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NEXT GEN EMPLOYABILITY PROGRAM

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CAPSTONE PROJECT SHOWCASE

Project Title

Voting Application using Django Framework-SNEKA R(820621104082,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:

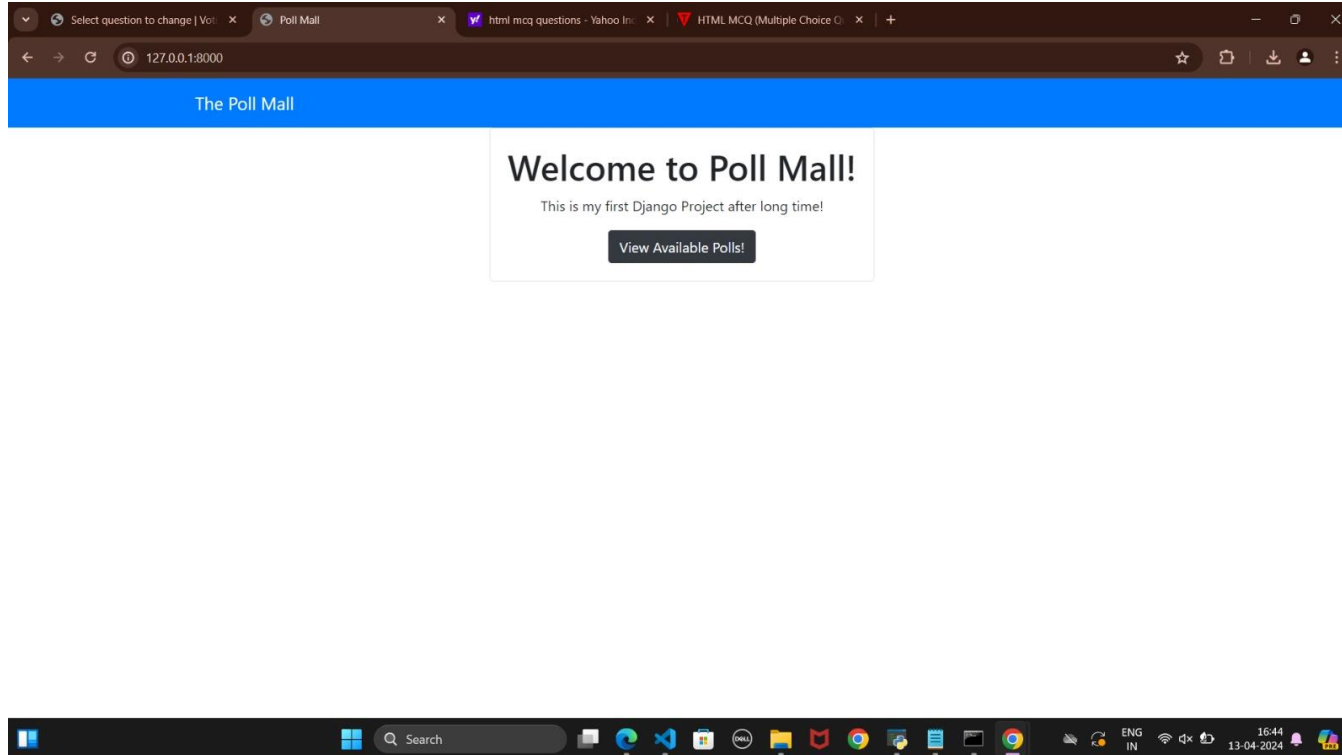
- 1.Setting up a Django Project:** Create a Django project to serve as the foundation for the voting application.
- 2.Designing the Database Schema:** Define the database structure to store user information, votes, and other relevant data.
- 3.Creating User Authentication:** Implement user authentication 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

