**A yellow and blue logo

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**Kasiglahan Village, San Jose, Rodriguez, Rizal**

**INSTITUTE OF COMPUTER STUDIES**

**I-VoteNow Documentation Online Voting System a New Way of Voting Process**

**DEVELOPERS**

**PROJECT MANAGER**

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**UI/UX DESIGNER**

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**BACHELOR OF SCIENCE IN COMPUTER ENGINEERING (2-C)**

**DOCUMENTATION**

**PART I (PLANNING)**

***Introduction***

Introducing I-Vote Now, an innovative online application designed to streamline and modernize the voting process. Our platform provides a secure, user-friendly, and accessible environment for voters to participate in elections from the comfort of their homes. With a focus on enhancing democratic participation and ensuring the integrity of the voting process, I-Vote Now is a significant step forward in the evolution of electoral systems.

***Significance***

I-Vote Now revolutionizes traditional voting methods by addressing common barriers such as long wait times, geographical constraints, and accessibility issues. By offering a digital solution, we aim to increase voter turnout, ensure accuracy in vote counting, and provide a transparent and trustworthy platform for election management. Our commitment to security and user experience makes I-Vote Now a critical tool in the advancement of modern democracy, empowering citizens to have their voices heard in a more efficient and inclusive manner.

* The background and context of the problem being addressed on our website is that it is not widely accessible to the public due to a lack of interactivity in the design. Consequently, it is currently only available on the desktop display. Additionally, we are not yet confident in the security, as the platform allows anyone to sign up.

***OBJECTIVES***

1. Provide an Easy and Friendly Interface
   * Ensure the voting process is straightforward and user-friendly, making it accessible for all students.
2. Secure Personal Information
   * Protect the personal information of every voter, ensuring privacy and confidentiality.
3. Ensure Integrity of Votes
   * Guarantee that each vote cast is securely recorded and accurately reflects the voter’s intention.
4. Enhance Accessibility
   * Make the platform available to as many students as possible, focusing on ease of use across different devices.
5. Build User Confidence
   * Develop robust security measures to instill confidence in users about the safety and reliability of the voting system.

**SCOPE**

- The website allows students to vote in a secure and user-friendly manner.

- Each user is permitted to cast only one vote per voting event.

- The voting process is designed to protect personal information and ensure the integrity of each vote.

**LIMITATIONS**

- Users are restricted to one vote per person, with no option to modify or change the vote once it has been cast.

- Access to critical files, such as the vote.php file, is restricted to prevent unauthorized access and tampering.

- Once a vote is submitted, the system will not accept any further votes from the same user, enforcing a strict one-time voting policy.

***ROLES AND RESPONSIBILITIES***

Our website project, I-Vote Now, is designed to provide students with a secure, user-friendly voting platform. To achieve this, we have assembled a dedicated team, each member bringing their unique skills and expertise to the project. Below are the roles and responsibilities of each team member:

**Project Manager (Shairen Jade Rivera)**

- Overseeing the entire project, ensuring it stays on schedule and meets all objectives.

- Coordinating between team members and stakeholders to facilitate effective communication.

- Managing project risks and resolving any issues that arise.

-Managing the timeline developing and maintaining project schedules, ensuring timely delivery of tasks.

-Manage to do the documentation of the software project.

**Developer (Kenneth Gonzales)**

- Designing and implementing the core functionality of the voting system.

- Ensuring the website is responsive, user-friendly, and secure.

- Leading the development team and reviewing code for quality assurance.

- Creating the user interface and ensuring a seamless user experience.

- Implementing interactive elements to enhance usability.

- Collaborating with the design team to maintain visual consistency.

- Developing and managing the server-side logic and database.

- Ensuring secure data handling and storage.

- Implementing features that support the voting process and user authentication.

**Tester/ Business Analyst (Christian Pascual)**

- He plays a dual role, combining the analytical prowess needed for business analysis with the meticulous nature required for testing. Their responsibilities include:

- Testing the website for bugs, usability issues, and security vulnerabilities.

- Ensuring the platform operates smoothly across different devices and browsers.

- Providing feedback to the development team for improvements.

-Evaluating current business processes and identifying areas for improvement.

**UI/UX Designer (Justin Felizario)**

- Designing the visual elements of the website to ensure a cohesive and appealing look.

- Conducting user research to inform design decisions.

- Creating wireframes, prototypes, and user flow diagrams.

-Reviewing UI designs to ensure they meet usability standards and provide a positive user experience.

Ensuring that each member of our team plays a crucial role in ensuring the success of I-Vote Now, contributing their expertise to create a secure, accessible, and efficient voting platform for students.

**Software Development Cycle**

The Iterative SDLC model does not need the full list of requirements before the project starts. The development process may start with the requirements to the functional part, which can be expanded later. The process is repetitive, allowing to make new versions of the product for every cycle. Every iteration (which last from two to six weeks) includes the development of a separate component of the system, and after that, this component is added to the functional developed earlier.

We evaluate the project scope, requirements, and constraints for our online voting system. After discussing with our team, we choose the Iterative SDLC model because it allows for flexibility, continuous improvement, and the ability to incorporate feedback throughout the development process.

A diagram of a software development process

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**Week 1: Requirements Gathering and Design**

* Gather requirements from stakeholders, including election officials, voters, and administrators.
* Analyze requirements and prioritize features for the initial iteration.
* Design the system architecture, user interface, and database schema.

**Week 2: Initial Implementation and Testing**

* Begin implementation of core functionality: user authentication, candidate registration, and ballot creation.
* Develop basic voting functionality and result viewing for administrators.
* Conduct unit testing of implemented features

**Week 3: Iterative Development and Feedback**

* Gather feedback from stakeholders on the implemented features.
* Revise and enhance the user interface based on feedback.
* Implement additional features such as voter registration and ballot verification.
* Conduct integration testing to ensure seamless operation of all features.

