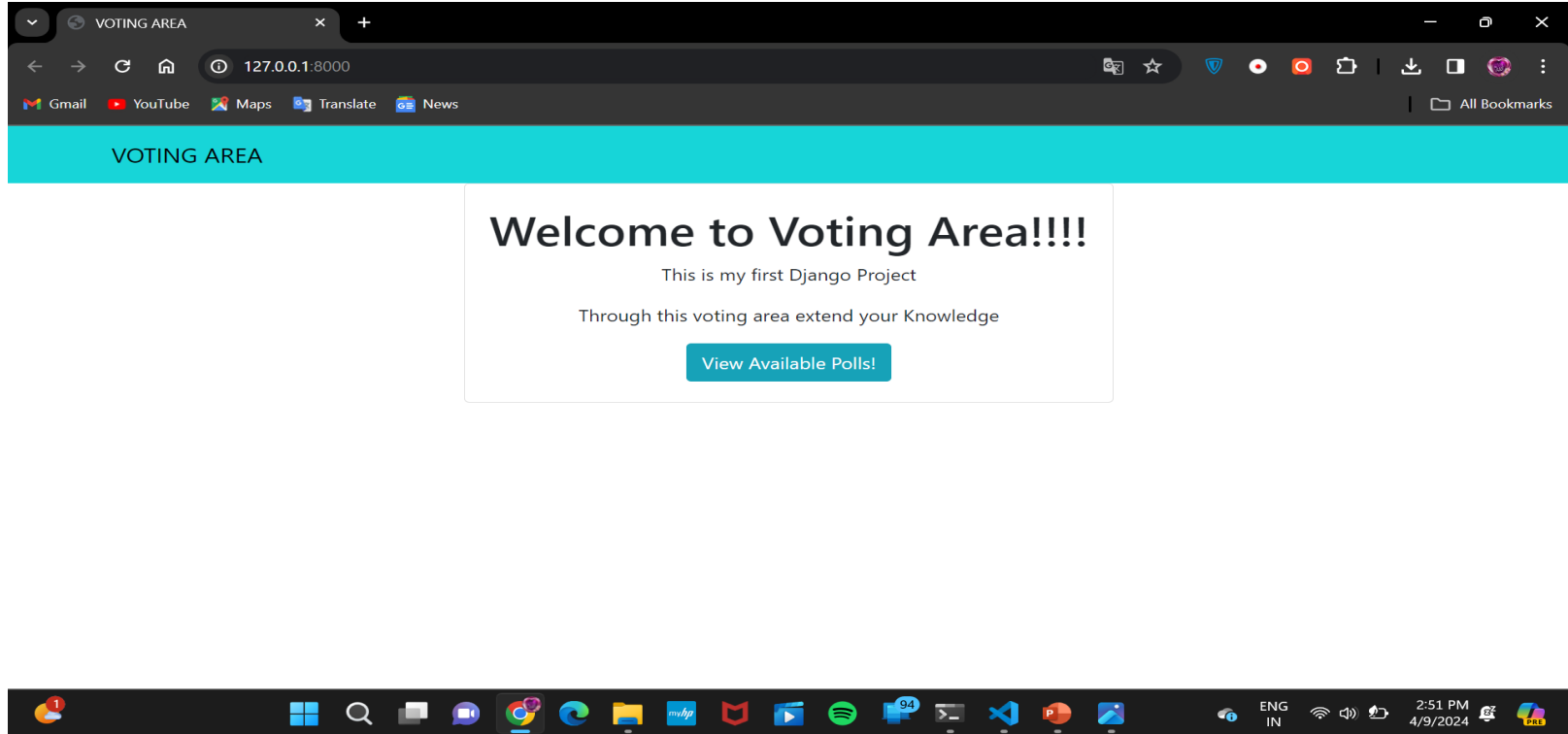
- 1.Setting up a Django Project:** Create a Django project to serve as the foundation for the voting application.
- 2.Designing the Database Schema:** Define the database structure to store user information, votes, and other relevant data.
- 3.Creating User Authentication:** Implement user authentication to allow users to register, log in, and participate in voting.
- 4.Building the Voting Interface:** Develop the interface where users can view options, select their choices, and submit votes.
- 5.Implementing Real-time Results:** Display the voting results dynamically to provide instant feedback to users.
- 6.Developing an Admin Panel:** Build an admin panel to manage the voting process, candidates, and user accounts effectively.