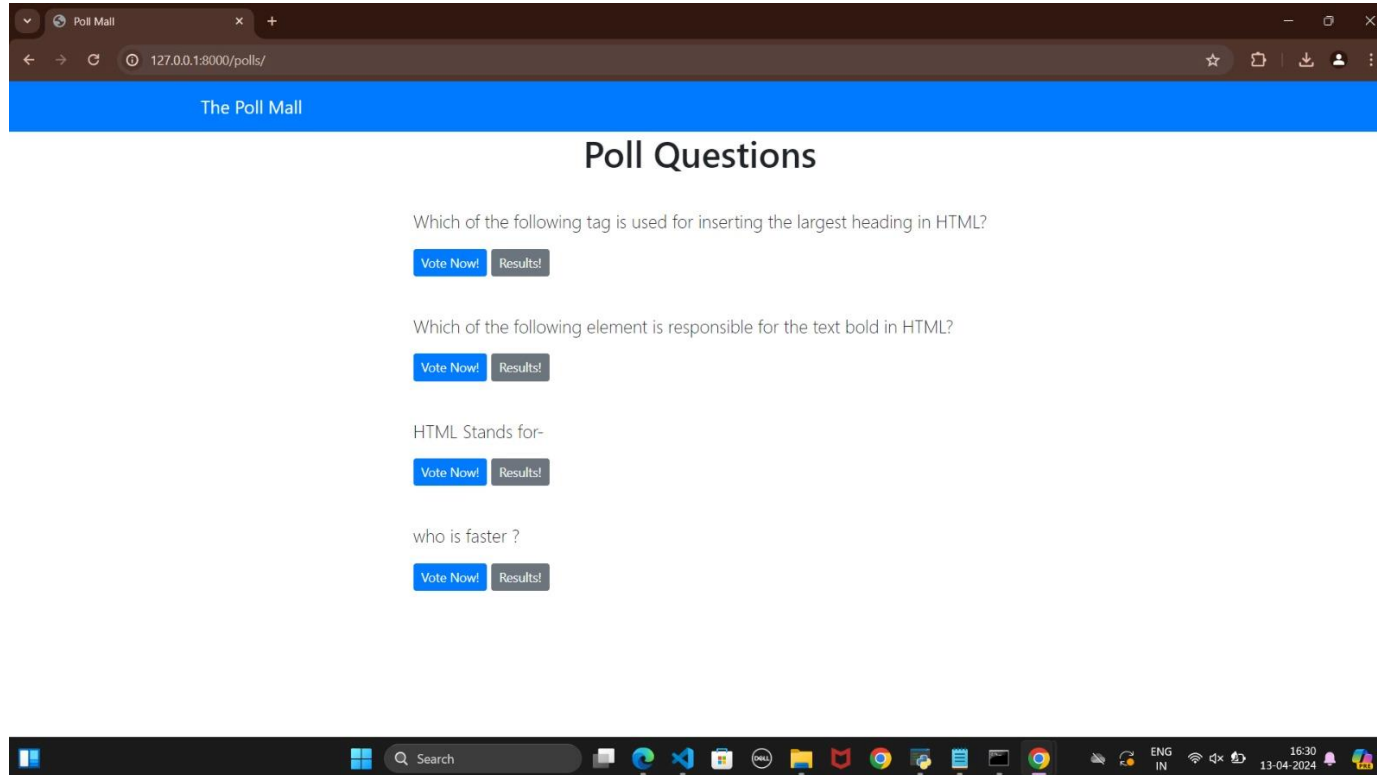
The proposed solution for a voting application using the Django framework is to create a secure and user-friendly online voting platform. The application will allow users to register, vote, and view real-time results. To build the application, the Django framework will be used as the foundation due to 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.