**Week 4: Testing and Refinement**

* Conduct user acceptance testing with a limited group of users.
* Address any issues or bugs identified during testing.
* Optimize performance and security measures.
* Finalize documentation and prepare for deployment.

**Week 5: Deployment and Evaluation**

* Deploy the online voting system to a test environment for final evaluation.
* Conduct a comprehensive evaluation of the system's functionality, usability, and security.
* Gather feedback from stakeholders and users on the deployed system.
* Make necessary revisions and enhancements based on feedback

**Week 6: Final Testing and Launch**

* Conduct thorough testing of the revised system.
* Perform security audits and ensure compliance with regulatory standards.
* Prepare for the official launch of the online voting system.
* Address any last-minute issues or concerns.
* Official launch of the online voting system.

**Gantt Chart**

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The Gantt Chart visually represents the project schedule, highlighting key phases, milestones, and the duration of each task involved in the development and deployment of the LMS.

**PART II (SOFTWARE REQUIREMENT ELICITATION/ GATHERING)**

**TECHNIQUE**

* **Brainstorming Sessions**

To ensure we gathered all possible ideas that might help our project, we organized a series of brainstorming sessions. These sessions served as a crucial stepping stone in our development process, providing a platform to create and explore ideas, challenge assumptions, and foster innovation. During these sessions, we collectively generated several ideas that we later implemented in our project. Before starting the website, we convened to share our thoughts on its design and content, ensuring everyone's opinions were heard, which significantly improved our planning process. We compiled information exclusively from online sources, exploring various websites to gather relevant data for the software project.

**PROTOTYPING**

Prototyping in software projects is like making a rough draft before writing the final version of a story. It's a quick and basic version of the software that helps developers and users understand how the final product might look and work.

Prototyping is important because it allows:

**Early Feedback**: Users can see and interact with the prototype to provide feedback, helping developers understand what features are needed or what changes should be made.

**Clarification of Requirements:** It helps in clarifying and refining the requirements of the software by visualizing them in action.

**Reduced Risk:** Prototyping helps in identifying potential issues or challenges early in the development process, reducing the risk of costly mistakes later on.

**i-VoteNow Prototype**

The wireframe serves as a blueprint for the design and layout, highlighting key components and their placement within the interface.

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**DOCUMENT ANALYSIS**

Document analysis was performed on existing online voting system documentation to identify essential features and workflow inefficiencies.

This included:

* Reviewing current processes for voter registration, ballot casting, and result tabulation.
* Analyzing existing reports and user records to understand data management requirements.
* Identifying gaps and areas for improvement in the current system.

**Functional Requirements**

* **User Registration and Authentication:** Secure and efficient methods for users to register and authenticate their accounts.
* **Candidate and Election Management:** Features to add and manage candidates and elections, including scheduling and candidate information.
* **Ballot Casting:** A secure and user-friendly interface for casting votes.
* **Result Tabulation and Reporting:** Accurate and real-time tabulation of votes with detailed reporting features.
* **Vote Receipt and Result:** Voters can view a receipt of their vote and see the overall election results.
* **One-Vote**: The software implements a one-vote policy, allowing each student to submit only one vote.

**Non-functional Requirements**

* **Performance:** The system should handle up to 100 concurrent users without performance degradation.
* **Security:** User data and votes must be protected from unauthorized access.
* **Usability:** The interface should be intuitive, accessible, and easy to navigate for all users, including those with disabilities.

**PART III (DESIGN)**

illustrates the wireframe for the main user interface of the Online Voting System (OVS). The wireframe serves as a blueprint for the design and layout of the OVS, highlighting key components and their placement within the interface.

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**Key Components:**

* Header Section:
  + Located at the top of the interface.
  + Includes the i-VN logo, navigation bar (NAV1, NAV2)
* Body:
  + Positioned below the header.
  + Contains Login Form and buttons For verification, Link to navigate Sign Up
* Sign Up Form:
  + Occupies the central portion of the interface.
  + Initially displays a promotional for our website
  + Contains Textboxes to fill up with information’s
* Voting form:
  + Positioned prominently in the main content area.
  + Showcases a list of candidates, including radio buttons.
  + Each list entry includes a number, name, of candidates.
* Footer Section:
  + Located at the bottom of the interface.
  + Contains Promotional for Developer name.

**Interactive Elements:**

* Navigation Links:
  + Enable easy access to different sections of the OVS.
  + Highlight the current section to provide clear navigation context.
* Radio Buttons & Buttons:
  + In the voting system, radio buttons allow voters to select options, like candidates, from a list. Buttons, such as "Submit" and "Next," facilitate actions like casting votes and navigating through the system.

User Experience Considerations:

* Intuitive Layout:
  + Designed to be user-friendly with a clean and organized structure.
  + Ensures that essential features are easily accessible and prominently displayed.
* Responsive Design:
  + Wireframe accounts for various screen sizes and devices, ensuring a seamless experience across desktops, tablets, and smartphones.
* Accessibility:
  + - Incorporates accessibility features such as keyboard navigation and screen reader compatibility to ensure usability for all users, including those with disabilities.
    - The software implements a one-vote policy, allowing each student to submit only one vote.
    - Users are required to register with a unique ID Number.
    - During registration, users provide their full name, year, and course.
    - The system includes a sign-in feature for added security.
    - It maintains a list of registered voters and their details.
    - Upon voting, users receive a vote receipt for confirmation.