**Phase 1: Requirement Refinement and Finalization (October 1 - October 15)**

**Main Objective:**  
To refine and finalize the project requirements ensuring clarity and completeness, setting a solid foundation for the subsequent phases of the project.

Sub-tasks:

1. **Internal review of requirements:**
   * **Objective:** To ensure that all gathered requirements are accurate, clear, and complete.
   * **Details:** The project team will review the initially collected requirements through team meetings and document reviews, ensuring they align with the project goals and stakeholder expectations.
   * **Outcome:** A refined set of requirements that are ready for stakeholder review.
   * **Start Date:** October 1
   * **Duration:** 3 days
   * **Dependency:** None
2. **Consultation with stakeholders for any additional requirements:**
   * **Objective:** To gather any additional requirements or modifications from stakeholders.
   * **Details:** Organize stakeholder meetings or feedback sessions to uncover any additional requirements or clarifications, ensuring the project aligns with stakeholder expectations.
   * **Outcome:** An enriched set of requirements that reflect stakeholder needs and expectations.
   * **Start Date:** October 4
   * **Duration:** 4 days
   * **Dependency:** Completion of internal review
3. **Finalization of the requirement document:**
   * **Objective:** To have a finalized document that clearly outlines the project requirements.
   * **Details:** Incorporate feedback from the internal review and stakeholder consultations into the requirement document, finalizing it for use in the subsequent phases of the project.
   * **Outcome:** A finalized Requirement Specification Document that will guide the design and development phases.
   * **Start Date:** October 8
   * **Duration:** 5 days
   * **Dependency:** Completion of stakeholder consultations

**Phase 2: System Architecture and Detailed Design (October 16 - October 31)**

**Main Objective:**  
To develop a robust system architecture and detailed design that will guide the development phase.

Sub-tasks:

1. **Selection of technologies and frameworks:**
   * **Objective:** To choose the appropriate technologies and frameworks that will support the implementation of the project requirements.
   * **Details:** Assess various technologies and frameworks based on the project needs, considering factors such as scalability, maintainability, and compatibility.
   * **Outcome:** A defined tech stack that is suited for the project needs.
   * **Start Date:** October 16
   * **Duration:** 4 days
   * **Dependency:** Finalized Requirement Specification Document
2. **Detailed design of system modules:**
   * **Objective:** To create a detailed design of each system module ensuring they fulfill the project requirements.
   * **Details:** Develop detailed design documents outlining how each module will function, interact with other modules, and how they will be implemented.
   * **Outcome:** A comprehensive design blueprint ready for the development phase.
   * **Start Date:** October 20
   * **Duration:** 5 days
   * **Dependency:** Defined Tech Stack
3. **Database design and API specification:**
   * **Objective:** To design the database schema and specify the APIs that will facilitate communication between the frontend and backend.
   * **Details:** Design the database schema based on the data requirements, and specify the APIs detailing the endpoints, methods, and data formats.
   * **Outcome:** A ready-to-implement database design and a clear API specification to guide backend development.
   * **Start Date:** October 25
   * **Duration:** 3 days
   * **Dependency:** Completed Design Documents
4. **UI/UX design:**
   * **Objective:** To design user interfaces and user experiences that are intuitive and meet the usability requirements of the project.
   * **Details:** Create wireframes, mockups, and prototypes of the user interfaces, ensuring they align with the usability and accessibility standards.
   * **Outcome:** Ready-to-implement UI/UX designs for the frontend development.
   * **Start Date:** October 28
   * **Duration:** 4 days
   * **Dependency:** None

**Phase 3: Development (November 1 - November 30)**

**Main Objective:**  
To implement the system as per the design, ensuring all functionalities are correctly implemented and integrated.

