→21mcme08 -Sidhartha Ananthula

→21mcme06-Lakshmi Sai Srivatsa

WORKFLOW

Digital Electoral System for University Governance

Abstract:

This project aims to create an efficient and secure online voting system tailored to university settings. It is a web-based application accessible to the university community, facilitating accessible voting processes. The system incorporates features such as user authentication, candidate registration, real-time voting, result generation, and security measures. It ensures a user-friendly experience while maintaining the integrity and confidentiality of the voting process.

Functional Requirements:

The Online Voting System encompasses various functionalities to streamline the voting process within the university. The key components include:

1. User Login:
   - Regular users log in using their university credentials.

2. Candidate Registration:
   - Candidates register themselves for elections, providing necessary details.
   - The system allows the Dean of Students' Welfare to approve or reject candidate registrations.

3. Election Management:
   - The Election Commission creates and manages elections, defining eligibility criteria, voting periods, and managing ballots.

4. User Roles and Access Control:
   - Different user roles with varying privileges are defined.
   - "Manage User Roles" is performed by the Election Commission.

5. Voting Process:
   - Users cast their votes online during specified election periods.
   - The system ensures each user can vote only once and maintains the confidentiality of their choices.

6. Result Generation:
   - Real-time results are generated after the completion of the voting process.

7. Notification System:
   - The system sends alerts and updates to users, such as confirmation of successful voting, and when results are available.

Accordingly, the privileges for each type of user are:

Voter:
- Log in securely to the system using their university credentials.
- Cast votes during the specified election period.
- View real-time election results.
- Upon successful casting of the vote, receive a confirmation notification.

Candidate:
   Other than the privileges of a voter:
- Register for elections by providing the necessary details.
- Monitor their candidacy status.

Election Commission:
- Log in securely to the system using authorized credentials.
- Create and manage elections, defining eligibility criteria, and voting periods.

Dean of Students Welfare:
- Log in securely to the system using authorized credentials.
- Approve or reject candidate registrations.
- Access specific reports relevant to student participation or other areas under their purview.

