



NEXT GEN EMPLOYABILITY PROGRAM

| Creating a future-ready workforce

Student Name :Noorul Naziha N
Student ID :au820621104061

College Name

Arasu Engineering College

CAPSTONE PROJECT SHOWCASE

Project Title

Voting Application using Django Framework-Noorul Naziha N(4061,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:

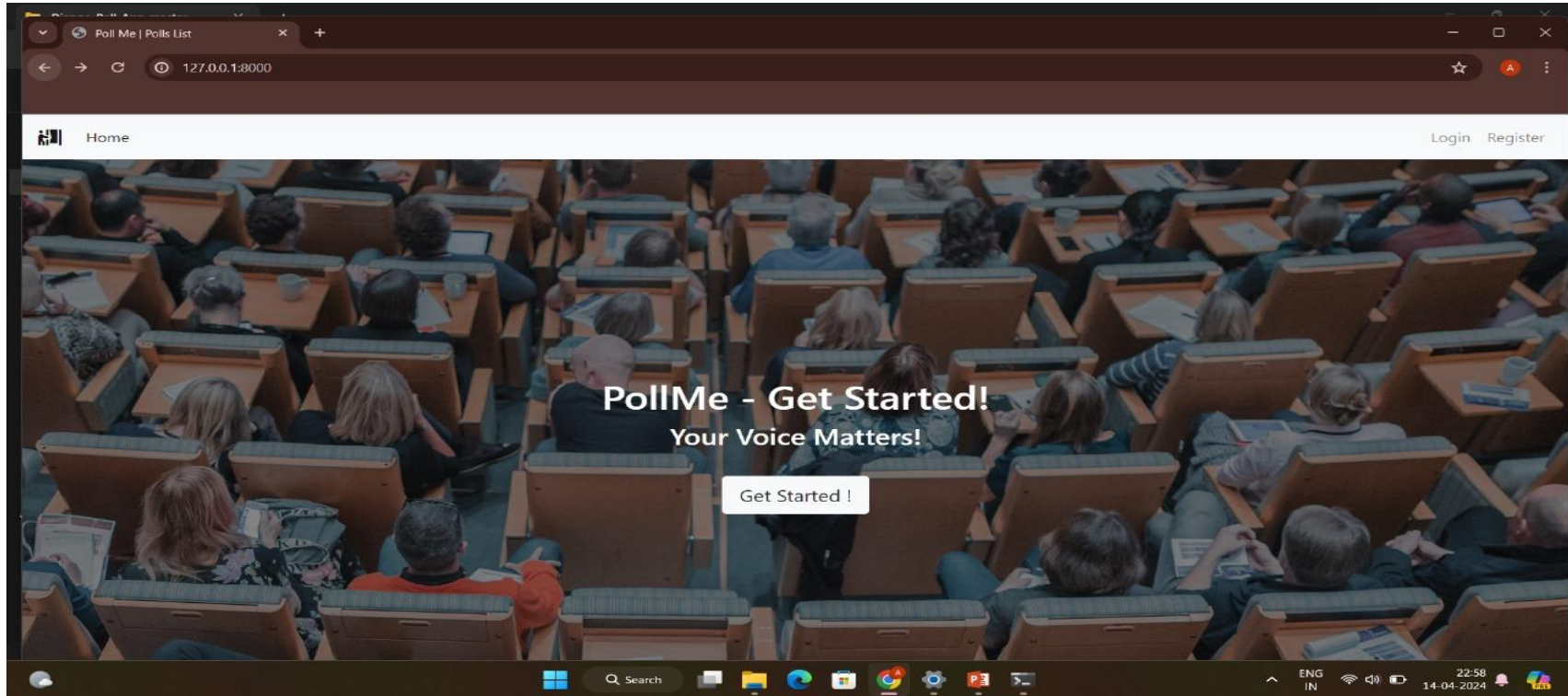
- 1.Setting up a Django Project:** Create a Django project to serve as the foundation for the voting application.
- 2.Designing the Database Schema:** Define the database structure to store user information, votes, and other relevant data.
- 3.Creating User Authentication:** Implement user authentication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