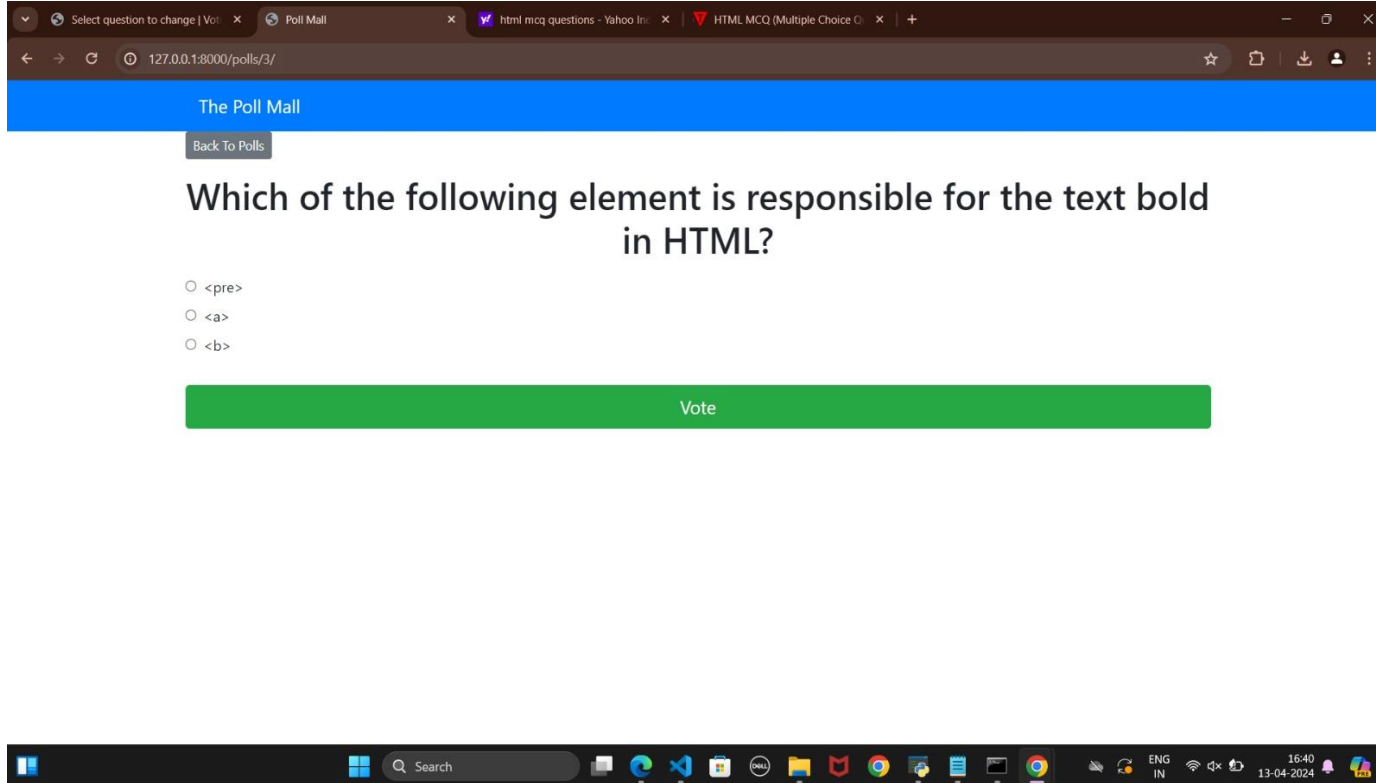
Home Page



Poll Page



Voting Page



The screenshot shows a web browser window with the address bar displaying '127.0.0.1:8000/polls/3/'. The page has a blue header with the title 'The Poll Mall' and a 'Back To Polls' button. The main content area contains a question: 'Which of the following element is responsible for the text bold in HTML?'. Below the question are three radio button options: '<pre>', '<a>', and ''. At the bottom of the form is a large green button labeled 'Vote'.

Select question to change | Vo | x Poll Mall x html mcq questions - Yahoo In x HTML MCQ (Multiple Choice Q x +

127.0.0.1:8000/polls/3/

The Poll Mall

Back To Polls

Which of the following element is responsible for the text bold in HTML?