## Proposed Solution

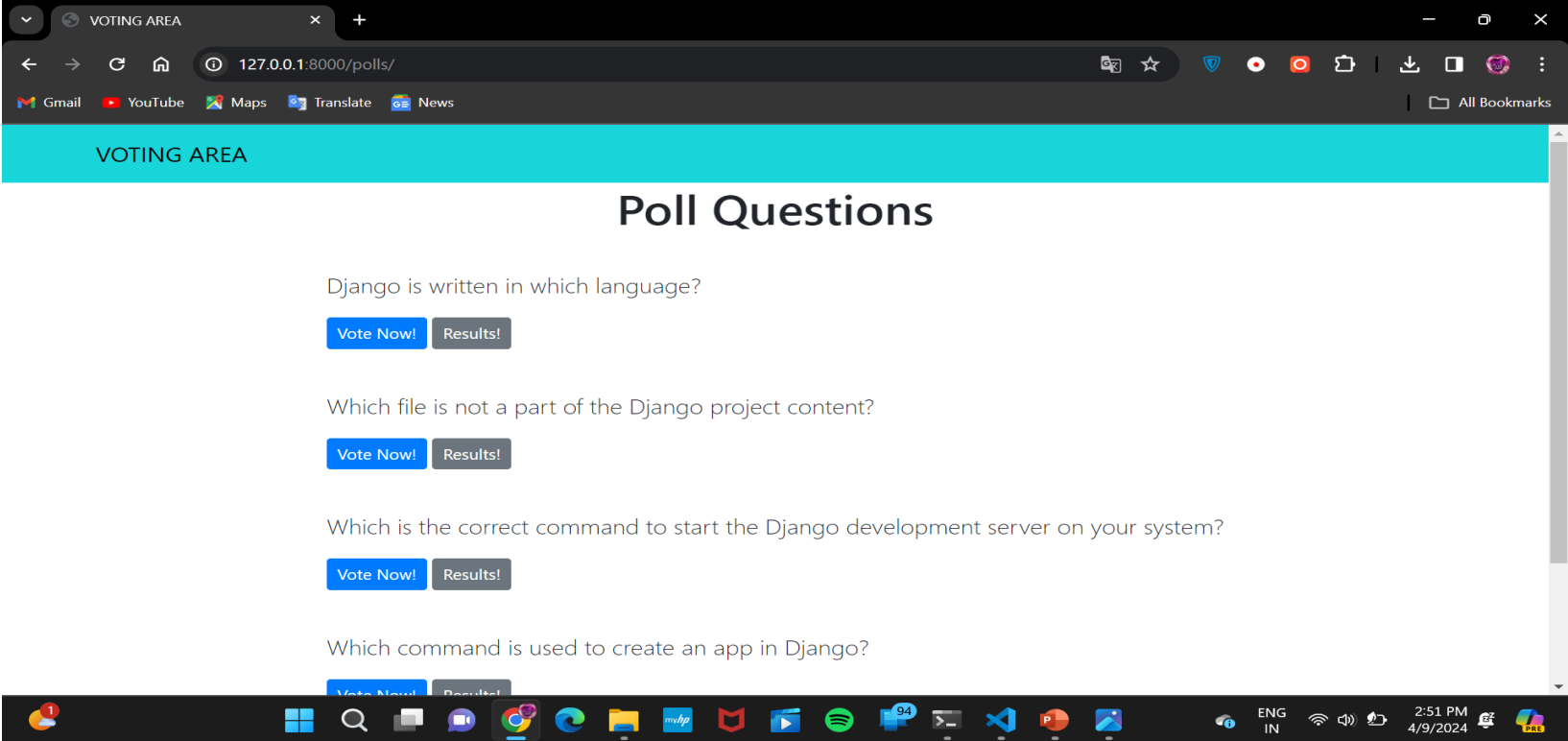
The proposed solution for a voting application using the Django framework is to create a secure and user-friendly online voting platform. The application will allow users to register, vote, and view real-time results. To build the application, the Django framework will be used as the foundation due to its robustness and scalability. The application will have a user-friendly interface, a secure database, real-time results, and an admin panel for efficient management of elections, candidates, and user accounts.

In summary, the proposed solution for a voting application using the Django framework is a secure, user-friendly, and flexible platform for conducting online votes. Its use of the Django framework ensures a robust and scalable foundation, while its focus on security and user experience makes it an ideal choice for a wide range of voting scenarios.

## Home Page



## Poll Page



The screenshot shows a web browser window with the address bar displaying `127.0.0.1:8000/polls/`. The page has a teal header with the text "VOTING AREA". Below the header, the main heading is "Poll Questions". There are four poll questions listed, each with a "Vote Now!" button and a "Results!" button.

**VOTING AREA**

### Poll Questions

Django is written in which language?

[Vote Now!](#) [Results!](#)

Which file is not a part of the Django project content?

[Vote Now!](#) [Results!](#)

Which is the correct command to start the Django development server on your system?