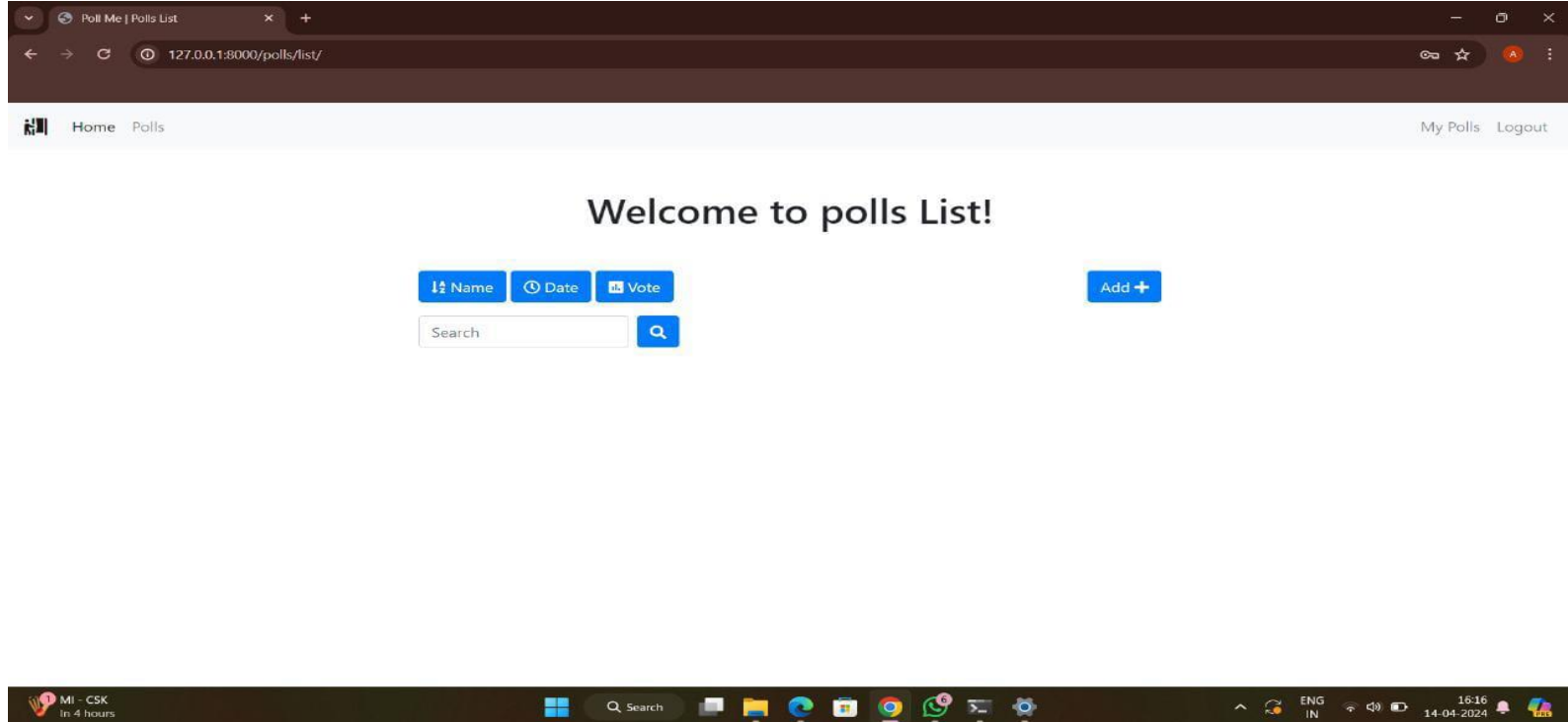
The proposed solution for a voting application using the Django framework is to create a secure and user-friendly online voting platform. The application will allow users to register, vote, and view real-time results. To build the application, the Django framework will be used as the foundation due to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

