



NEXT GEN EMPLOYABILITY PROGRAM

| Creating a future-ready workforce

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College Name

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CAPSTONE PROJECT SHOWCASE

Project Title

Voting Application using Django Framework-Jothi Jemimal J (4029,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 are the steps involved in building the voting application:

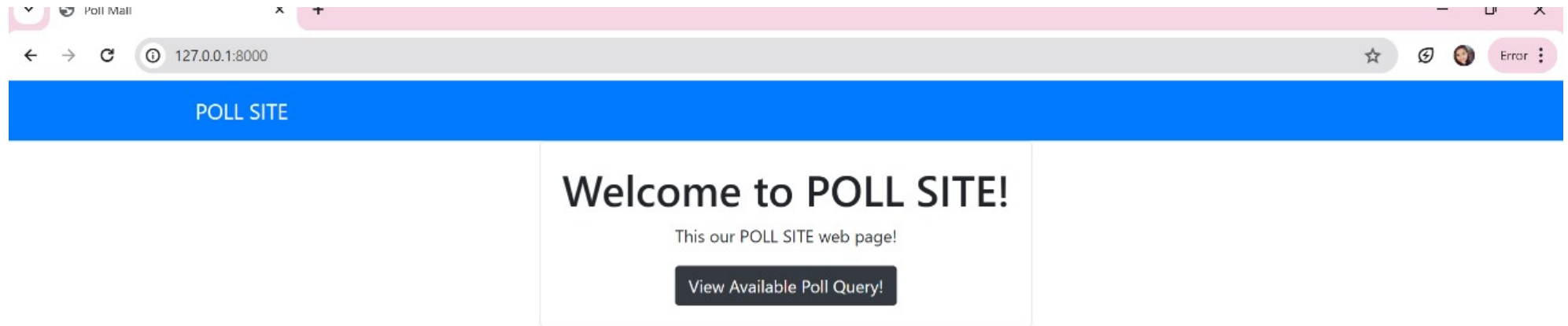
- 1.Setting up a Django Project:** Create a Django project to serve as the foundation for the voting application.
- 2.Designing the Database Schema:** Define the database structure to store user information, votes, and other relevant data.
- 3.Creating User Authentication:** Implement user authentication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



POLL QUESTIONS

Which programming language is primarily used for developing Android applications?

[Vote Now!!!](#)

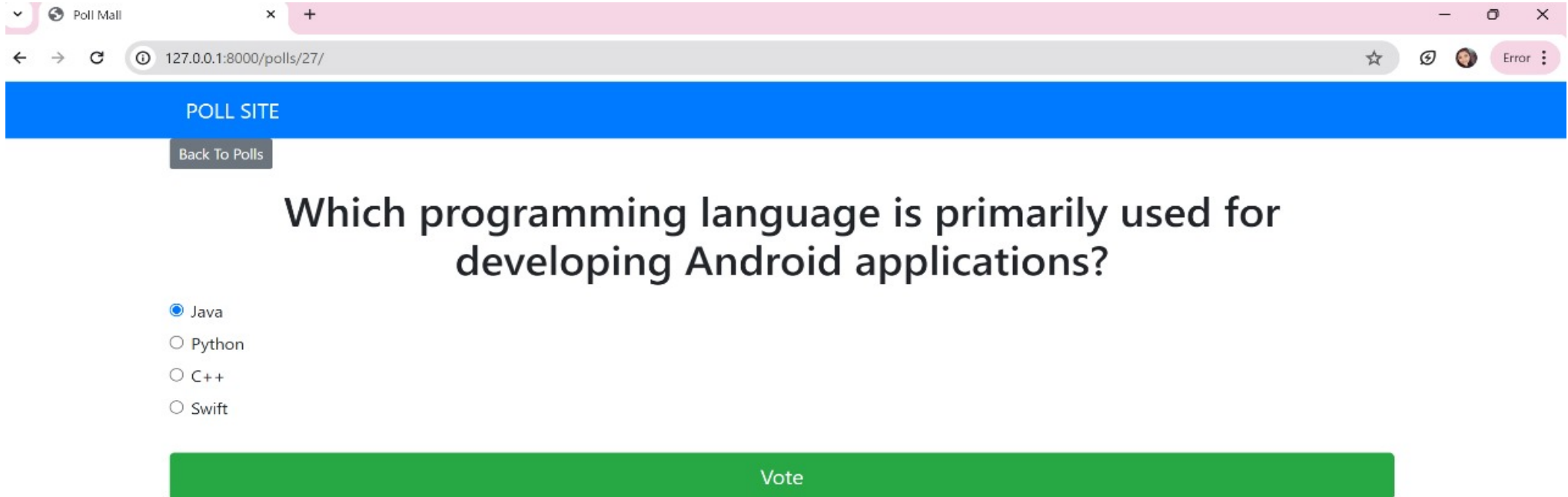
[Results!!!](#)