☐ <pre>

☐ <a>

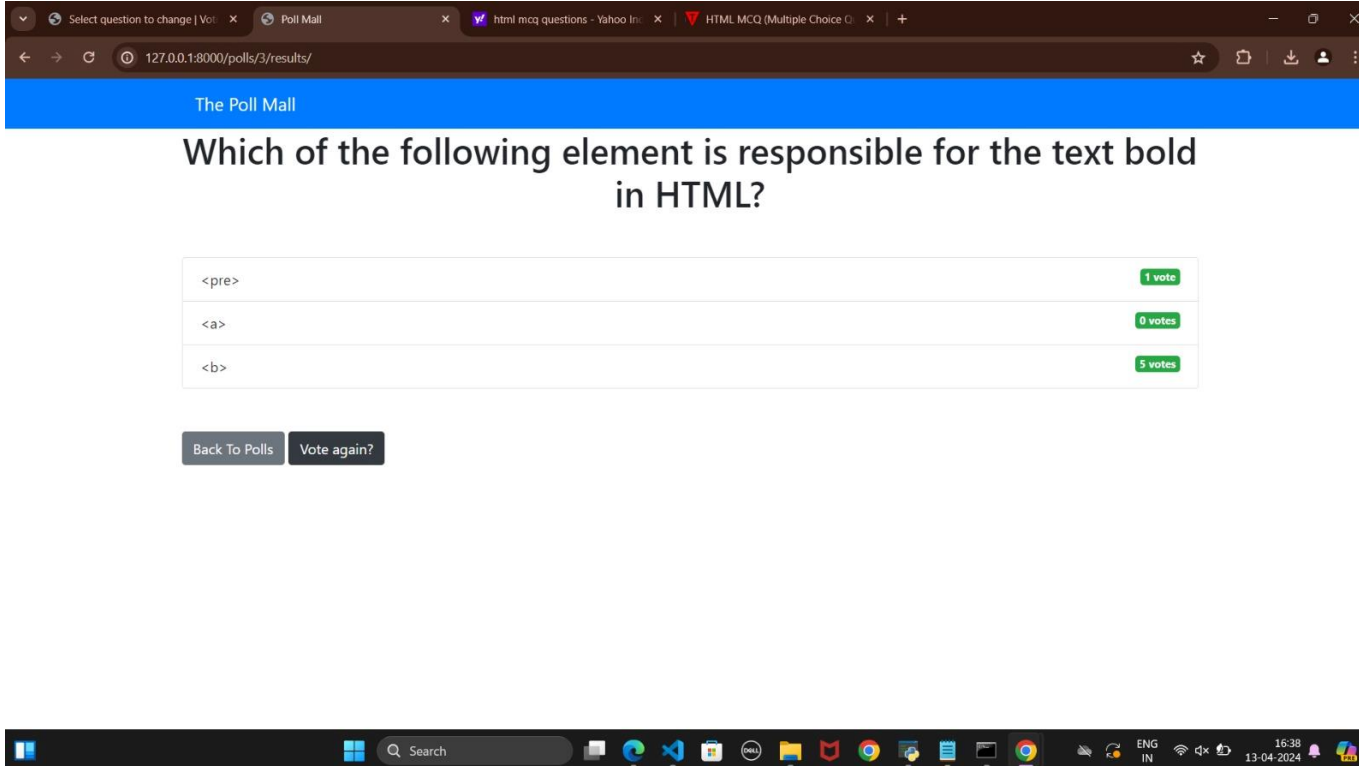
☐

Vote

Search

ENG IN 16:40 13-04-2024

Voting Details Page



The Poll Mall

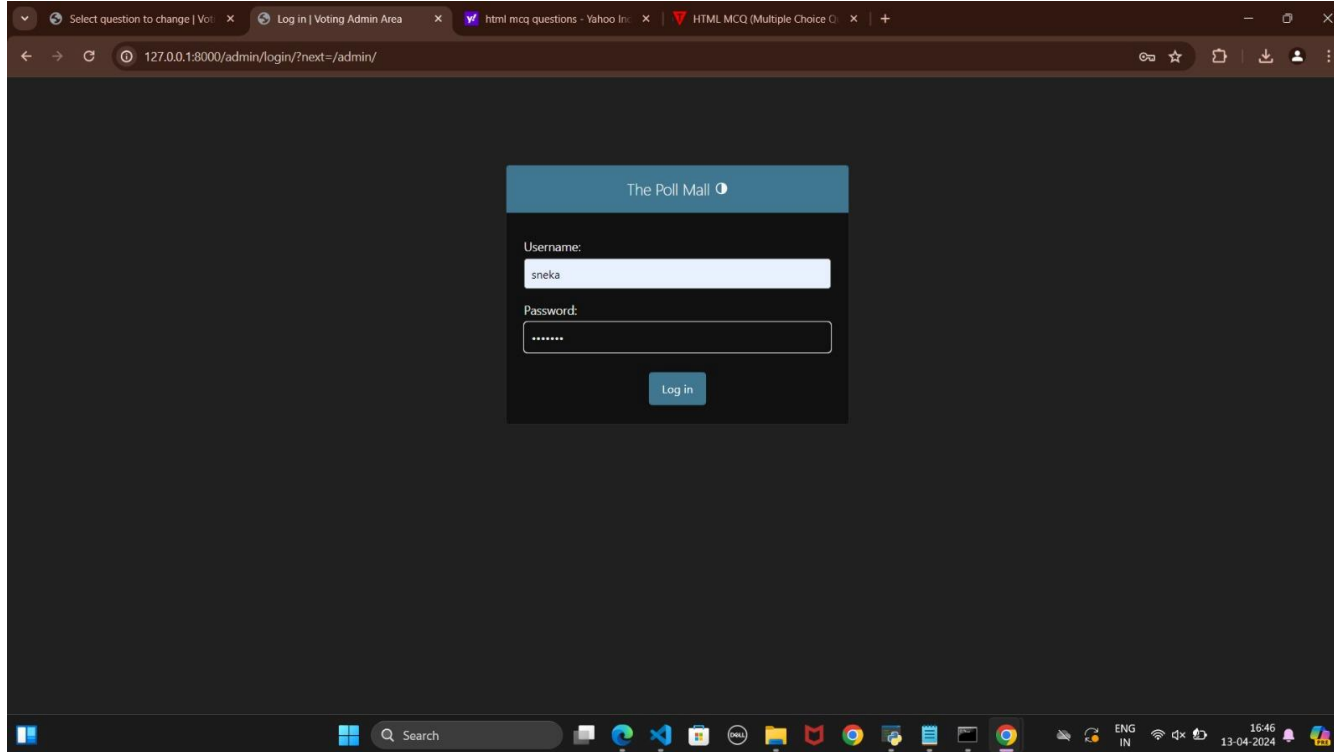
Which of the following element is responsible for the text bold in HTML?