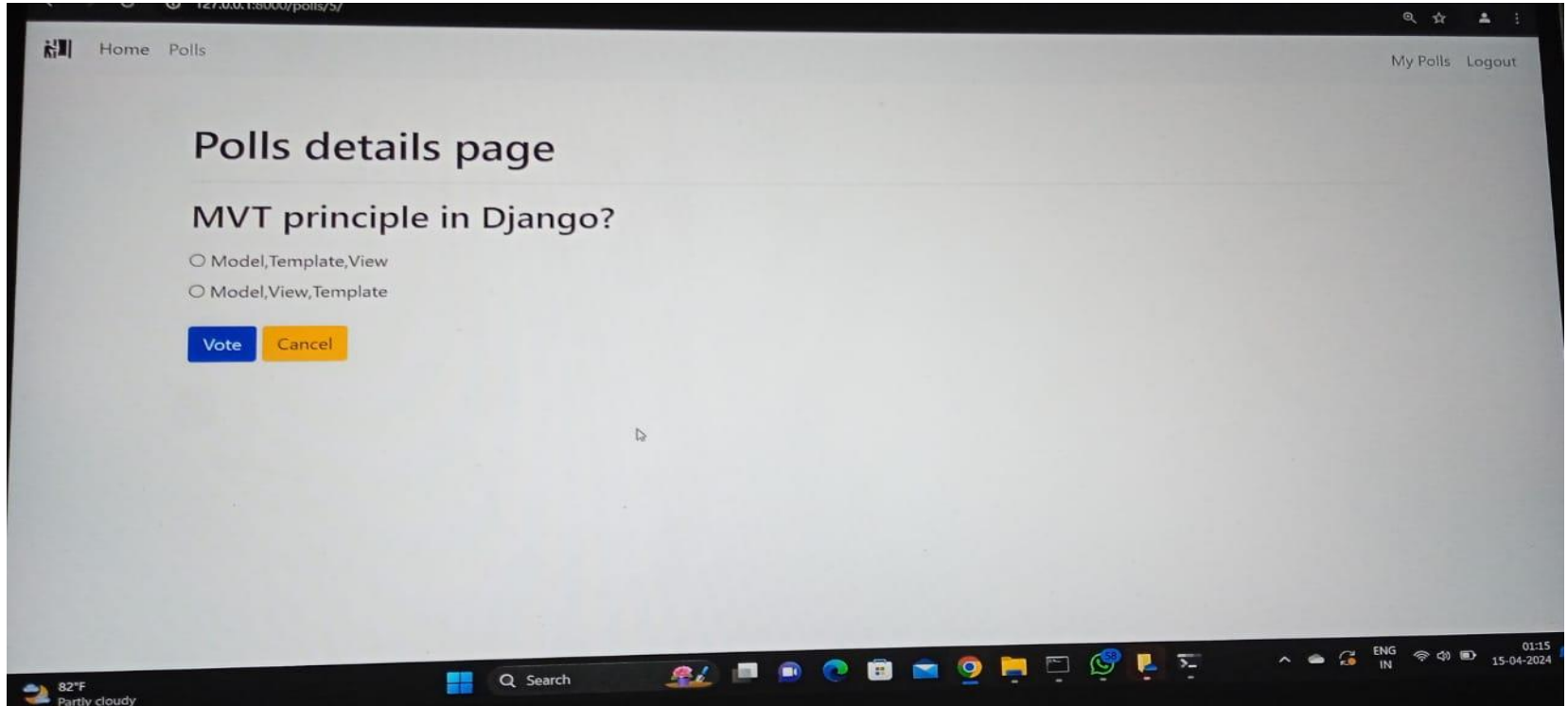
Home Page



Poll Page



Voting Page



The screenshot shows a web browser window with the address bar displaying `127.0.0.1:8000/polls/5/`. The page has a navigation bar with 'Home' and 'Polls' links on the left, and 'My Polls' and 'Logout' links on the right. The main content area is titled 'Polls details page' and contains the question 'MVT principle in Django?'. Below the question are two radio button options: 'Model,Template,View' and 'Model,View,Template'. At the bottom of the form are two buttons: a blue 'Vote' button and an orange 'Cancel' button. The Windows taskbar at the bottom shows the system clock as 01:15 on 15-04-2024, along with weather information (82°F, Partly cloudy) and various application icons.

127.0.0.1:8000/polls/5/

Home Polls

My Polls Logout

Polls details page

MVT principle in Django?

☐ Model,Template,View

☐ Model,View,Template

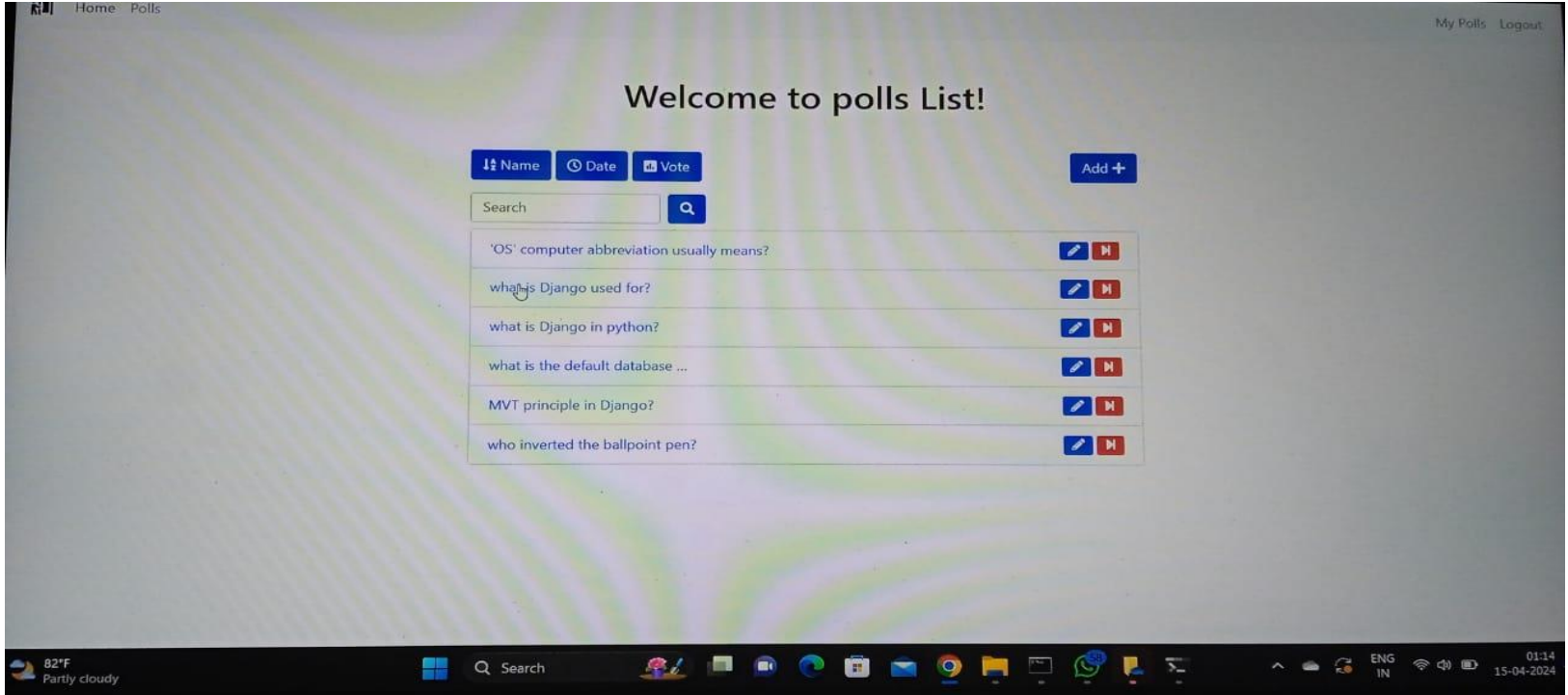
82°F Partly cloudy

Search

ENG IN

01:15 15-04-2024

Voting Details Page



The screenshot shows a web application interface for a polls list. At the top, there's a navigation bar with "Home" and "Polls" links. The main heading is "Welcome to polls List!". Below this, there are three buttons: "Name" (with a sort icon), "Date" (with a clock icon), and "Vote" (with a ballot icon). To the right is an "Add +" button. A search bar with a magnifying glass icon is positioned below these buttons. The main content area displays a list of six poll questions, each with a blue edit icon and a red delete icon to its right. The questions are: "OS' computer abbreviation usually means?", "what is Django used for?", "what is Django in python?", "what is the default database ...", "MVT principle in Django?", and "who inverted the ballpoint pen?". The bottom of the screen shows a Windows taskbar with the date and time "01:14 15-04-2024".