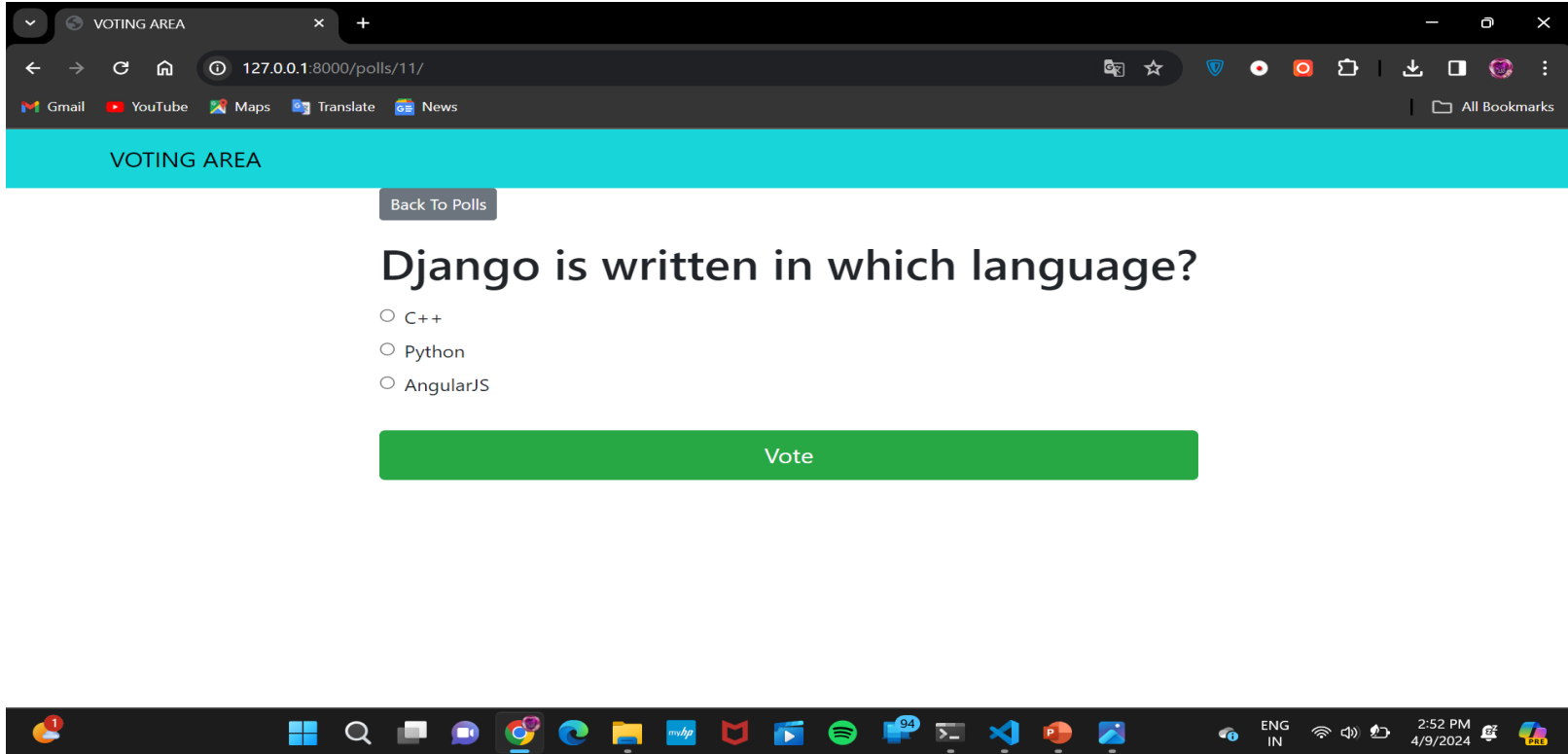
[Vote Now!](#) [Results!](#)

Which command is used to create an app in Django?

[Vote Now!](#) [Results!](#)



## Voting Page



The screenshot shows a web browser window with a single tab titled "VOTING AREA". The address bar displays the URL "127.0.0.1:8000/polls/11/". Below the browser window, a cyan banner reads "VOTING AREA". A grey button labeled "Back To Polls" is positioned above the poll question. The question is "Django is written in which language?". There are three radio button options: "C++", "Python", and "AngularJS". A large green button labeled "Vote" is at the bottom of the poll area. The Windows taskbar at the bottom shows various application icons, including Chrome, Edge, File Explorer, Mail, and a system tray with the date and time "2:52 PM 4/9/2024".

VOTING AREA

[Back To Polls](#)

Django is written in which language?