<pre>	1 vote
<a>	0 votes
	5 votes

[Back To Polls](#) [Vote again?](#)

Windows taskbar: Search, Edge, VS Code, File Explorer, Mail, Chrome, Task View, ENG IN, 16:38, 13-04-2024

Admin Login Page

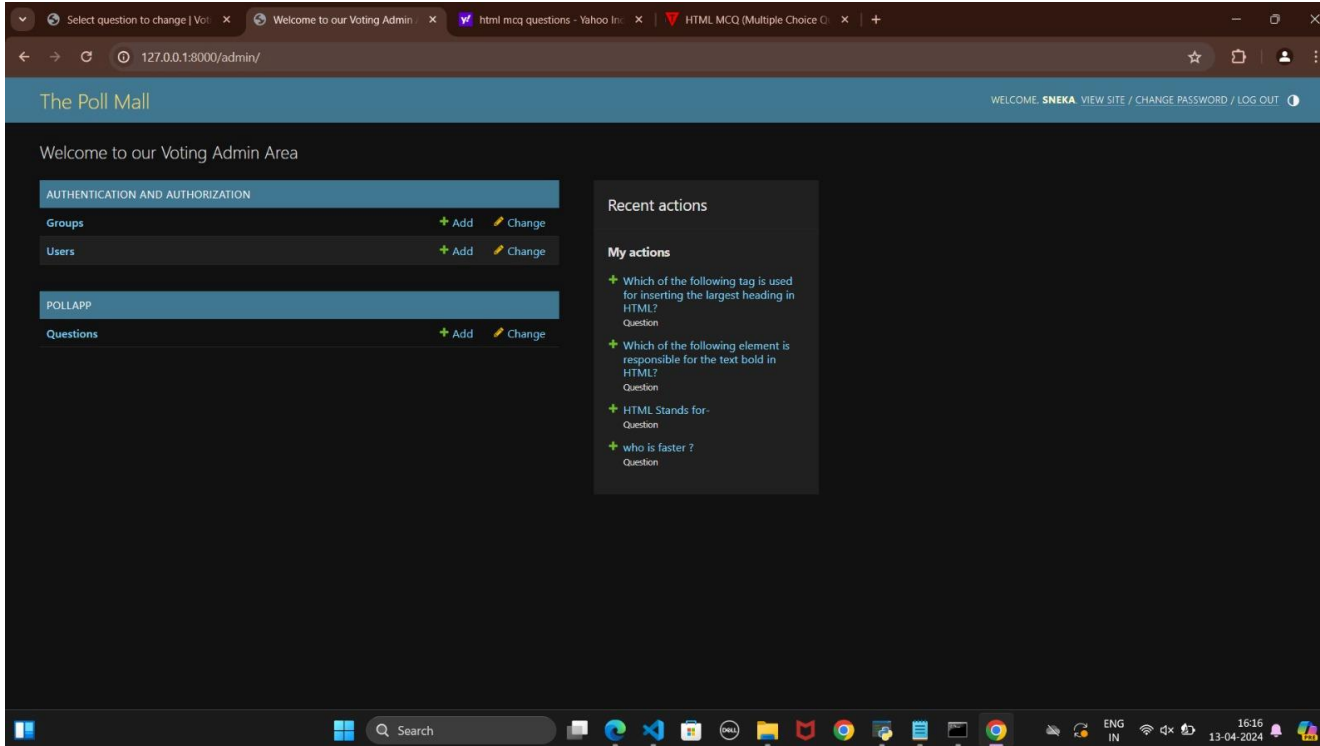


The screenshot shows a web browser window with the address bar displaying `127.0.0.1:8000/admin/login/?next=/admin/`. The page has a dark background with a central login form. The form is titled "The Poll Mall" and contains the following fields:

- Username:** A text input field containing the value "sneka".
- Password:** A password input field with masked characters (dots).
- Log in:** A button located below the password field.

The browser's taskbar at the bottom shows the Windows Start button, a search bar, and several application icons. The system tray on the right indicates the language is "ENG IN", the date is "13-04-2024", and the time is "16:46".

Admin Home Page



The screenshot displays the Admin Home Page of a web application. The browser's address bar shows the URL `127.0.0.1:8000/admin/`. The page header includes the title "The Poll Mall" and a welcome message for "SNEKA" with links for "VIEW SITE", "CHANGE PASSWORD", and "LOG OUT".