Home Polls

My Polls Logout

Welcome to polls List!

↓ Name ⌚ Date 🗳 Vote Add +

Search 🔍

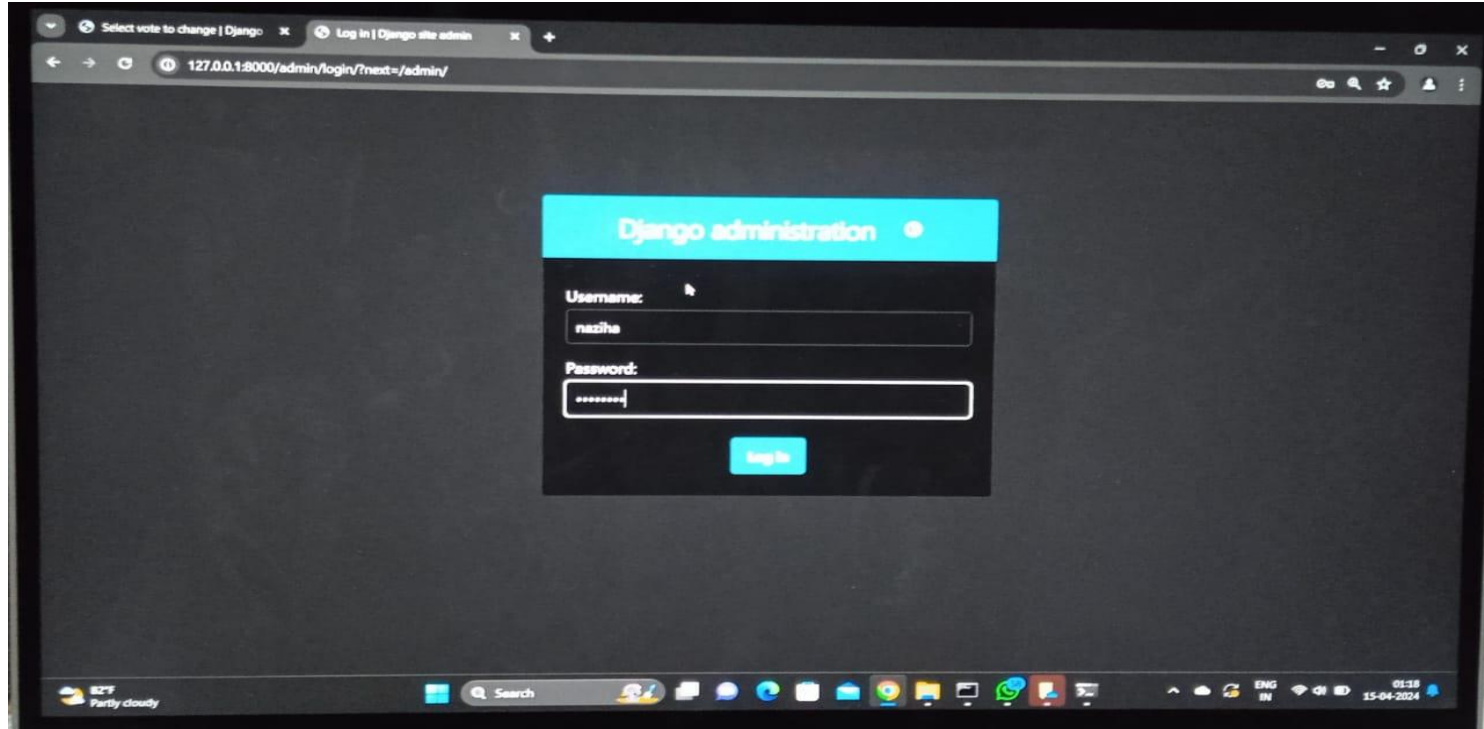
'OS' computer abbreviation usually means?	✎ ✖
what is Django used for?	✎ ✖
what is Django in python?	✎ ✖
what is the default database ...	✎ ✖
MVT principle in Django?	✎ ✖
who inverted the ballpoint pen?	✎ ✖

82°F Partly cloudy

Search

ENG IN 01:14 15-04-2024

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 features a dark blue background with a central white login form titled "Django administration". The form includes a "Username:" label, a text input field containing "naziha", a "Password:" label, a password input field with masked characters, and a "log in" button. The browser's taskbar at the bottom shows the system clock as 01:18 on 15-04-2024.