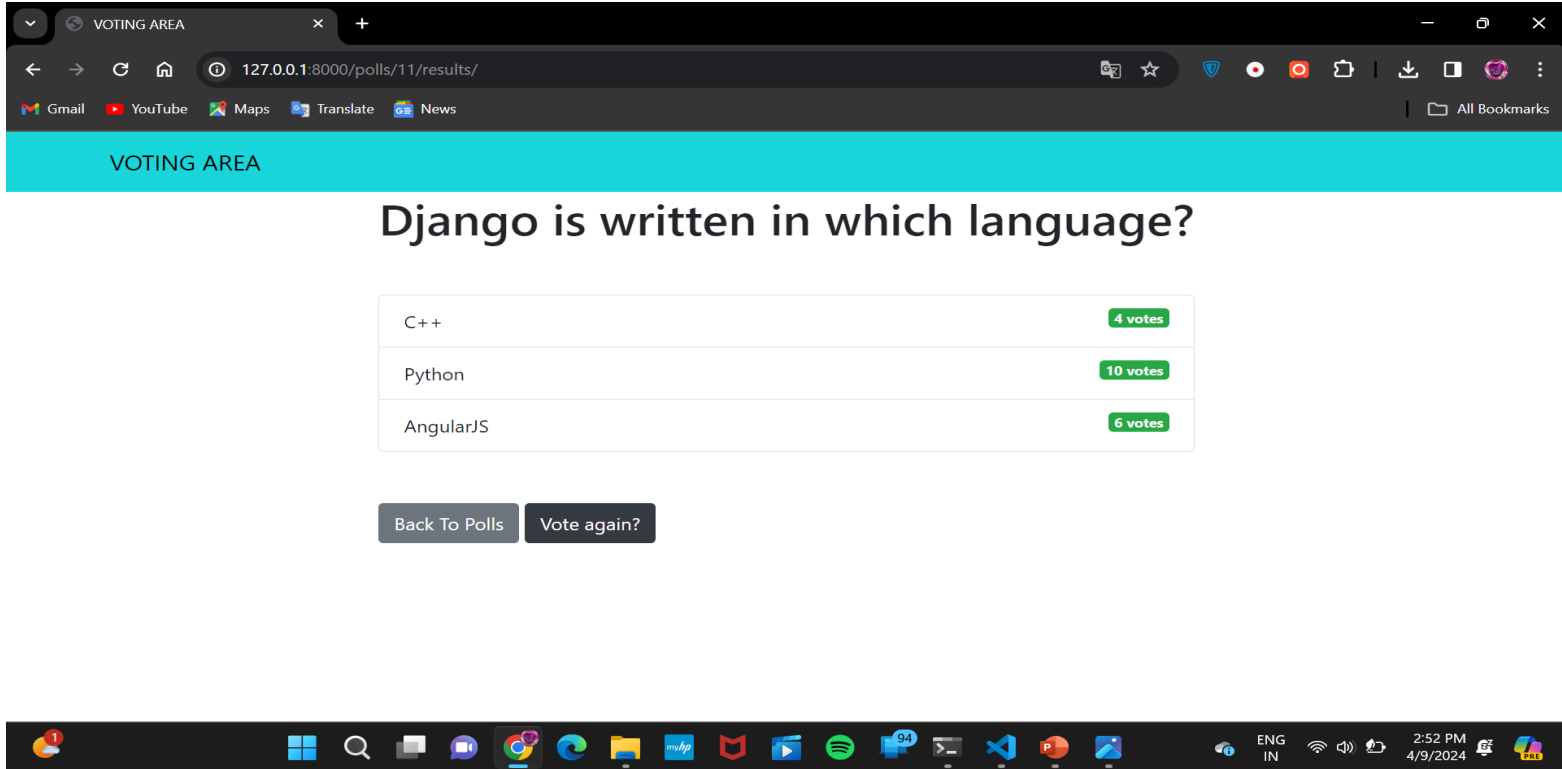
☐ C++

☐ Python

☐ AngularJS

[Vote](#)