What is the primary function of a firewall in a network?

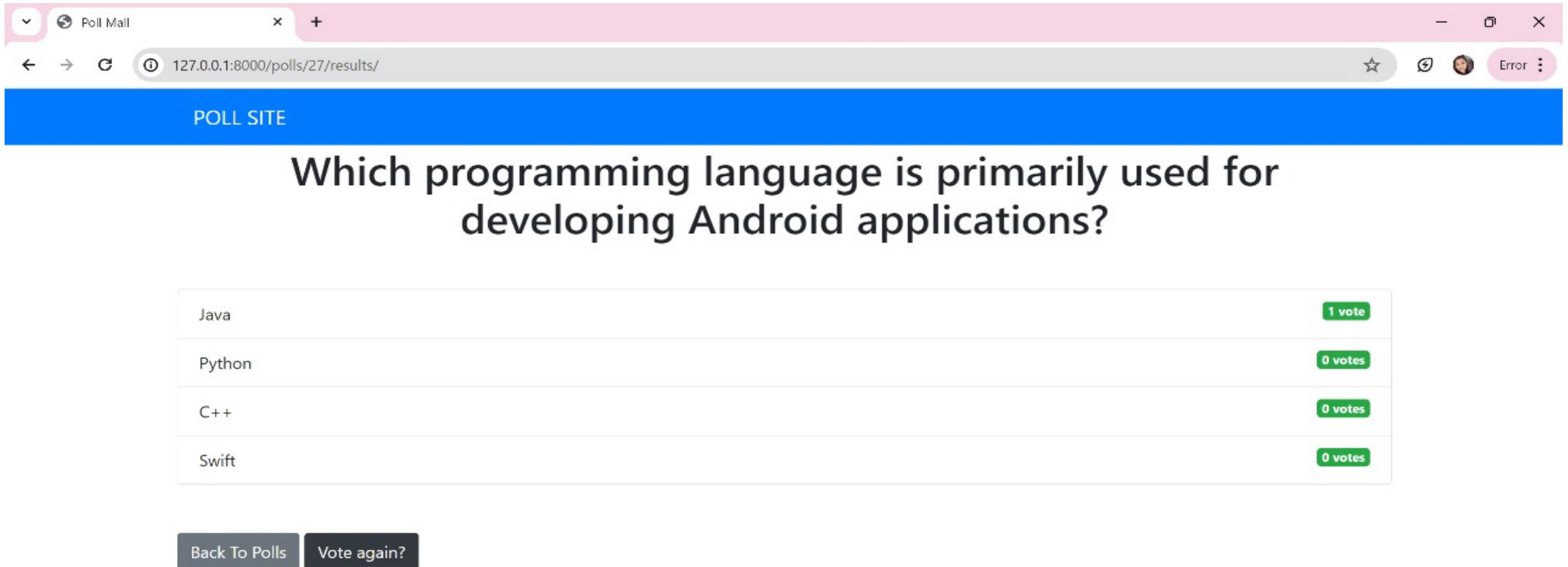
[Vote Now!!!](#)

[Results!!!](#)

Voting Page

A screenshot of a web browser window. The browser has a single tab titled 'Poll Mall'. The address bar shows the URL '127.0.0.1:8000/polls/27/'. The page has a blue header bar with the text 'POLL SITE' and a 'Back To Polls' button. The main content area displays a poll question: 'Which programming language is primarily used for developing Android applications?'. Below the question are four radio button options: 'Java' (selected), 'Python', 'C++', and 'Swift'. At the bottom of the form is a large green button labeled 'Vote'.