The main content area is titled "Welcome to our Voting Admin Area" and is divided into two primary sections:

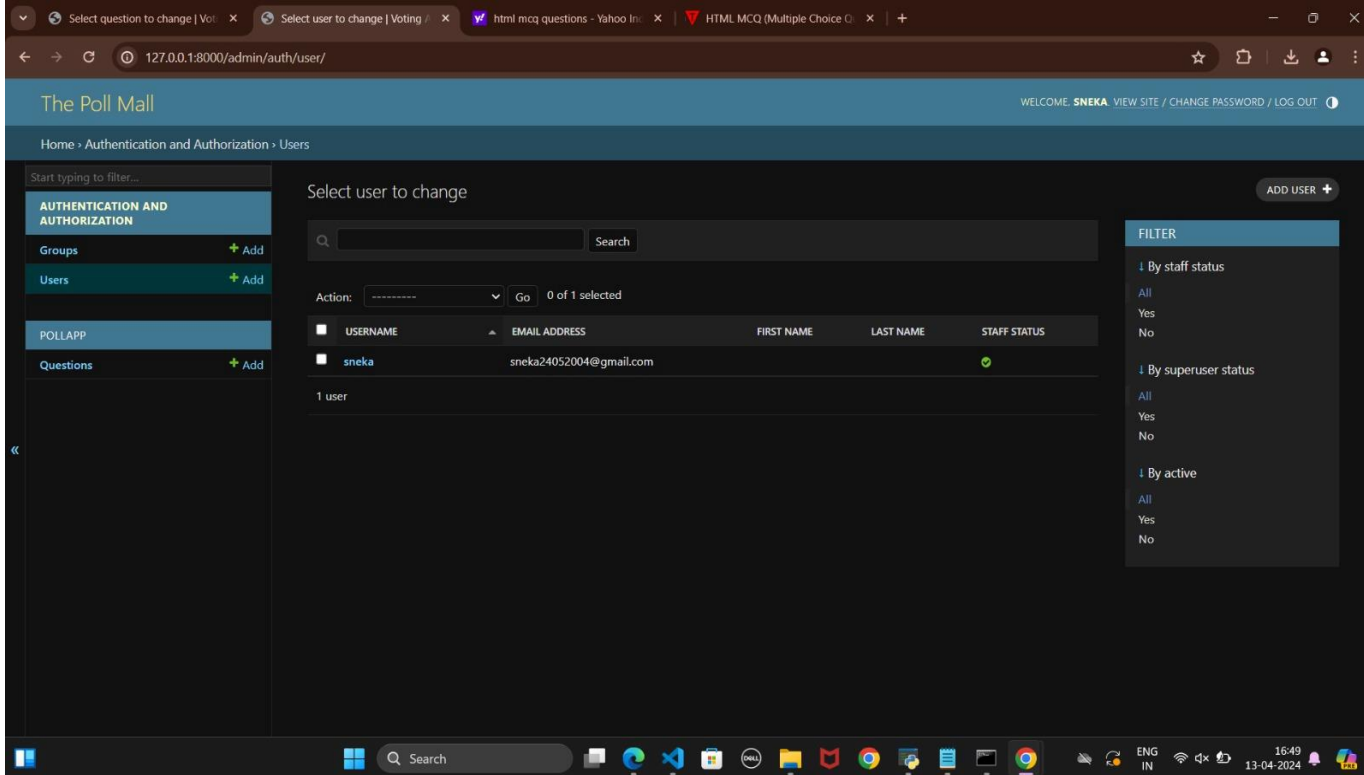
- AUTHENTICATION AND AUTHORIZATION**: This section contains two sub-sections: "Groups" and "Users". Each sub-section has a green "+ Add" button and a yellow pencil "Change" button.
- POLLAPP**: This section contains a "Questions" sub-section, which also features a green "+ Add" button and a yellow pencil "Change" button.

On the right side of the page, there is a "Recent actions" section titled "My actions". It lists four actions, each preceded by a green plus icon:

- Which of the following tag is used for inserting the largest heading in HTML?
Question
- Which of the following element is responsible for the text bold in HTML?
Question
- HTML Stands for-
Question
- who is faster ?
Question

The Windows taskbar at the bottom of the screen shows the Start button, a search bar, and several application icons including Edge, VS Code, and File Explorer. The system clock indicates the time is 16:16 on 13-04-2024.