## Voting Details Page

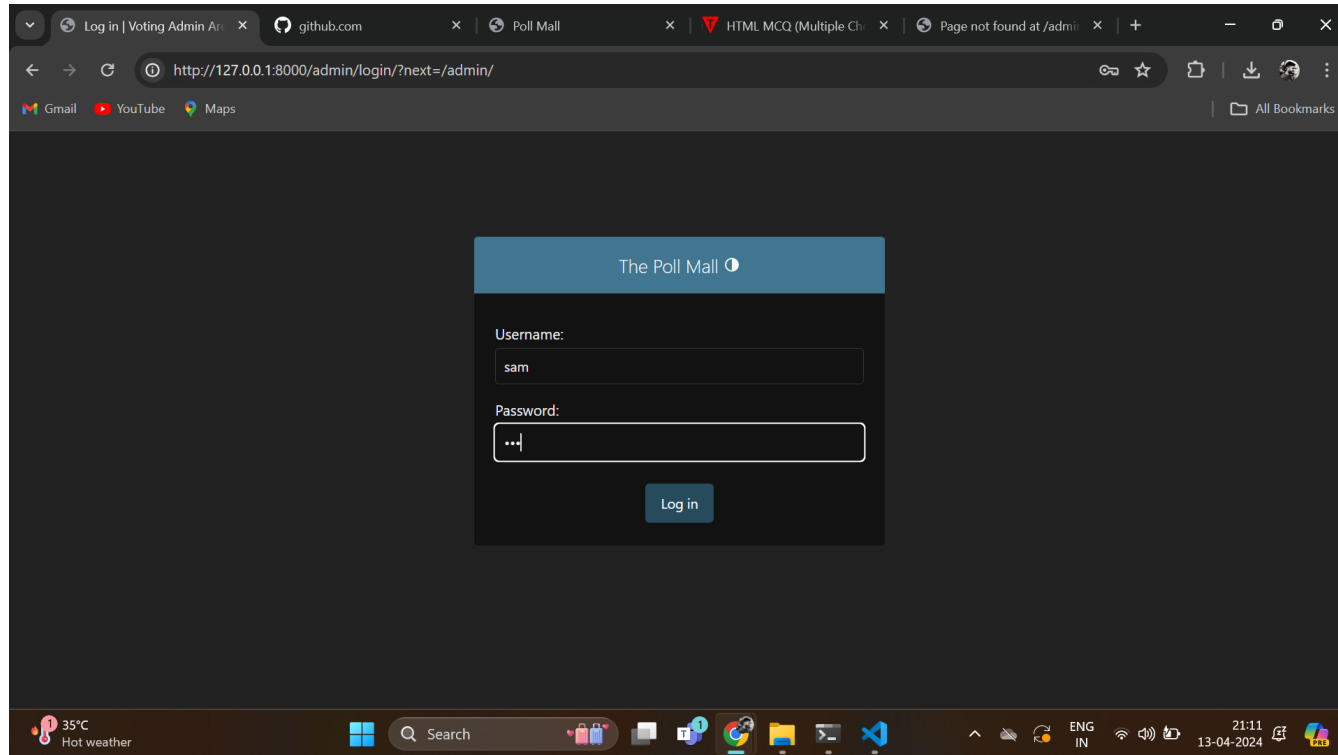


The screenshot shows a web browser window with the address bar displaying `127.0.0.1:8000/polls/11/results/`. The page has a teal header with the text "VOTING AREA". Below the header, the question "Django is written in which language?" is displayed. A table lists three options with their respective vote counts:

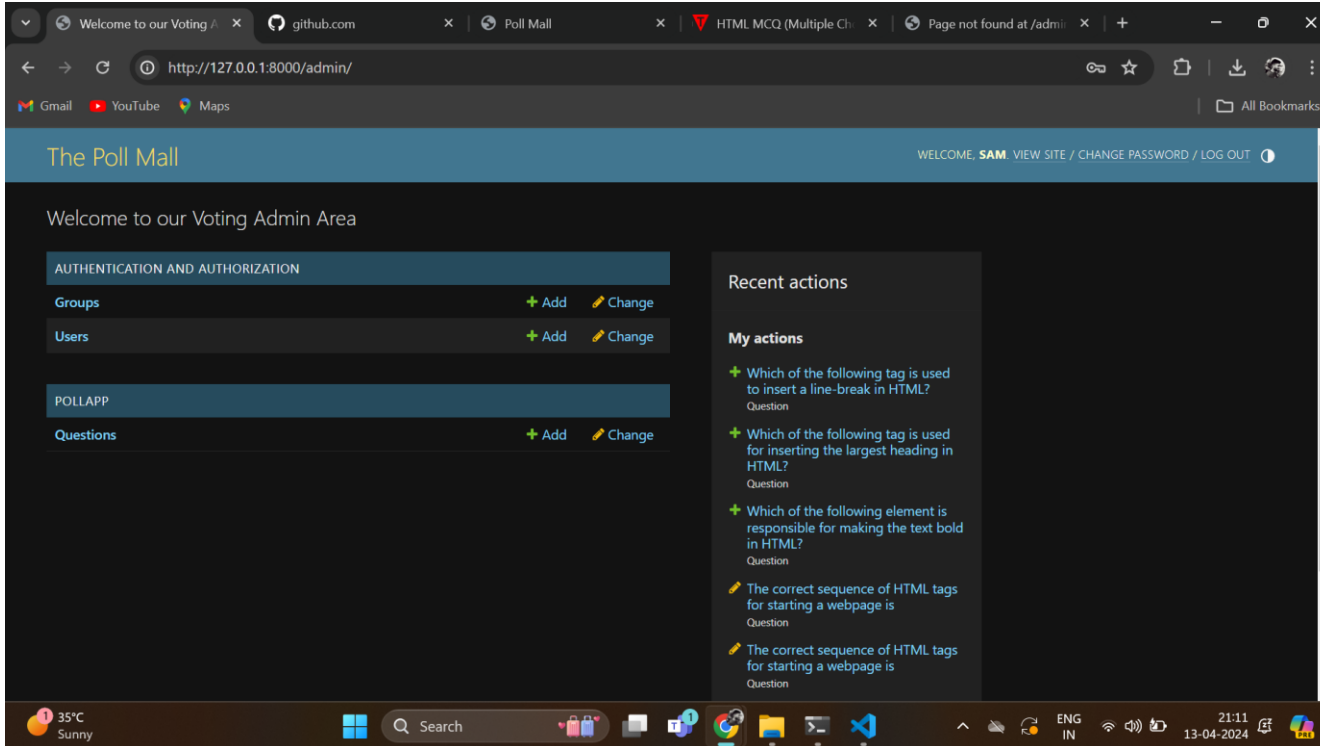
C++	4 votes
Python	10 votes
AngularJS	6 votes

At the bottom of the page, there are two buttons: "Back To Polls" and "Vote again?". The Windows taskbar at the bottom shows the time as 2:52 PM on 4/9/2024.

## Admin Login Page



## Admin Home Page



The screenshot displays the Admin Home Page of 'The Poll Mall' application, accessed via a web browser at the URL `http://127.0.0.1:8000/admin/`. The browser's address bar shows the URL, and the page title is 'The Poll Mall'. The user is logged in as 'SAM', with links for 'VIEW SITE', 'CHANGE PASSWORD', and 'LOG OUT' available in the top right corner.