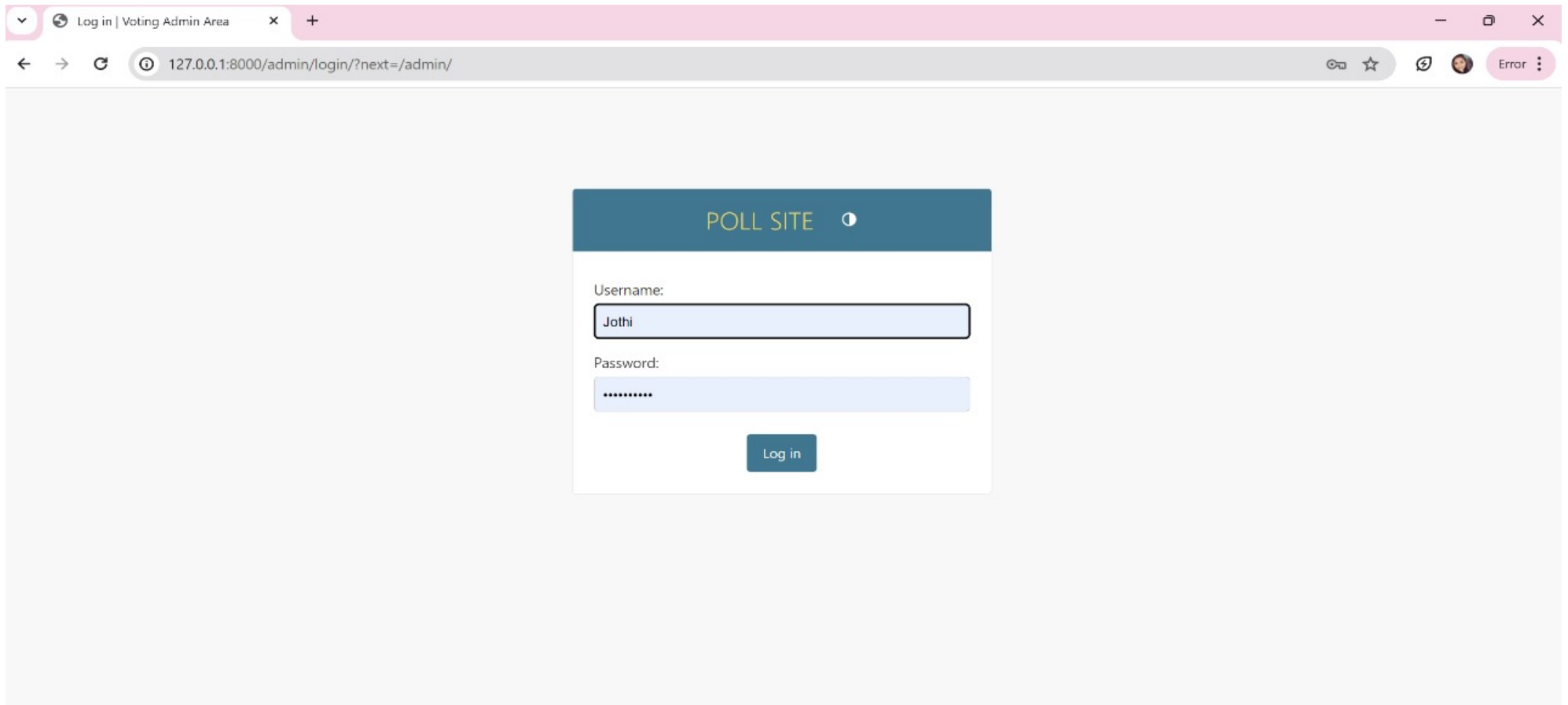
Voting Details Page

A screenshot of a web browser window. The browser has a single tab titled 'Poll Mail'. The address bar shows the URL '127.0.0.1:8000/polls/27/results/'. The page has a blue header bar with the text 'POLL SITE'. Below the header, the question 'Which programming language is primarily used for developing Android applications?' is displayed in a large, bold font. Underneath the question is a table with four rows, each representing a programming language and its current vote count. At the bottom of the page, there are two buttons: 'Back To Polls' and 'Vote again?'.