Select vote to change | Django

Log in | Django site admin

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

Django administration

Username:

naziha

Password:

log in

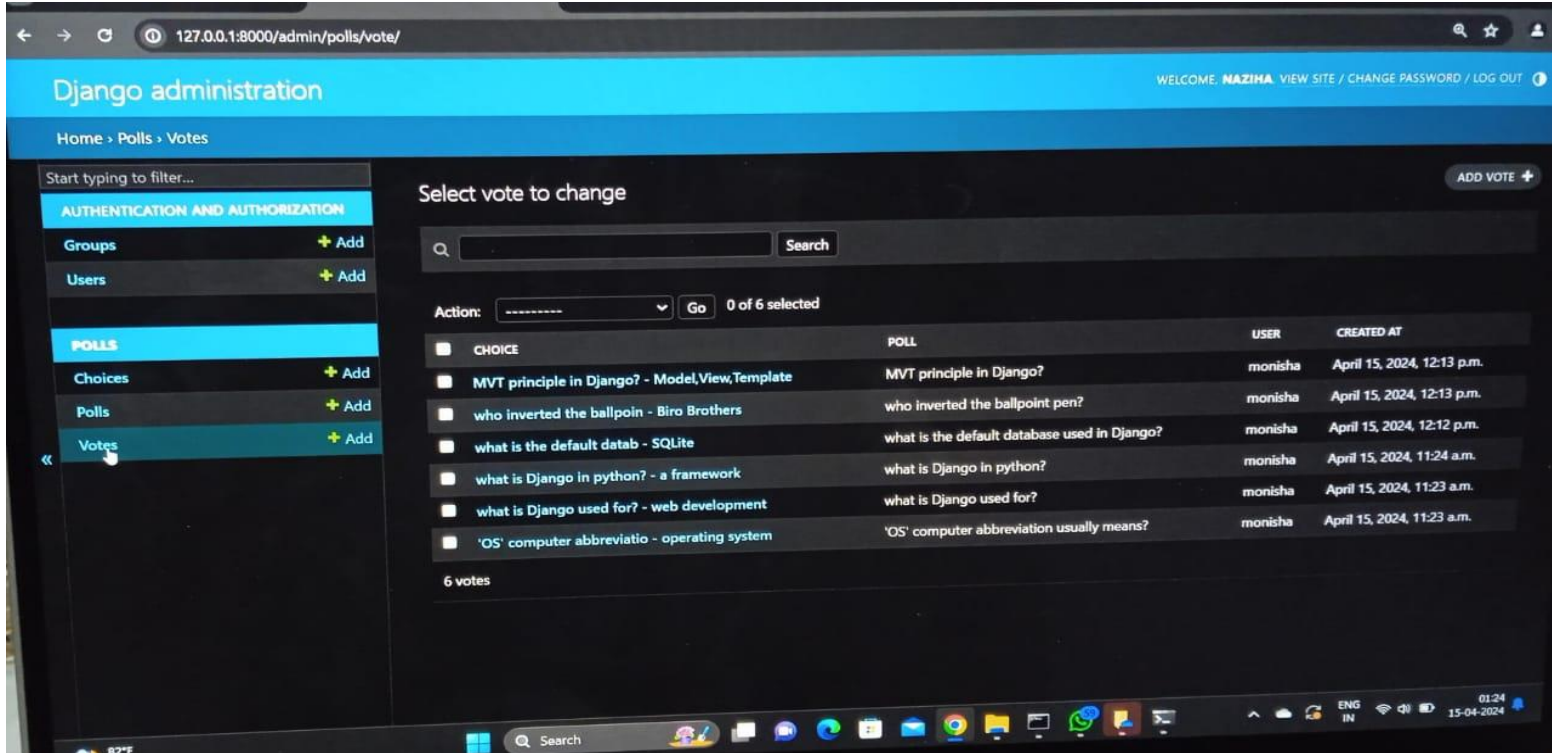
82°F Partly cloudy

Search

ENG IN

01:18 15-04-2024

Admin Home Page



The screenshot displays the Django administration interface for the 'polls' app, specifically the 'Votes' page. The browser address bar shows the URL `127.0.0.1:8000/admin/polls/vote/`. The page header includes the Django administration logo and a welcome message for user 'NAZIMA', with links for 'VIEW SITE', 'CHANGE PASSWORD', and 'LOG OUT'.

The left sidebar contains a navigation menu with the following sections:

- AUTHENTICATION AND AUTHORIZATION**
 - Groups (+ Add)
 - Users (+ Add)
- POLLS**
 - Choices (+ Add)
 - Polls (+ Add)
 - Votes (+ Add)** (highlighted)

The main content area is titled 'Select vote to change' and features a search bar and an 'ADD VOTE +' button. Below this, there is an 'Action:' dropdown menu set to '-----' and a 'Go' button, indicating that 0 of 6 votes are selected.