The main content area is titled 'Welcome to our Voting Admin Area'. It features two primary sections for managing the application:

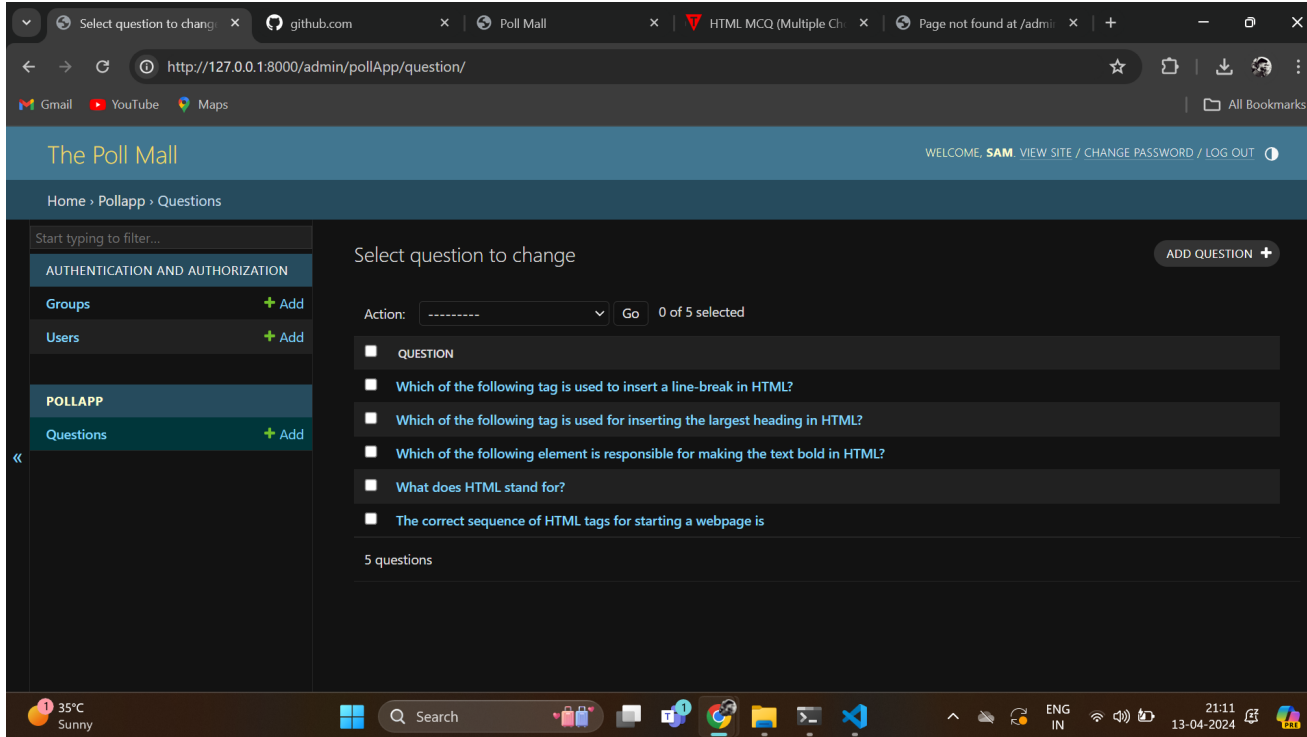
- AUTHENTICATION AND AUTHORIZATION**: This section includes two sub-sections: 'Groups' and 'Users'. Each sub-section has '+ Add' and 'Change' (indicated by a pencil icon) buttons.
- POLLAPP**: This section includes a 'Questions' sub-section, which also has '+ Add' and 'Change' (indicated by a pencil icon) buttons.

On the right side of the page, there is a 'Recent actions' section titled 'My actions'. It lists five actions, each with a green plus icon and a question text:

- + Which of the following tag is used to insert a line-break in HTML? Question
- + Which of the following tag is used for inserting the largest heading in HTML? Question
- + Which of the following element is responsible for making the text bold in HTML? Question
- + The correct sequence of HTML tags for starting a webpage is Question
- + The correct sequence of HTML tags for starting a webpage is Question

The bottom of the screenshot shows the Windows taskbar with the search bar, task view button, and various application icons. The system tray displays the temperature (35°C), weather (Sunny), and the date and time (21:11, 13-04-2024).