Authentication and Authorization Page



The screenshot displays a web application interface for user management. The browser address bar shows the URL `127.0.0.1:8000/admin/auth/user/`. The page title is "The Poll Mall". The sidebar on the left contains a navigation menu with the following items:

- Start typing to filter...
- AUTHENTICATION AND AUTHORIZATION
 - Groups + Add
 - Users + Add
- POLLAPP
 - Questions + Add

The main content area is titled "Select user to change" and features a search bar. Below the search bar, there is a table with the following columns: USERNAME, EMAIL ADDRESS, FIRST NAME, LAST NAME, and STAFF STATUS. The table contains one user entry:

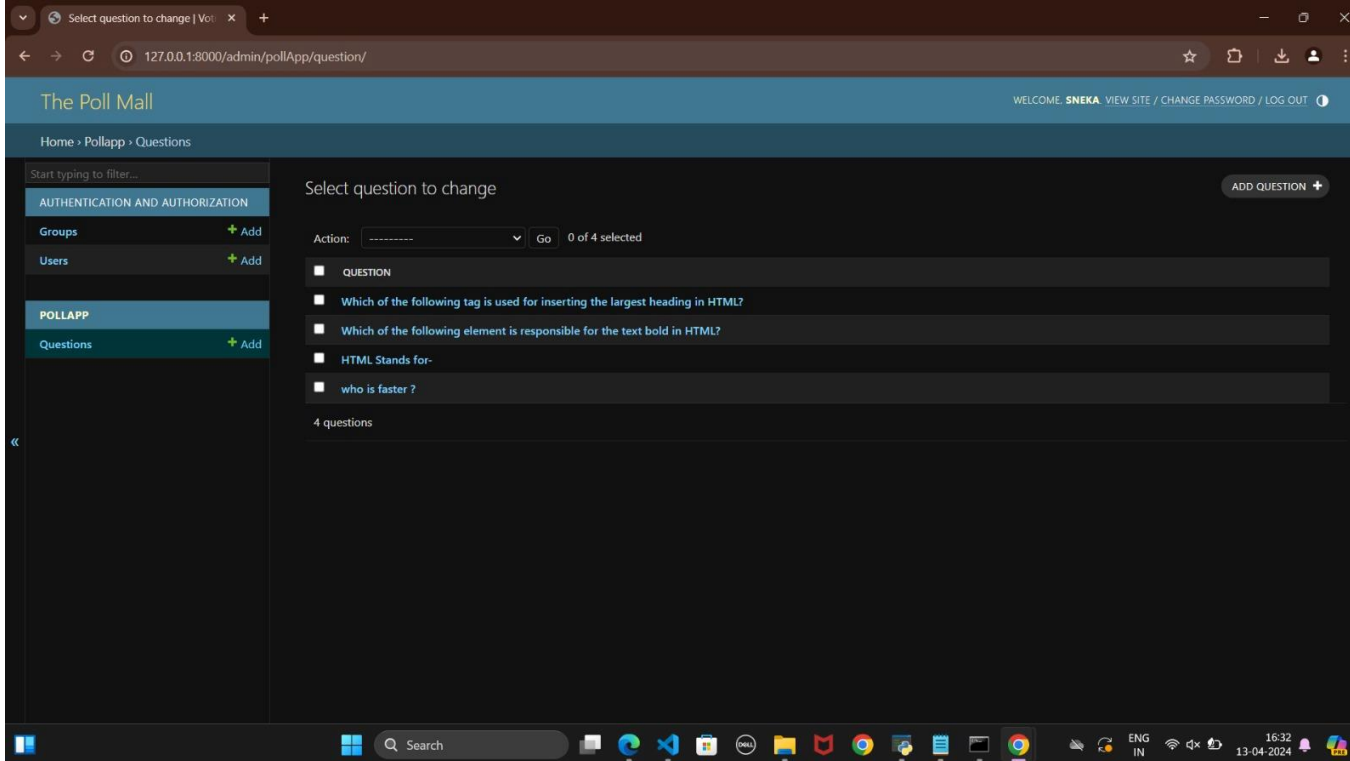
USERNAME	EMAIL ADDRESS	FIRST NAME	LAST NAME	STAFF STATUS
sneka	sneka24052004@gmail.com			✓

Below the table, it indicates "1 user". To the right of the table, there is a "FILTER" panel with the following options:

- By staff status
 - All
 - Yes
 - No
- By superuser status
 - All
 - Yes
 - No
- By active
 - All
 - Yes
 - No

The Windows taskbar at the bottom shows the system time as 16:49 on 13-04-2024.