Additional Notes:
- Ensure the system is designed with security measures to protect user data and prevent unauthorized access or manipulation.
- Make the voting process accessible to all eligible voters, regardless of technical abilities or disabilities.
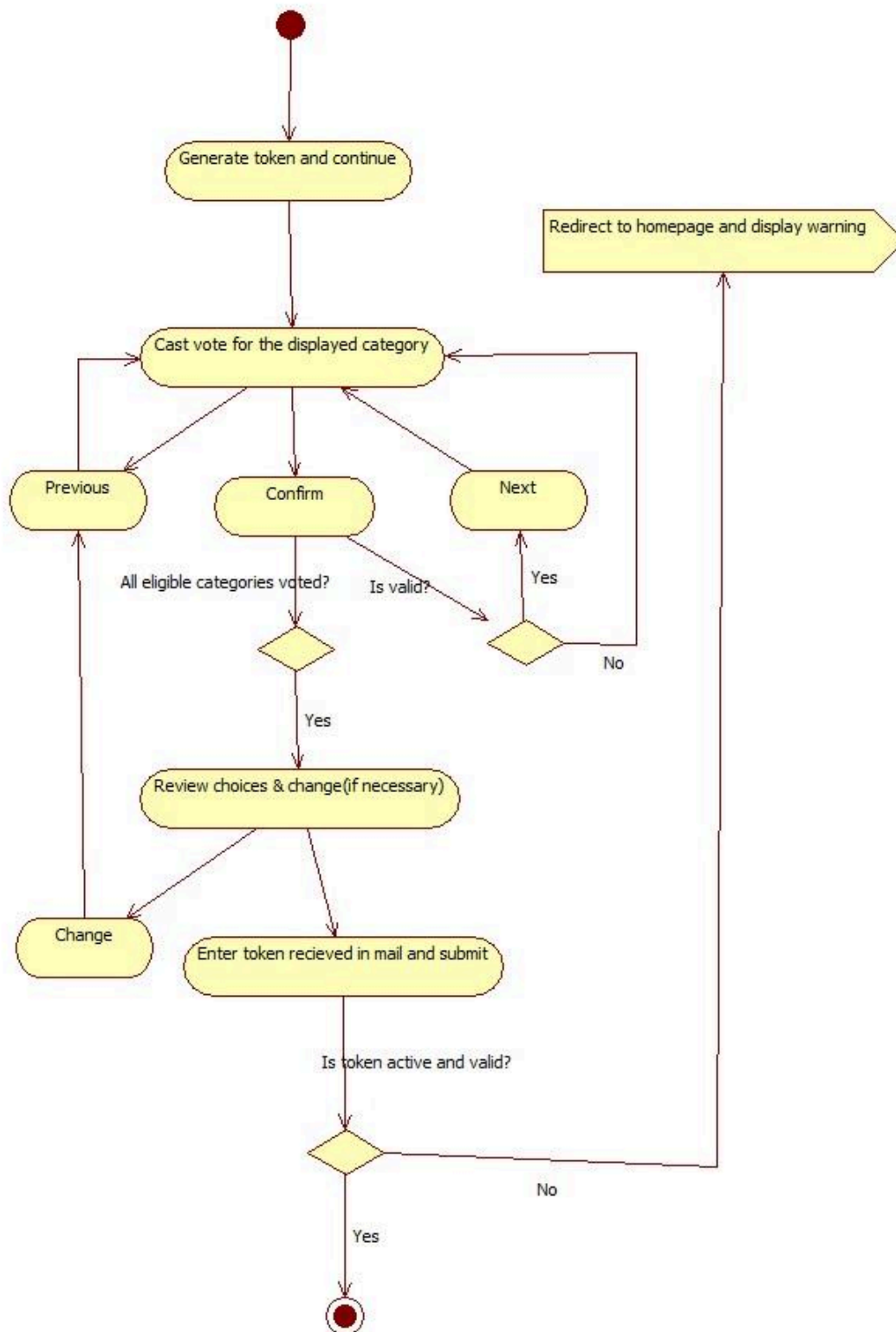
Refined USE CASE DIAGRAM
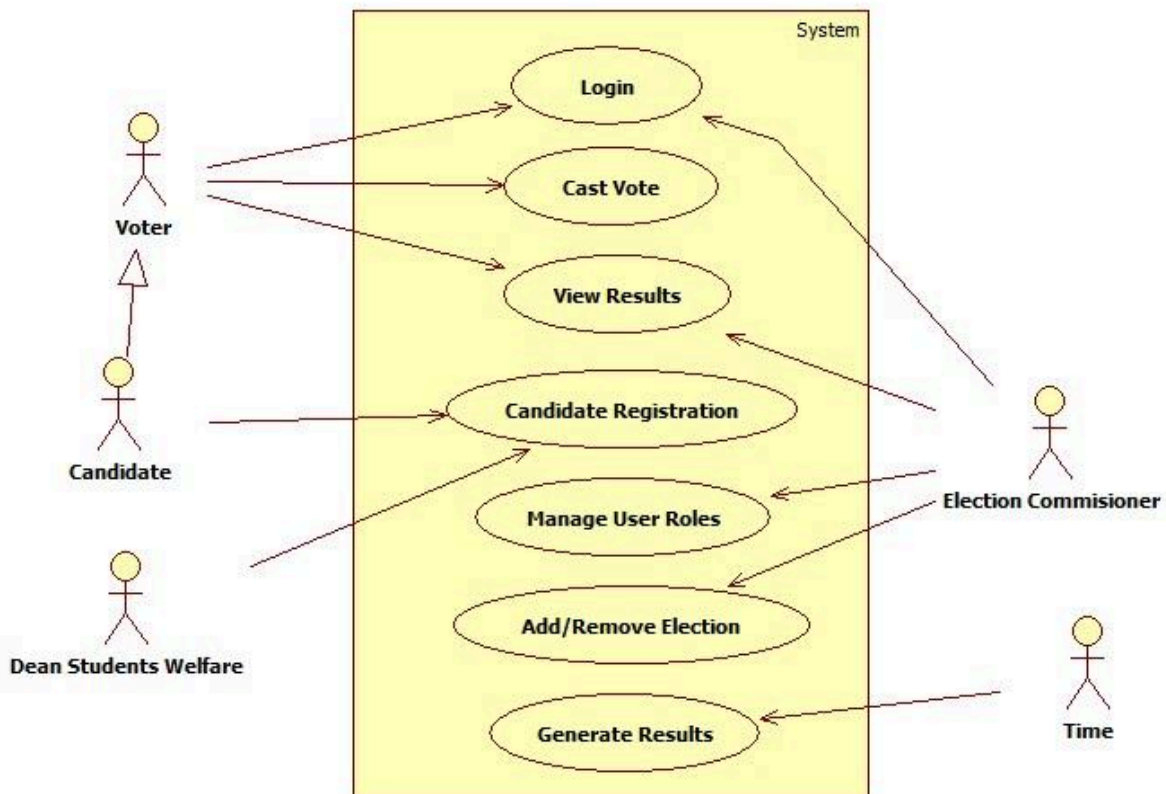
USE CASE SPECIFICATION - CAST VOTE

Use Case ID:	002		
Use Case Name:	Cast Vote		
Created By:	Sidhartha Srivatsa	Last Updated By:	Sidhartha Srivatsa
Date Created:	09-02-2024	Date Last Updated:	09-02-2024

Actors:	Voter
Description:	The user casts their vote
Preconditions:	Login use case has to be executed successfully
Postconditions:	Casted votes are recorded with the token used
Normal Flow:	1. Generate token - token is sent to registered university email 2. Cast your vote for the respective candidate 3. Confirm and Next [A2] (OR) Previous 4. Repeat steps 3 to 4 through all the candidates for which the user is eligible to vote 5. Review your choices and change, if necessary 6. Enter the token and Submit [A1]
Alternative Flows:	A1. If the token is invalid or expired, redirect to the home page and show a warning message A2. Validation of the choices
Exceptions:	
Includes:	
Priority:	High
Frequency of Use:	Frequently
Business Rules:	
Assumptions:	

ACTIVITY DIAGRAM

Generate token and continue

Redirect to homepage and display warning

Cast vote for the displayed category

Previous

Confirm

Next

All eligible categories voted?

Is valid?

Yes

No

Yes

Review choices & change(if necessary)

Change

Enter token recieved in mail and submit

Is token active and valid?

No

Yes

SEQUENCE DIAGRAM