Sub-tasks:

1. **Backend development for handling user registration, application submission, etc.:**
   * **Objective:** To develop the backend logic that will handle user interactions such as registration and application submission.
   * **Details:** Code the backend services and APIs that will process user registrations, application submissions, and other backend functionalities.
   * **Outcome:** A functioning backend ready for integration with the frontend.
   * **Start Date:** November 1
   * **Duration:** 10 days
   * **Dependency:** Completed Database Design and API Specification
2. **Frontend development for user interfaces:**
   * **Objective:** To implement the user interfaces as per the UI/UX design.
   * **Details:** Code the frontend components, ensuring they are intuitive, accessible, and align with the project's usability standards.
   * **Outcome:** A user-friendly frontend ready for integration with the backend.
   * **Start Date:** November 1
   * **Duration:** 15 days
   * **Dependency:** Finalized UI/UX Designs
3. **Database setup and data modeling:**
   * **Objective:** To set up the database and implement the data models as per the database design.
   * **Details:** Set up the database environment, implement the schema, and ensure that data integrity and security measures are in place.
   * **Outcome:** A well-structured database ready for data storage and retrieval.
   * **Start Date:** November 1
   * **Duration:** 10 days
   * **Dependency:** Completed Database Design
4. **Development of automated notification system:**
   * **Objective:** To develop an automated notification system for keeping users informed about relevant updates.
   * **Details:** Implement the logic for sending automated notifications via email or in-app notifications based on specific triggers.
   * **Outcome:** An automated notification system that enhances user engagement and keeps them informed.
   * **Start Date:** November 11
   * **Duration:** 10 days
   * **Dependency:** Completed Backend Development
5. **Integration of front-end with back-end services:**
   * **Objective:** To integrate the frontend and backend components ensuring seamless communication between them.
   * **Details:** Establish the necessary connections between frontend and backend, ensuring data flows correctly and securely across the system.
   * **Outcome:** A fully integrated system ready for testing.
   * **Start Date:** November 21
   * **Duration:** 10 days
   * **Dependency:** Completed Frontend and Backend Development

**Phase 4: Testing and Quality Assurance (December 1 - December 5)**

**Main Objective:**  
To ensure that the system meets all the functional and non-functional requirements, is bug-free, and ready for deployment.

Sub-tasks:

1. **Unit and integration testing:**
   * **Objective:** To ensure that individual components and integrated components work as expected.
   * **Details:** Write and execute unit tests for individual components, and integration tests for testing the interactions between different components.
   * **Outcome:** A system with identified and fixed bugs, ready for user acceptance testing.
   * **Start Date:** December 1
   * **Duration:** 2 days
   * **Dependency:** Completed System Integration
2. **User acceptance testing:**
   * **Objective:** To ensure that the system meets the user and business requirements.
   * **Details:** Conduct user acceptance testing with end-users to ensure the system meets their expectations and the project requirements.
   * **Outcome:** A system validated by end-users, ready for deployment.
   * **Start Date:** December 3
   * **Duration:** 1 day
   * **Dependency:** Completed Unit and Integration Testing
3. **Performance and security testing:**
   * **Objective:** To ensure the system performs well under load and is secure from potential threats.
   * **Details:** Conduct performance testing under various loads, and security testing to identify and fix any vulnerabilities.
   * **Outcome:** A robust and secure system ready for deployment.
   * **Start Date:** December 4
   * **Duration:** 2 days
   * **Dependency:** Completed User Acceptance Testing

**Phase 5: Deployment and Delivery (December 6 - December 9)**

**Main Objective:**  
To deploy the system to a production environment, ensuring it meets all stakeholder requirements.

Sub-tasks:

1. **Setup of production environment:**
   * **Objective:** To prepare the production environment for deployment.
   * **Details:** Set up the servers, databases, and other necessary infrastructure for deploying the application to a production environment.
   * **Outcome:** A production environment ready for deployment.
   * **Start Date:** December 6
   * **Duration:** 1 day
   * **Dependency:** Completed Performance and Security Testing
2. **Deployment of application:**
   * **Objective:** To deploy the application to the production environment.
   * **Details:** Deploy the backend services, frontend application, and set up any necessary monitoring tools.
   * **Outcome:** A live system accessible to end-users.
   * **Start Date:** December 7
   * **Duration:** 1 day
   * **Dependency:** Setup of production environment
3. **Final review meeting with stakeholders:**
   * **Objective:** To ensure that all requirements have been met and gather any final feedback from stakeholders.
   * **Details:** Conduct a final review meeting with stakeholders to go over the project and ensure all requirements have been fulfilled.
   * **Outcome:** Final approval from stakeholders and readiness for post-deployment support.
   * **Start Date:** December 8
   * **Duration:** 1 day
   * **Dependency:** Deployment of application

**Phase 6: Post-Deployment Support and Monitoring (December 9- December 10)**

**Main Objective:**  
To provide support for any post-deployment issues and monitor the system for any unexpected behavior.