POLL SITE	
Which programming language is primarily used for developing Android applications?	
Java	1 vote
Python	0 votes
C++	0 votes
Swift	0 votes

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

Admin Login Page

A screenshot of a web browser showing the Admin Login Page. The browser's address bar displays the URL '127.0.0.1:8000/admin/login/?next=/admin/'. The page features a central login form with a teal header bar labeled 'POLL SITE'. The form includes fields for 'Username' (containing 'Jothi') and 'Password' (masked with dots), and a 'Log in' button.

Log in | Voting Admin Area

127.0.0.1:8000/admin/login/?next=/admin/

POLL SITE

Username:

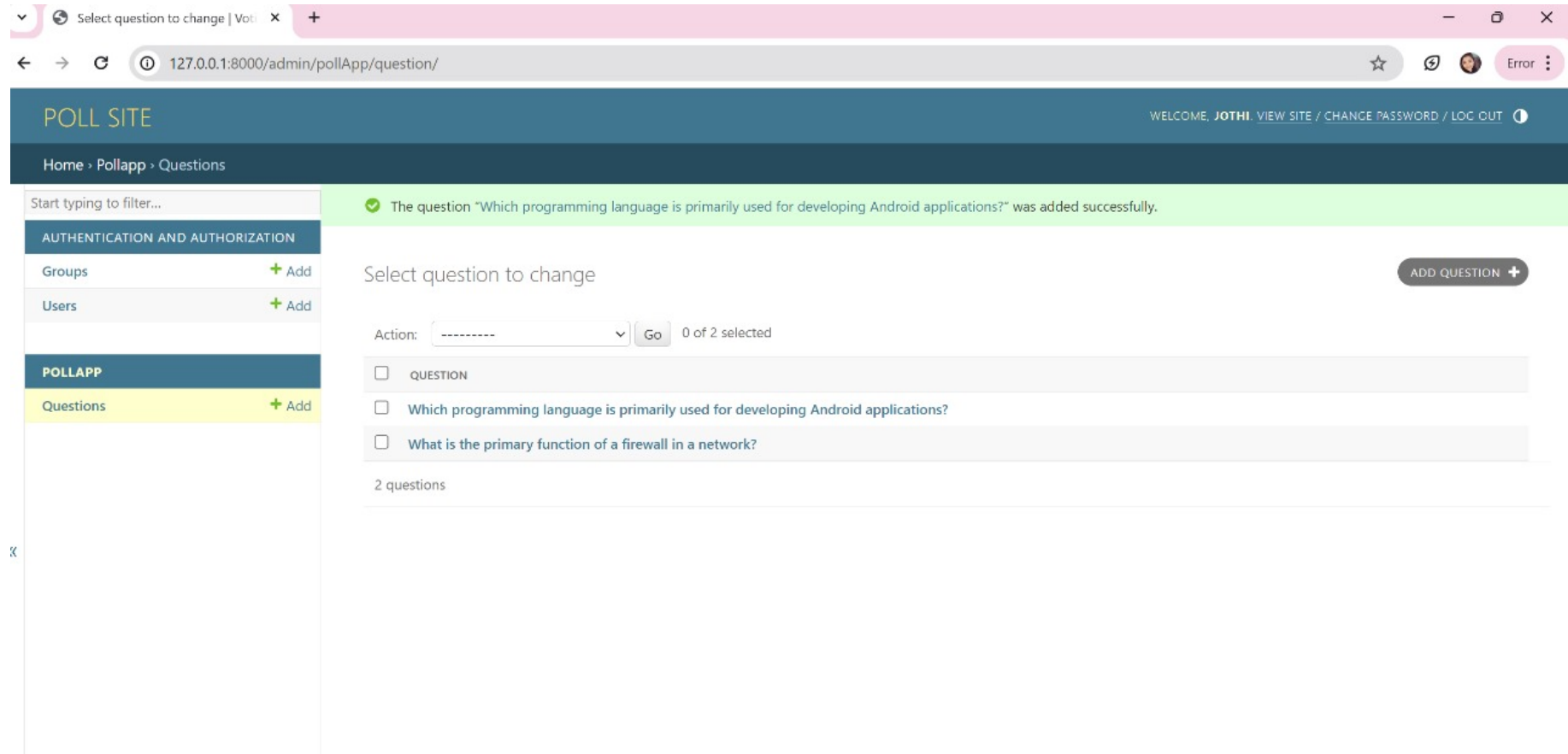
Jothi

Password:

.....