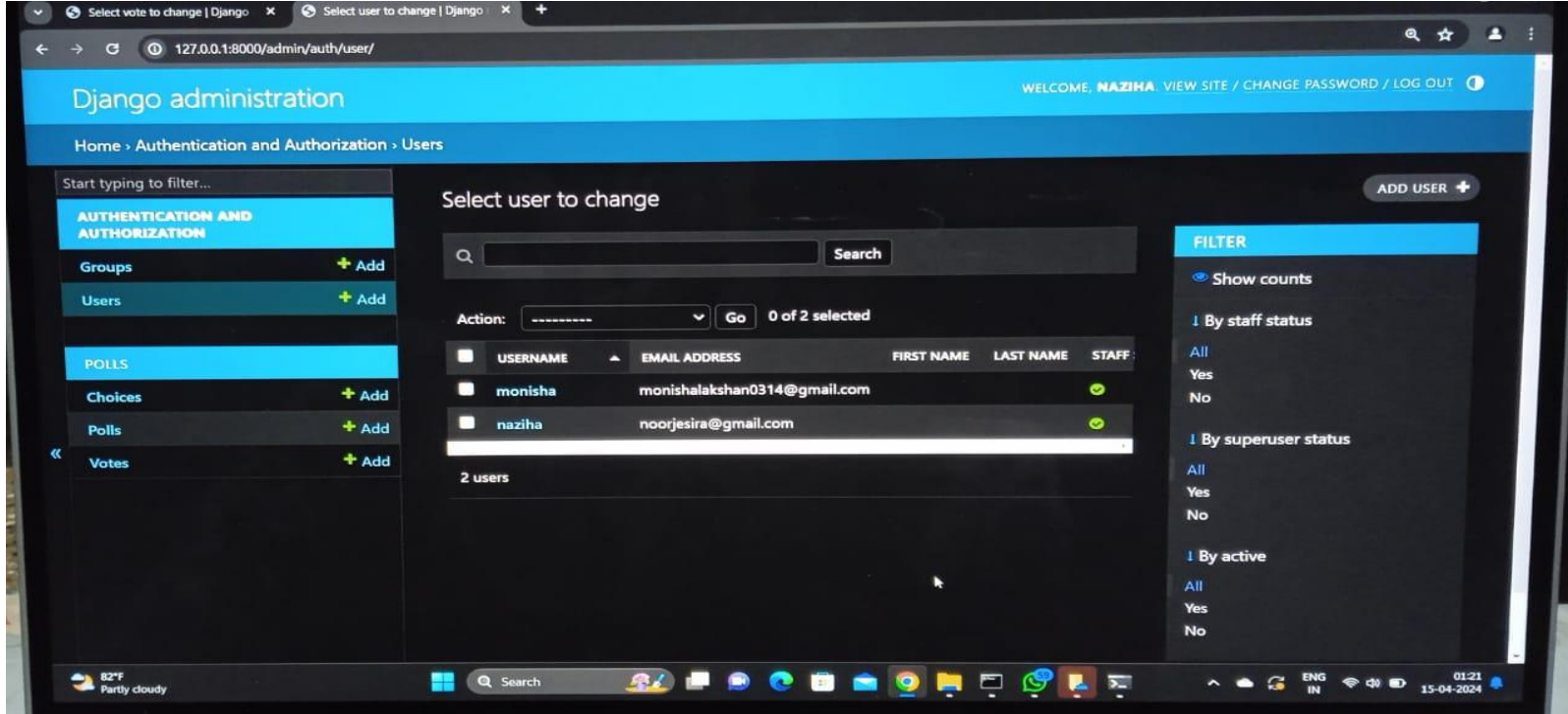
The table below lists the available votes:

CHOICE	POLL	USER	CREATED AT
<input type="checkbox"/> MVT principle in Django? - Model,View,Template	MVT principle in Django?	monisha	April 15, 2024, 12:13 p.m.
<input type="checkbox"/> who inverted the ballpoint - Biro Brothers	who inverted the ballpoint pen?	monisha	April 15, 2024, 12:13 p.m.
<input type="checkbox"/> what is the default datab - SQLite	what is the default database used in Django?	monisha	April 15, 2024, 12:12 p.m.
<input type="checkbox"/> what is Django in python? - a framework	what is Django in python?	monisha	April 15, 2024, 11:24 a.m.
<input type="checkbox"/> what is Django used for? - web development	what is Django used for?	monisha	April 15, 2024, 11:23 a.m.
<input type="checkbox"/> 'OS' computer abbreviato - operating system	'OS' computer abbreviation usually means?	monisha	April 15, 2024, 11:23 a.m.

At the bottom of the table, it indicates '6 votes'.

The Windows taskbar at the bottom shows the system clock as 01:24 on 15-04-2024, with the language set to ENG IN.

Authentication and Authorization Page



The screenshot displays the Django administration interface for the Authentication and Authorization section. The page title is "Django administration" and the user is logged in as "NAZIHA". The breadcrumb trail is "Home > Authentication and Authorization > Users".

Left Sidebar:

- Start typing to filter...**
- AUTHENTICATION AND AUTHORIZATION**
 - Groups [+ Add](#)
 - Users [+ Add](#)
- POLLS**
 - Choices [+ Add](#)
 - Polls [+ Add](#)
 - Votes [+ Add](#)

Main Content Area:

Select user to change

Search: [Search](#)

Action: [Go](#) 0 of 2 selected

	USERNAME	EMAIL ADDRESS	FIRST NAME	LAST NAME	STAFF
<input type="checkbox"/>	monisha	monishalakshan0314@gmail.com			<input checked="" type="checkbox"/>
<input type="checkbox"/>	naziha	noorjesira@gmail.com			<input checked="" type="checkbox"/>