Sub-tasks:

1. **Setup monitoring tools:**
   * **Objective:** To have a monitoring system in place to track the system’s performance and any unexpected behavior.
   * **Details:** Set up monitoring tools to track system performance, error rates, and other relevant metrics.
   * **Outcome:** A monitoring system that provides insights into the system’s performance and health.
   * **Start Date:** December 9
   * **Duration:** 1 day
   * **Dependency:** Deployment of application
2. **Provide training and support documentation:**
   * **Objective:** To ensure that users have the necessary knowledge and resources to use the system effectively.
   * **Details:** Create and distribute user manuals, conduct training sessions, and provide a support channel for users to report issues or seek assistance.
   * **Outcome:** Well-informed users and a support system for addressing user issues.
   * **Start Date:** December 9
   * **Duration:** 1 day
   * **Dependency:** Deployment of application
3. **Address any post-deployment issues or bugs:**
   * **Objective:** To ensure that any issues or bugs encountered post-deployment are quickly addressed.
   * **Details:** Set up a process for reporting and addressing bugs, ensuring that any reported issues are resolved in a timely manner.
   * **Outcome:** A stable system with minimized post-deployment issues.
   * **Start Date:** December 9
   * **Duration:** 2 days (crossing into the next phase)
   * **Dependency:** Deployment of application

**Phase 7: Documentation and Final Review (December 10- December 11)**

**Main Objective:**  
To finalize all project documentation and conduct a review to evaluate the project process and outcome.

Sub-tasks:

1. **Finalization of system documentation:**
   * **Objective:** To have complete and up-to-date documentation for the system.
   * **Details:** Update and finalize all system documentation including technical specifications, user manuals, and system architecture diagrams.
   * **Outcome:** Comprehensive documentation for future reference and support.
   * **Start Date:** December 10
   * **Duration:** 1 day
   * **Dependency:** Completion of all previous phases
2. **Conducting a lessons learned session:**
   * **Objective:** To gather insights from the project for future improvements.
   * **Details:** Conduct a lessons learned session with the project team and stakeholders to discuss what went well, what didn’t, and what could be done differently in future projects.
   * **Outcome:** Valuable insights for improving future projects.
   * **Start Date:** December 10
   * **Duration:** 1 day
   * **Dependency:** Completion of all previous phases
3. **Project closure:**
   * **Objective:** To formally close the project, ensuring all deliverables are accepted and all objectives are met.
   * **Details:** Conduct a project closure meeting, finalize all project documentation, and ensure all deliverables are handed over to the stakeholders or maintenance teams.
   * **Outcome:** A successfully closed project with all objectives met and deliverables handed over.
   * **Start Date:** December 11
   * **Duration:** 1 day
   * **Dependency:** Conducting a lessons learned session

**Owners**

Phase 1: Requirement Refinement and Finalization (October 1 - October 15)

* Owners: Project Manager (PM)

Phase 2: System Architecture and Detailed Design (October 16 - October 31)

* Sub-tasks 1 & 2 Owners: Development Team Lead (DTL)
* Sub-task 3 Owners: Development Team Lead (DTL), DevOps Engineer
* Sub-task 4 Owners: Documentation and Training Coordinator (DTC)

Phase 3: Development (November 1 - November 30)

* Sub-tasks 1, 4 & 5 Owners: Development Team Lead (DTL)
* Sub-task 2 Owners: Development Team Lead (DTL), Documentation and Training Coordinator (DTC)
* Sub-task 3 Owners: DevOps Engineer

Phase 4: Testing and Quality Assurance (December 1 - December 5)

* All Sub-tasks Owners: Quality Assurance Lead (QAL)

Phase 5: Deployment and Delivery (December 6 - December 9)

* Sub-tasks 1 & 2 Owners: DevOps Engineer
* Sub-task 3 Owners: Project Manager (PM)

Phase 6: Post-Deployment Support and Monitoring (December 9- December 10)

* Sub-task 1 Owners: DevOps Engineer
* Sub-tasks 2 & 3 Owners: Documentation and Training Coordinator (DTC), Quality Assurance Lead (QAL)

Phase 7: Documentation and Final Review (December 10- December 11)

* Sub-task 1 Owners: Documentation and Training Coordinator (DTC)
* Sub-tasks 2 & 3 Owners: Project Manager (PM)

**Gantt Chart:**

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