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I confirm that I understand my coursework needs to be submitted online via My Second Teacher under the relevant module page before the deadline in order for my assignment to be accepted and marked. I am fully aware that late submissions will be treated as non-submission and a mark of zero will be awarded.

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E-VOTING Documentation

# Introduction

## Project Description

The Voting Website is a web application designed to facilitate democratic voting processes. It provides a platform for users to register as voters, securely log in, view candidate profiles, and cast their votes for preferred candidates.

## Current Scenario

In many democratic systems, traditional voting methods can be cumbersome, inefficient, and prone to errors. Long queues at polling stations, logistical challenges, and limited accessibility hinder the democratic process. The Voting Website addresses these issues by offering an online platform for convenient and efficient voting.

## Problem Domain and Project as a Solution

The problem domain encompasses the challenges associated with traditional voting methods, including accessibility barriers, logistical complexities, and security concerns. The Voting Website serves as a solution by providing a user-friendly, secure, and transparent platform for democratic voting, thereby overcoming the limitations of traditional voting systems.

## Aim and Objectives

The aim of the Voting Website is to empower individuals to exercise their democratic right to vote effectively and contribute to the democratic process. The objectives include:

- Providing a user-friendly interface for voter registration and login.

- Displaying candidate profiles to help voters make informed decisions.

- Implementing secure voting functionality to ensure the integrity of the voting process.

- Enhancing accessibility and convenience by offering an online voting platform.

## Structure of the Report

- Introduction: Provides an overview of the project, including its description, current scenario, problem domain, aim, and objectives.

- Background: Explores the end user, system architecture, functions, features, and technical aspects of the Voting Website.

- Development: Discusses the selected methodology, phases of development, software requirement specification (SRS), and design process.

- Testing and Analysis: Covers testing procedures and analysis of the Voting Website's performance and functionality.

- Conclusion: Summarizes the project, discusses legal, social, and ethical issues, outlines advantages and limitations, and suggests future work.

- References: Lists sources and materials referenced throughout the documentation.

# Background

## End User

The end users of the Voting Website include eligible voters who wish to participate in democratic elections or decision-making processes. These users may vary in demographics, including age, education, and socioeconomic background.

## System Architecture

The system architecture of the Voting Website consists of frontend and backend components. The frontend includes HTML, CSS, and JavaScript files for the user interface, while the backend comprises Node.js, Express.js, and MySQL for server-side processing and database management.

## Functions and Feature

Key functions and features of the Voting Website include voter registration, secure login, candidate profile display, voting functionality, and contact information for user inquiries.

## Review of Technical Aspects

Technical aspects of the Voting Website encompass frontend and backend technologies, database management, security measures, and usability considerations.

# Development

## Selected Methodology

The development methodology chosen for the Voting Website is Agile, allowing for iterative development, flexibility, and continuous feedback from stakeholders.

## Phases of Methodology

The development process includes phases such as planning, design, implementation, testing, and deployment. Each phase involves collaboration between development teams, stakeholders, and end users.

## Software Requirement Specification (SRS)

The SRS document outlines functional and non-functional requirements of the Voting Website, including user stories, use cases, system constraints, and performance criteria.

## Design

The design phase involves creating wireframes, mockups, and prototypes to visualize the user interface and user experience (UI/UX) of the Voting Website. Design decisions prioritize usability, accessibility, and aesthetics.

## Testing and Analysis

The testing phase includes unit testing, integration testing, and user acceptance testing to ensure the reliability, security, and functionality of the Voting Website. Analysis involves evaluating test results and identifying areas for improvement.

# Conclusion

## Legal, Social, and Ethical Issues

Considerations of legal compliance, social impact, and ethical considerations are essential for the development and deployment of the Voting Website. Measures must be taken to protect user privacy, ensure data security, and adhere to electoral regulations.

## Advantages of Voting Website

The Voting Website offers several advantages, including increased accessibility, convenience, efficiency, transparency, and participation in the democratic process.

## Limitations

Despite its benefits, the Voting Website may face limitations such as technological barriers, digital divide, cybersecurity risks, and potential for voter manipulation.

## Future Work

Future work on the Voting Website could include enhancements in security, usability, accessibility, scalability, and integration with emerging technologies such as blockchain for enhanced transparency and integrity of the voting process.