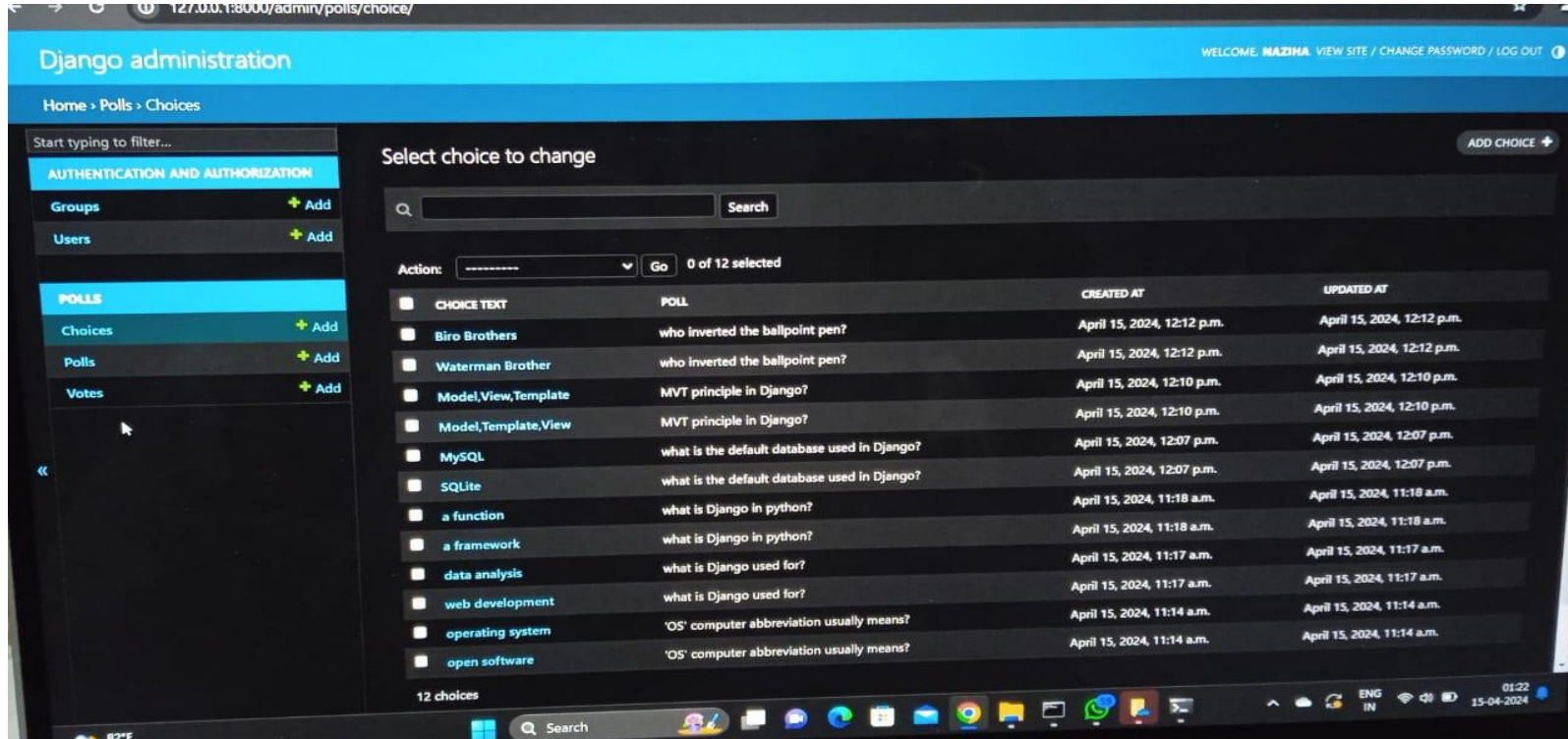
2 users

[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 Django administration interface for the 'polls' app, specifically the 'choices' section. The left sidebar shows the navigation menu with 'Polls' selected. The main content area is titled 'Select choice to change' and features a search bar and a table of existing choices.

Navigation: Home > Polls > Choices

Left Sidebar:

- Start typing to filter...
- AUTHENTICATION AND AUTHORIZATION
 - Groups + Add
 - Users + Add
- POLLS
 - Choices + Add
 - Polls + Add
 - Votes + Add

Main Content Area:

Select choice to change

ADD CHOICE +

Search: [] Search

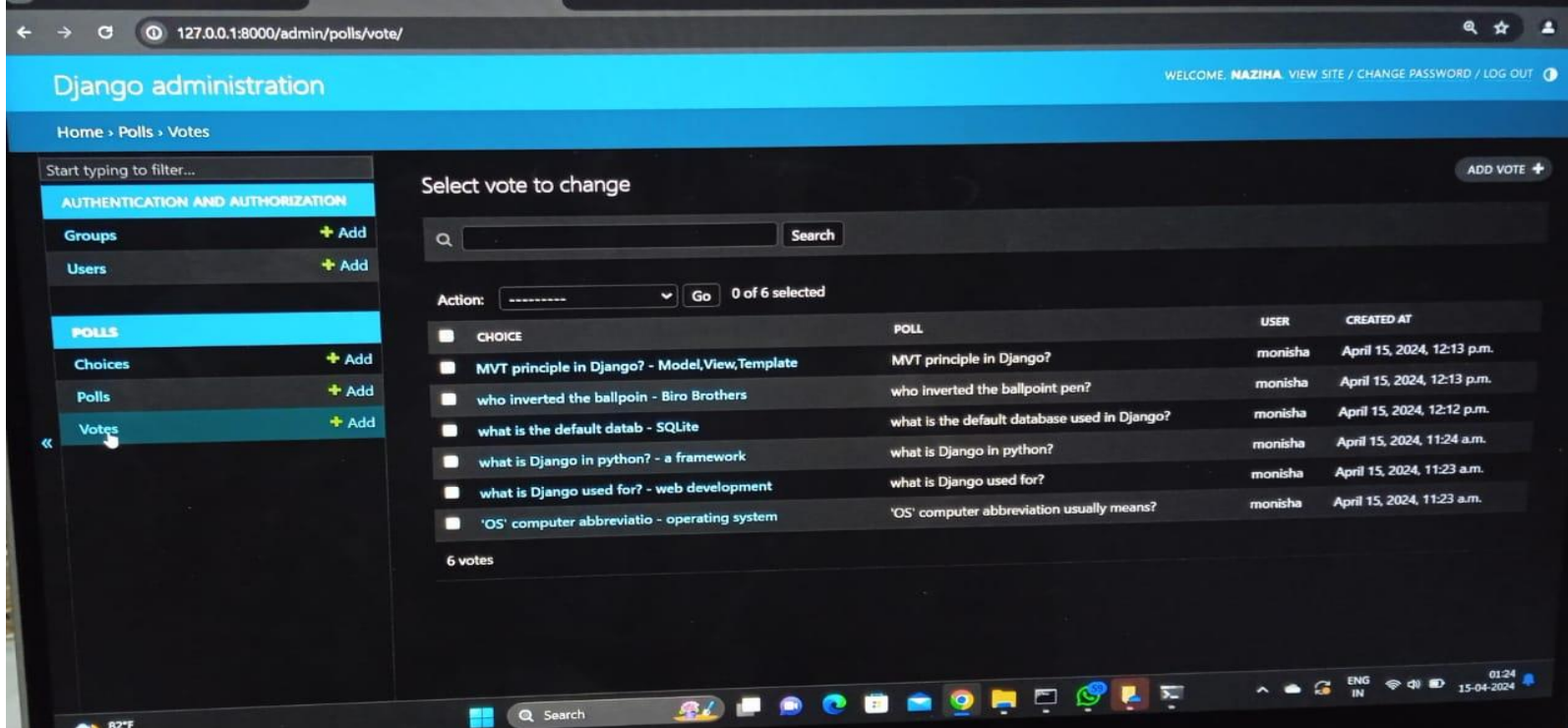
Action: [] Go 0 of 12 selected

CHOICE TEXT	POLL	CREATED AT	UPDATED AT
<input type="checkbox"/> Biro Brothers	who inverted the ballpoint pen?	April 15, 2024, 12:12 p.m.	April 15, 2024, 12:12 p.m.
<input type="checkbox"/> Waterman Brother	who inverted the ballpoint pen?	April 15, 2024, 12:12 p.m.	April 15, 2024, 12:12 p.m.
<input type="checkbox"/> Model,View,Template	MVT principle in Django?	April 15, 2024, 12:10 p.m.	April 15, 2024, 12:10 p.m.
<input type="checkbox"/> Model,Template,View	MVT principle in Django?	April 15, 2024, 12:10 p.m.	April 15, 2024, 12:10 p.m.
<input type="checkbox"/> MySQL	what is the default database used in Django?	April 15, 2024, 12:07 p.m.	April 15, 2024, 12:07 p.m.
<input type="checkbox"/> SQLite	what is the default database used in Django?	April 15, 2024, 12:07 p.m.	April 15, 2024, 12:07 p.m.
<input type="checkbox"/> a function	what is Django in python?	April 15, 2024, 11:18 a.m.	April 15, 2024, 11:18 a.m.
<input type="checkbox"/> a framework	what is Django in python?	April 15, 2024, 11:18 a.m.	April 15, 2024, 11:18 a.m.
<input type="checkbox"/> data analysis	what is Django used for?	April 15, 2024, 11:17 a.m.	April 15, 2024, 11:17 a.m.
<input type="checkbox"/> web development	what is Django used for?	April 15, 2024, 11:17 a.m.	April 15, 2024, 11:17 a.m.
<input type="checkbox"/> operating system	'OS' computer abbreviation usually means?	April 15, 2024, 11:14 a.m.	April 15, 2024, 11:14 a.m.
<input type="checkbox"/> open software	'OS' computer abbreviation usually means?	April 15, 2024, 11:14 a.m.	April 15, 2024, 11:14 a.m.

12 choices

Taskbar: 62°F, Search, Windows icons, ENG IN, 01:22 15-04-2024

Voting Details Page



The screenshot displays the Django administration interface for the 'polls' app, specifically the 'Votes' page. The interface is in a dark theme. The left sidebar shows the navigation menu with 'VOTES' selected. The main content area is titled 'Select vote to change' and features a search bar and a table of votes. The table has columns for 'CHOICE', 'POLL', 'USER', and 'CREATED AT'. There are 6 votes listed, all created by 'monisha' on April 15, 2024. The bottom of the screen shows a Windows taskbar with various application icons and system information.

Django administration

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

Home > Polls > Votes

Start typing to filter...

AUTHENTICATION AND AUTHORIZATION

- Groups [+ Add](#)
- Users [+ Add](#)

POLLS

- Choices [+ Add](#)
- Polls [+ Add](#)
- Votes** [+ Add](#)

Select vote to change

ADD VOTE +

Search

Action: Go 0 of 6 selected

CHOICE	POLL	USER	CREATED AT
<input type="checkbox"/> MVT principle in Django? - Model,View,Template	MVT principle in Django?	monisha	April 15, 2024, 12:13 p.m.
<input type="checkbox"/> who inverted the ballpoin - Biro Brothers	who inverted the ballpoint pen?	monisha	April 15, 2024, 12:13 p.m.
<input type="checkbox"/> what is the default datab - SQLite	what is the default database used in Django?	monisha	April 15, 2024, 12:12 p.m.
<input type="checkbox"/> what is Django in python? - a framework	what is Django in python?	monisha	April 15, 2024, 11:24 a.m.
<input type="checkbox"/> what is Django used for? - web development	what is Django used for?	monisha	April 15, 2024, 11:23 a.m.
<input type="checkbox"/> 'OS' computer abbreviatio - operating system	'OS' computer abbreviation usually means?	monisha	April 15, 2024, 11:23 a.m.

6 votes

82°F Search ENG IN 01:24 15-04-2024

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!