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UNIVERSITI
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CSC584

ENTERPRISE PROGRAMMING

Online Student Election Management System

USER MANUAL

Prepared for :

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1.0 Introduction

The Online Student Election Management System is a web-based application developed to support and enhance the management of campus elections. Although the university currently provides an online voting platform during election seasons, its functionality is limited mainly to vote submission and is only accessible for a short period of time. This can restrict administrative efficiency, data management, and transparency throughout the election process.

This project aims to improve the existing approach by providing a centralized and user-friendly system that supports election activities before, during, and after the voting period. The system enables secure user authentication, efficient management of election and candidate information, and accurate recording of voting data.

Developed using Java technology and the Model-View-Controller (MVC) architecture, the system integrates JavaBeans as the Model, JavaServer Pages (JSP) as the View, and Servlets as the Controller. A structured relational database is used to store election-related data such as users, candidates, courses, and votes, ensuring data consistency and integrity.

Overall, the Online Student Election Management System enhances transparency, improves administrative efficiency, and provides a reliable digital platform for conducting campus elections in a secure and organized manner.

2.0 System Objective

The main objective of the Online Student Election Management System is to provide a secure, efficient, and user-friendly platform for managing campus elections digitally. The specific objectives of the system are as follows:

- 1. To ensure secure and fair voting**

Implement authentication and validation mechanisms to ensure that only authorized students can vote and that each student can vote only once per election.

- 2. To manage election and candidate information effectively**

Allow administrators to create, update, view, and delete election, candidate, and course data using a structured database system.

- 3. Improve administrative efficiency**

Improve the current voting approach by developing a centralized and user-friendly system that enhances transparency, data management, and administrative efficiency throughout the election process.

3.0 Intended User

The Online Student Election Management System is designed for users directly involved in the campus election process. Each user group is assigned specific roles and access rights to ensure proper system usage and security.

1. Administrators

Administrators are responsible for managing and overseeing the entire election process. They can create and manage elections, register and update candidate information, manage course data, and monitor voting activities. Administrators also control user access rights, including disabling the voting ability of candidates to ensure fair elections.

2. Students (Voters)

Students act as voters in the election process. They are required to register and log in to the system before participating in any election. Students can view election details, candidate information, and cast their votes securely. The system ensures that each student can vote only once per election.

3. Candidates

Candidates are students who have been registered to participate in an election. Candidates are allowed to log in and view election information and their candidate details. However, candidates are not permitted to vote, as their voting capability is disabled by the administrator to prevent conflicts of interest and ensure election fairness.

4.0 System Requirements

To use the Online Student Election Management System, users must meet the following requirements:

- A device such as a desktop computer, laptop, tablet, or smartphone.
- A stable internet connection.
- A web browser such as Google Chrome, Mozilla Firefox, or Microsoft Edge.
- A registered administrator account provided and authorized by the system administrator(for Admin).

5.0 User Roles

The Online Student Election Management System supports the following user roles:

Administrator

- Manages elections, candidates, and course information.
- Manages user voting privileges.
- Monitors voting activities and views election results.
- Requires a registered admin account provided by the system administrator.

Student

- Views election and total student voted information.
- Casts a vote during an active election period.
- Can vote only once per election.
- Requires a registered student account.

Candidates

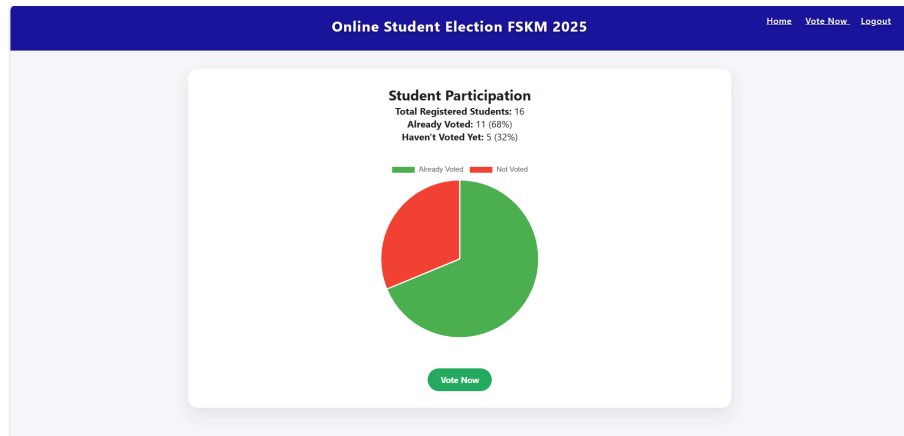
- Views election and personal candidate information.
- Does not have permission to vote.
- Voting ability is disabled by the administrator to ensure fairness.
- Requires a registered candidate account.

6.0 User Manual

This section describes how users interact with the Online Student Election System based on their assigned roles. The user manual explains the steps required to log in, navigate the system, and perform allowed actions.