## Authentication and Authorization Page

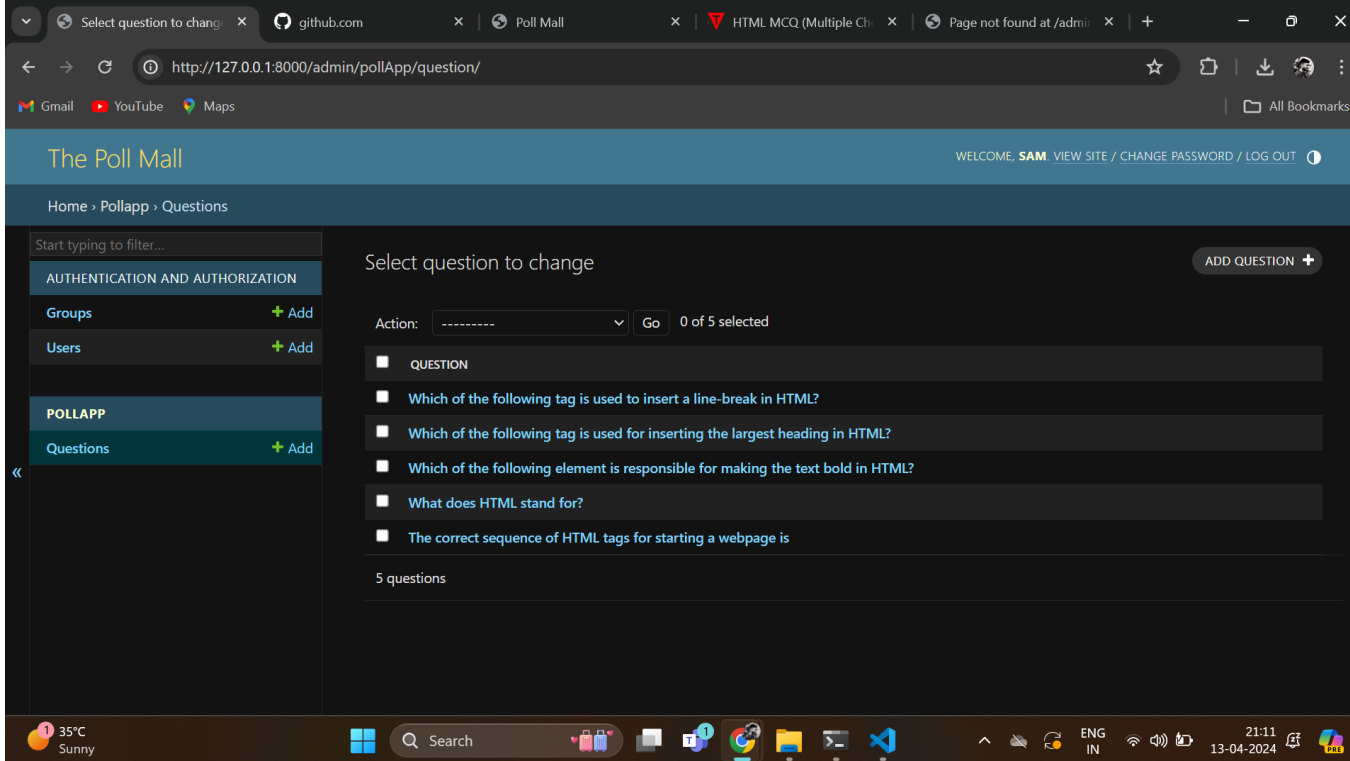


The screenshot shows a web browser window with the URL `http://127.0.0.1:8000/admin/pollApp/question/`. The page title is "The Poll Mall" and the user is logged in as "SAM". The navigation bar includes links for "HOME", "Pollapp", and "Questions". The main content area is titled "Select question to change" and features a sidebar with a search bar and a list of categories: "AUTHENTICATION AND AUTHORIZATION" (with sub-items "Groups" and "Users") and "POLLAPP" (with sub-item "Questions"). The "Questions" category is selected, displaying a list of 5 questions related to HTML. The questions are:

- Which of the following tag is used to insert a line-break in HTML?
- Which of the following tag is used for inserting the largest heading in HTML?
- Which of the following element is responsible for making the text bold in HTML?
- What does HTML stand for?
- The correct sequence of HTML tags for starting a webpage is

The bottom of the screen shows a Windows taskbar with the date and time "21:11 13-04-2024" and the weather "35°C Sunny".

## Questions Adding Section Page



The screenshot displays a web browser window with the URL `http://127.0.0.1:8000/admin/pollApp/question/`. The page title is "The Poll Mall" and the user is logged in as "SAM". The navigation bar includes links for "VIEW SITE", "CHANGE PASSWORD", and "LOG OUT".