Log in

Admin Home Page



The screenshot displays the Admin Home Page for the Poll Site. The browser's address bar shows the URL `127.0.0.1:8000/admin/pollApp/question/`. The page header includes the text "POLL SITE" and a welcome message for "JOTHI" with links to "VIEW SITE", "CHANGE PASSWORD", and "LOG OUT". The breadcrumb trail indicates the path: "Home > Pollapp > Questions".

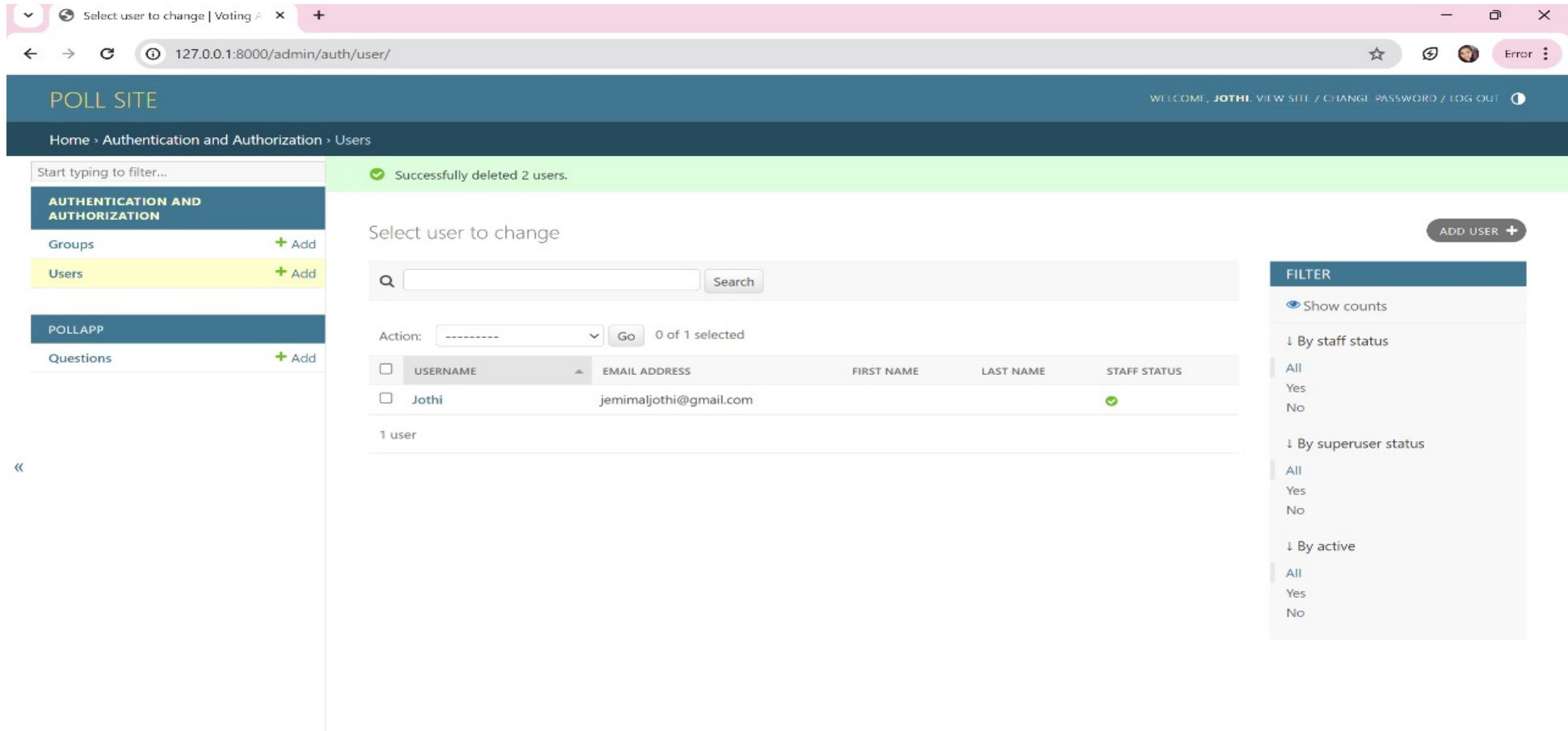
A sidebar on the left contains a search bar and two main sections: "AUTHENTICATION AND AUTHORIZATION" with links for "Groups" and "Users" (each with a "+ Add" button), and "POLLAPP" with a link for "Questions" (with a "+ Add" button). The "Questions" link is currently highlighted.