Student Module	
Student Login	<div><div><div>Online Student Election FSKM</div><div><div>Student Login</div><div><div>Student ID</div><div></div></div><div><div>Password</div><div></div></div><div><div>Log In</div></div><div><div>Don't have an account? Sign Up</div><div>Admin Log In</div></div></div></div></div> <div><div><div>Online Student Election FSKM</div><div><div>Sign Up Form</div><div><div>Student ID</div><div></div></div><div><div>Full Name</div><div></div></div><div><div>Email</div><div></div></div><div><div>Password</div><div></div></div><div><div>Sign Up</div></div><div><div>Already have an account? Log In</div></div></div></div></div> <p>Students access the system through the login page by entering their Student ID and password.</p> <p>Upon successful authentication, the system creates a session and redirects the student to the Student Homepage.</p> <p>If invalid credentials are entered, the system redirects the user back to the login page.</p>

Student Homepage



The Student Homepage provides an overview of election participation. The following information is displayed:


- Total number of registered students
- Number of students who have voted
- Number of students who have not voted
- A pie chart representing voting participation


The navigation bar allows students to:


- View the homepage
- Proceed to voting
- Log out from the system




Voting Process



	<p>When a student selects Vote Now, the system checks whether the student has already voted.</p> <ul style="list-style-type: none"> • If the student has not voted, they are redirected to the Voting Page. • If the student has already voted, they are redirected to the Vote Success Page. <p>On the voting page, students are allowed to select a maximum of two candidates.</p> <p>The system validates the selection before storing the vote in the database.</p>
<p>Vote Confirmation</p>	 <p>After a successful vote submission:</p> <ul style="list-style-type: none"> • The vote is stored in the database • The student is marked as having voted • The system redirects the student to the Vote Success Page <p>Students are prevented from voting more than once.</p>

Candidate Module	
Candidate Login	<div><div>Online Student Election</div><div>FSKM</div><div><div>Student Login</div><div>Student ID</div><div><input type="text"/></div><div>Password</div><div><input type="password"/></div><div>Log In</div><div>Don't have an account? Sign Up</div><div>Admin Log In</div></div></div> <p>Candidates log in using their student credentials. The system identifies candidates based on records created by the administrator.</p>
Candidate Homepage	<div><div>Online Student Election FSKM 2025</div><div>HomeVote NowLogout</div><div><div>Student Participation</div><div>Total Registered Students: 16</div><div>Already Voted: 11 (68%)</div><div>Haven't Voted Yet: 5 (32%)</div><div><div>Already Voted</div><div>Not Voted</div><div></div><div>Vote Now</div></div></div><div><div>You are a candidate</div><div>Candidates are not allowed to vote.</div><div>Back</div></div></div>

	<p>Candidates have access to the homepage where election statistics are displayed.</p> <p>However, candidates are not allowed to vote.</p> <p>If a candidate attempts to access the voting page, the system redirects them to the Candidate Not Allowed Page.</p>
Administrator Module	
Administrator Login	<div><div>Online Student Election</div><div>FSKM</div><div><div>Admin Log In</div><div>Email</div><div><input type="text"/></div><div>Password</div><div><input type="password"/></div><div>Log In</div><div>Back to Student Login</div></div></div>
	<p>Administrators log in using a dedicated admin login page.</p> <p>Only authenticated administrators can access the dashboard and management features.</p>
Admin Dashboard	<div><div>Online Student Election FSKM 2025</div><div>DashboardManage CandidatesLog Out</div><div><div>Total Registered Students</div><div>17/100</div><div>Students Voted</div><div>11/100</div><div>Total Candidates</div><div>4</div><div>Candidates Result</div><div><div>alep eirwann Bachelor in Computer Science</div><div>17%</div></div></div></div>
	<p>The dashboard provides an overview of the election status, including:</p> <ul style="list-style-type: none">• Total registered students• Number of students who have voted

	<ul style="list-style-type: none">• Total number of candidates• Voting results for each candidate• Candidate distribution by course <p>All data displayed on the dashboard is retrieved dynamically from the database.</p>
Manage Candidates	<div><div>Online Student Election FSKM 2025</div><div>DashboardManage CandidatesLog Out</div><div><div>Candidates List</div><div><div>+ Add Candidate</div><div>Search by ID or name</div><div>All courses</div></div><div><div><div><div>alep eirwann Bachelor in Computer Science</div><div>EditDelete</div></div><div><div>Farah Afifah binti Ramlee Bachelor in Multimedia Computing</div><div>EditDelete</div></div><div><div>Amirah Aloysia binti Zulkhairi Bachelor in Software Engineering</div><div>EditDelete</div></div></div></div></div><p>The administrator can manage candidates through the Manage Candidates page.</p><p>The available actions include:</p><ul style="list-style-type: none">• Adding new candidates• Editing candidate information• Deleting candidates• Uploading candidate images<p>Any changes made by the administrator are reflected immediately in the system.</p></div>

7.0 Conclusion

In conclusion, the Online Student Election System was successfully developed to manage the student voting process in an organised and secure way. The system allows students to vote easily, prevents multiple voting, restricts candidates from voting, and enables administrators to manage candidates and monitor election results.

The use of a database ensures that all information such as students, candidates, and votes is stored properly and accurately. Overall, this system helps reduce manual work, improves efficiency, and ensures fairness in the election process. It is suitable for use in an academic environment and can be improved further in the future.