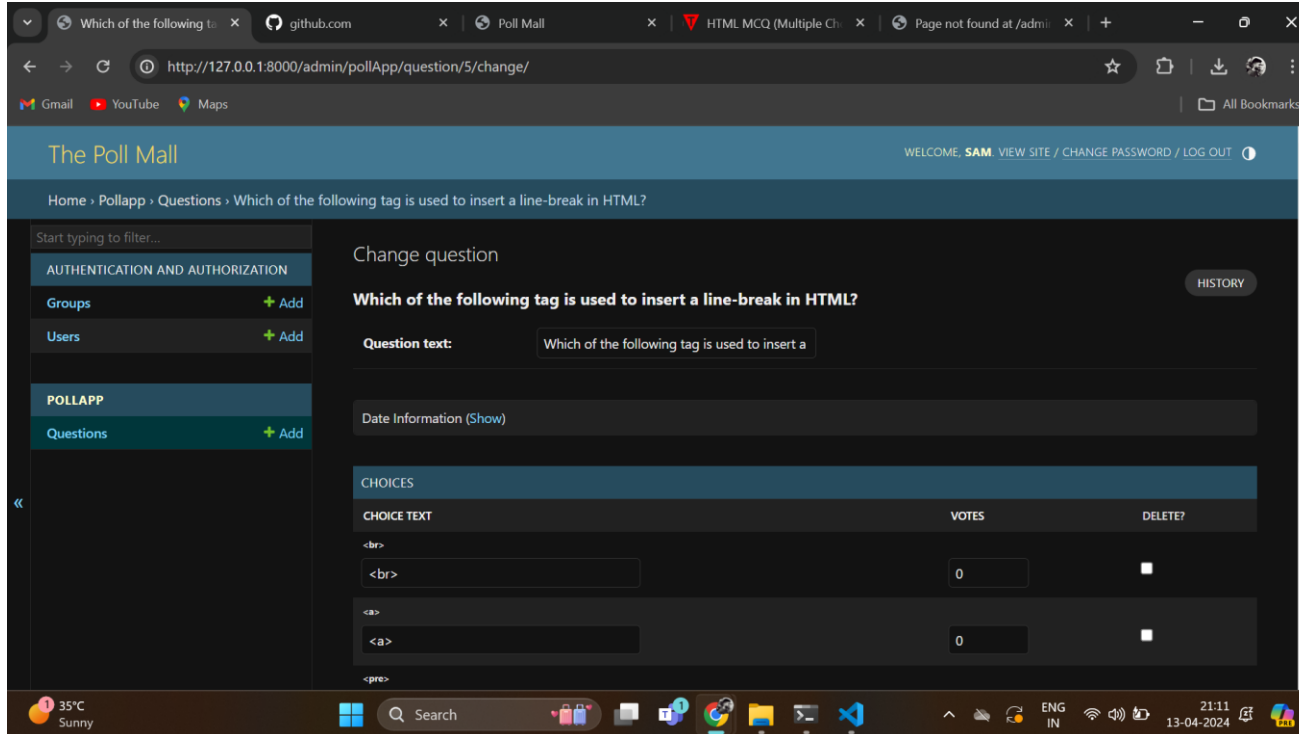
The main content area is titled "Select question to change" and features a search bar with the placeholder text "Start typing to filter...". Below the search bar, there are two sections: "AUTHENTICATION AND AUTHORIZATION" and "POLLAPP". The "POLLAPP" section is expanded, showing a list of questions with checkboxes and an "Add" button next to each.

The questions listed are:

- ☐ QUESTION
- ☐ Which of the following tag is used to insert a line-break in HTML?
- ☐ Which of the following tag is used for inserting the largest heading in HTML?
- ☐ Which of the following element is responsible for making the text bold in HTML?
- ☐ What does HTML stand for?
- ☐ The correct sequence of HTML tags for starting a webpage is

At the bottom of the page, there is a status bar showing "5 questions" and a "Go" button. The Windows taskbar at the bottom indicates the system time as 21:11 on 13-04-2024, with a temperature of 35°C and a sunny weather forecast.

## Voting Details Page



The screenshot displays a web browser window with the URL `http://127.0.0.1:8000/admin/pollApp/question/5/change/`. The page title is "The Poll Mall" and it includes a navigation bar with links: "WELCOME, SAM", "VIEW SITE", "CHANGE PASSWORD", and "LOG OUT".

The main content area is titled "Change question" and features a "HISTORY" button. The question text is "Which of the following tag is used to insert a line-break in HTML?".

On the left sidebar, there are two main sections: "AUTHENTICATION AND AUTHORIZATION" with sub-items "Groups" and "Users" (each with an "Add" button), and "POLLAPP" with a "Questions" sub-item (with an "Add" button).

The "CHOICES" section contains a table with the following data:

CHOICE TEXT	VOTES	DELETE?
<code>&lt;br&gt;</code>	0	<input type="checkbox"/>
<code>&lt;a&gt;</code>	0	<input type="checkbox"/>
<code>&lt;pre&gt;</code>		

The Windows taskbar at the bottom shows the date and time as 21:11 on 13-04-2024, along with system icons for temperature (35°C), weather (Sunny), and network status.

## Technology Used

Front-end



Back-end





## Future Enhancements:

Future enhancements in a voting application using the Django framework, several key features and improvements can be considered based on the information from the provided sources,

**1.Asynchronous Programming:** Implementing asynchronous programming can enhance the performance of the application by allowing tasks to run concurrently, improving responsiveness and scalability.

**2.Microservices Architecture:** Adopting a microservices architecture can make the application more modular, easier to maintain, and scalable by breaking it into smaller, independent services that communicate with each other

**3.Serverless Computing:** Utilizing serverless computing can optimize resource utilization and reduce costs by enabling automatic scaling and only paying for actual usage, enhancing the application's efficiency and cost-effectiveness.

**4.Client-Side Encryption:** Enhancing security by implementing client-side encryption can protect sensitive data and ensure the confidentiality of votes, contributing to a more secure e-voting platform.

**5.Blockchain Technology:** Integrating blockchain technology can provide transparent and verifiable voting processes, ensuring the integrity of elections and promoting trust in the system

## Conclusion

To create a voting application using Django, one should have a solid understanding of Python programming, Django framework, HTML, CSS, and Bootstrap. The development process involves creating a new Django project, creating a Django app, defining models, creating views, defining templates, and creating URLs. The application can be further enhanced with features such as real-time results, a user-friendly interface, and a secure database design. It can also include an admin panel for managing elections, candidates, and user accounts. Overall, a voting application using the Django framework is a powerful and flexible solution for creating online voting systems that can cater to various use cases and requirements.

**Thank You!**