Questions Adding Section Page



The screenshot displays a web browser window with the address bar showing `127.0.0.1:8000/admin/pollApp/question/`. The page title is "The Poll Mall" and the user is logged in as "WELCOME, SNEKA". 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 sidebar on the left with the following sections:

- Start typing to filter...**
- AUTHENTICATION AND AUTHORIZATION**
 - Groups [+ Add](#)
 - Users [+ Add](#)
- POLLAPP**
 - Questions [+ Add](#)

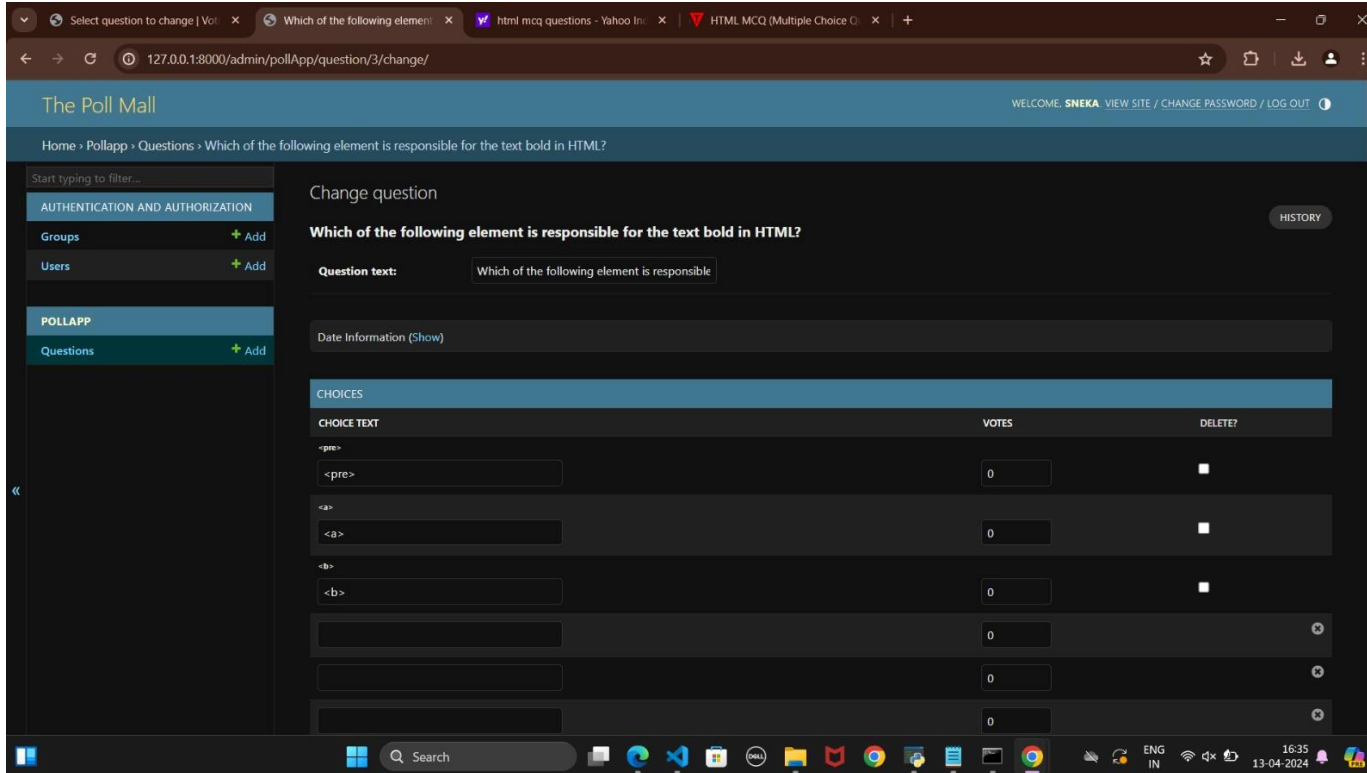
The main content area contains a list of questions to be added or modified:

- ☐ QUESTION
- ☐ Which of the following tag is used for inserting the largest heading in HTML?
- ☐ Which of the following element is responsible for the text bold in HTML?
- ☐ HTML Stands for-
- ☐ who is faster ?

Below the list, it indicates "4 questions".

The bottom of the screen shows a Windows taskbar with various application icons, a search bar, and system tray icons including the date and time (16:32, 13-04-2024).

Voting Details Page



The screenshot shows a web browser window with the URL `127.0.0.1:8000/admin/pollApp/question/3/change/`. The page is titled "The Poll Mall" and displays a sidebar with navigation options: "AUTHENTICATION AND AUTHORIZATION" (Groups, Users) and "POLLAPP" (Questions). The main content area is titled "Change question" and shows the question text: "Which of the following element is responsible for the text bold in HTML?". Below the question text, there is a table with the following structure:

CHOICE TEXT	VOTES	DELETE?
<code><pre></code>	0	<input type="checkbox"/>
<code><a></code>	0	<input type="checkbox"/>
<code></code>	0	<input type="checkbox"/>
	0	<input type="checkbox"/>
	0	<input type="checkbox"/>
	0	<input type="checkbox"/>

The Windows taskbar at the bottom shows the time as 16:35 on 13-04-2024.

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!