The main content area features a green success message: "The question 'Which programming language is primarily used for developing Android applications?' was added successfully." Below this, there is a section titled "Select question to change" with an "ADD QUESTION +" button. This section includes an "Action:" dropdown menu, a "Go" button, and a selection count of "0 of 2 selected". Two questions are listed with checkboxes:

- ☐ QUESTION
- ☐ Which programming language is primarily used for developing Android applications?
- ☐ What is the primary function of a firewall in a network?

At the bottom of the list, it states "2 questions".

Authentication and Authorization Page



The screenshot displays the 'Authentication and Authorization' page of a web application. The browser's address bar shows the URL '127.0.0.1:8000/admin/auth/user/'. The page header includes the text 'POLL SITE' and a welcome message for 'JOTHI'. The sidebar on the left contains navigation links for 'Groups', 'Users', 'POLLAPP', and 'Questions'. The main content area features a search bar and a table of users. A green success message at the top indicates 'Successfully deleted 2 users.'.

Navigation Sidebar:

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

Main Content Area:

Select user to change

Search: [Search]

Action: [-----] Go 0 of 1 selected

<input type="checkbox"/>	USERNAME	EMAIL ADDRESS	FIRST NAME	LAST NAME	STAFF STATUS
<input type="checkbox"/>	Jothi	jemimaljothi@gmail.com			✓

1 user

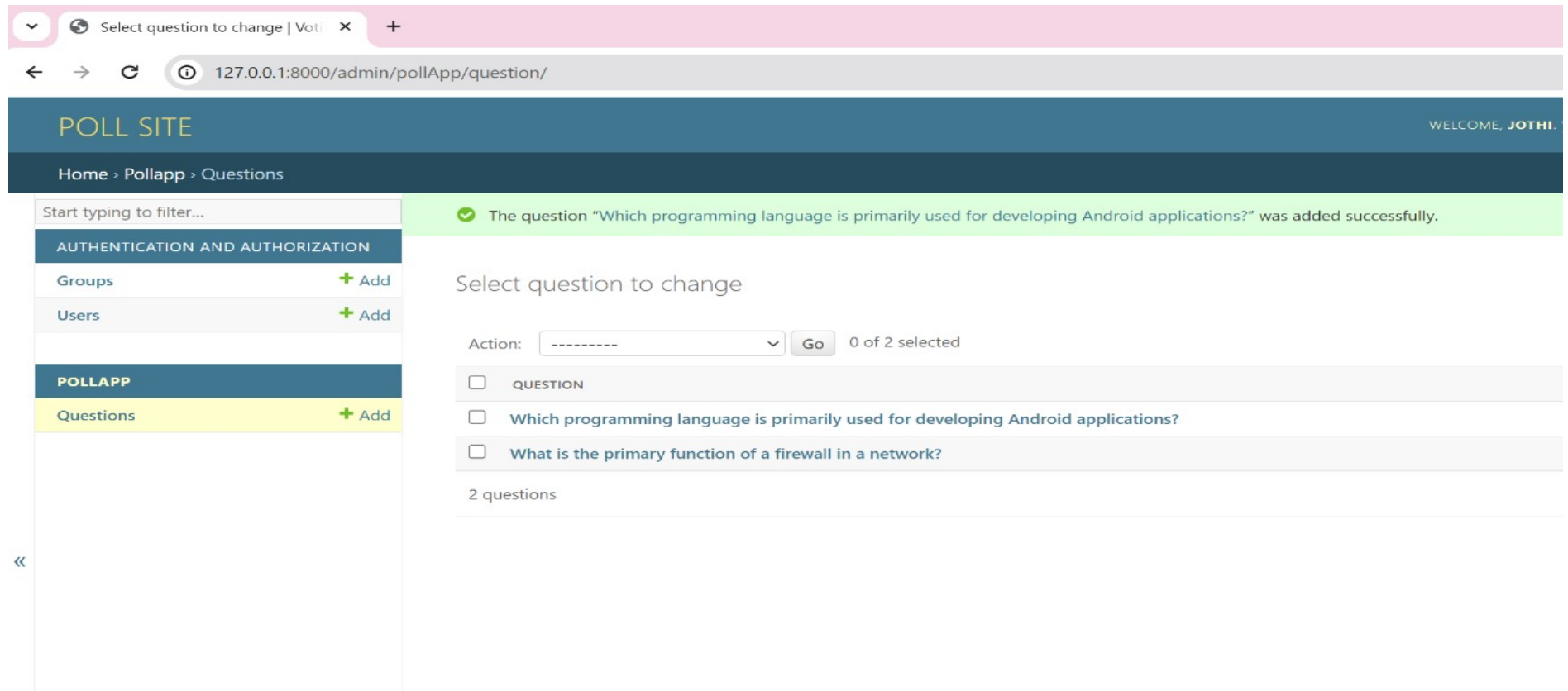
Filter Sidebar:

ADD USER +

FILTER

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

Questions Adding Section Page



The screenshot displays the 'POLL SITE' admin interface. The browser address bar shows the URL '127.0.0.1:8000/admin/pollApp/question/'. The page header includes 'POLL SITE' and a welcome message 'WELCOME, JOTHI.'. The breadcrumb trail is 'Home > Pollapp > Questions'. A sidebar on the left contains a search bar and two main sections: 'AUTHENTICATION AND AUTHORIZATION' with 'Groups' and 'Users' (each with a '+ Add' button), and 'POLLAPP' with 'Questions' (with a '+ Add' button). A green success message at the top right states: 'The question "Which programming language is primarily used for developing Android applications?" was added successfully.' The main content area is titled 'Select question to change' and features an 'Action:' dropdown menu, a 'Go' button, and a selection count '0 of 2 selected'. Below this, two questions are listed with checkboxes: 'Which programming language is primarily used for developing Android applications?' and 'What is the primary function of a firewall in a network?'. At the bottom, it indicates '2 questions'.

Select question to change

Action: Go 0 of 2 selected

☐ QUESTION

☐ Which programming language is primarily used for developing Android applications?

☐ What is the primary function of a firewall in a network?

2 questions

Voting Details Page

Which programming language

127.0.0.1:8000/admin/pollApp/question/27/change/

WELCOME, JOTHI. [VIEW SITE](#) / [CHANGE PASSWORD](#) / [LOG OUT](#)

Home > Pollapp > Questions > Which programming language is primarily used for developing Android applications?

Start typing to filter...

AUTHENTICATION AND AUTHORIZATION

Groups [+ Add](#)

Users [+ Add](#)

POLLAPP

Questions [+ Add](#)

Change question

HISTORY

Which programming language is primarily used for developing Android applications?

Question text: Which programming language is primarily us

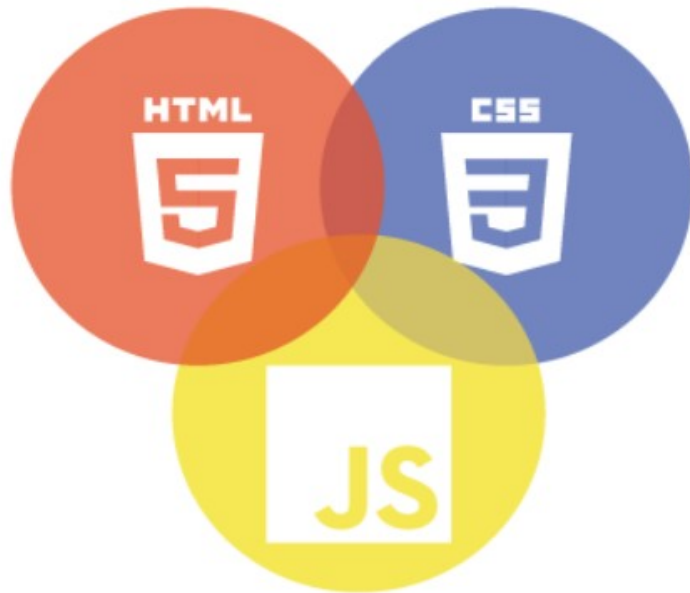
Date Information (Show)

CHOICES

CHOICE TEXT	VOTES	DELETE?
Java	0	<input type="checkbox"/>
Python	0	<input type="checkbox"/>
C++	0	<input type="checkbox"/>
Swift	0	<input type="checkbox"/>
	0	<input type="checkbox"/>

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!
