

Kanban Board Project Week 5 Deliverable

Week 5 (September 2 - September 6)

Stage 3: Core Development and Testing (continued)

Objective: Continue core development and testing and prepare for deployment.

Backend Team:

- **September 3: Initial Deployment**
 - **Deploy the Application:**
 - Deploy the backend services on Google Cloud Platform (GCP) for internal testing.
 - Set up necessary GCP services, including Compute Engine, Cloud SQL, and Cloud Storage.
 - Configure environment variables, deployment scripts, and ensure secure connections.
 - **Database Configuration:**
 - Ensure the MongoDB database is correctly connected to the deployed backend.
 - Configure database security, backups, and performance monitoring.
- **September 4-5: Testing**
 - **Unit Testing:**
 - Write and execute unit tests for individual backend modules, focusing on key functionalities like user authentication, project management, and task handling.
 - Use tools like Mocha or Jest for testing.
 - **Integration Testing:**
 - Conduct integration testing to ensure that all backend components work seamlessly together.
 - Test interactions between different API endpoints and the database.
 - **Load Testing:**
 - Perform load testing using tools like Apache JMeter or Locust to evaluate backend performance under stress.
 - Identify bottlenecks and optimize where necessary.
 - **Bug Fixes:**
 - Identify and resolve any issues or bugs discovered during testing.
 - Refactor code for improved performance and reliability.
- **September 6: Security Enhancements Preparation**

- **Prepare for Security Implementation:**
 - Review current security configurations and identify potential vulnerabilities.
 - Plan for secure API practices, such as moving from HTTP to HTTPS.
 - Prepare for implementing data encryption, secure token storage, and enhancing role-based access control.
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Frontend Team:

- **September 3: Initial Deployment**
 - **Deploy the Frontend Application:**
 - Deploy the frontend on Google Cloud Storage (GCS) and configure it with a Content Delivery Network (CDN) for efficient content delivery.
 - Ensure that the frontend is properly connected to the deployed backend.
 - **Environment Configuration:**
 - Set up environment-specific variables for the frontend.
 - Test the deployment in different environments (development, staging).
- **September 4-5: Testing**
 - **Component Testing:**
 - Write unit tests for individual React components using tools like Jest and React Testing Library.
 - Ensure that components such as Login, Dashboard, and Task Board work as expected.
 - **End-to-End Testing:**
 - Conduct end-to-end testing with tools like Cypress to simulate user interactions and verify the full user flow.
 - Test user scenarios for different roles (Admin, Project Manager, Volunteer).
 - **Responsive and Cross-Browser Testing:**
 - Test the application on different devices and browsers to ensure responsive design and compatibility.
 - **Bug Fixes:**
 - Address any front-end bugs discovered during testing.
 - Ensure that UI components are optimized for performance.
- **September 6: Security Enhancements Preparation**
 - **Prepare for Security Implementation:**
 - Plan for implementing secure communication using HTTPS.
 - Prepare for data encryption and secure handling of sensitive user information.
 - Review and improve frontend security practices, including secure token storage.

UI/UX Team:

- **September 2-3: Design Finalization for Deployment**
 - **Design Handoff for Deployment:**
 - Ensure all design elements are finalized and handed off to the frontend team for deployment.
 - Confirm that the deployed application matches the design specifications.
- **September 4-5: Usability Testing**
 - **Conduct Usability Testing:**
 - Work with testers to conduct usability tests focusing on the ease of use for different user roles.
 - Gather feedback on the user interface and experience, identifying any pain points or areas for improvement.
 - **Iterate on Feedback:**
 - Based on feedback, make adjustments to the design where necessary.
 - Ensure that the design remains user-friendly and intuitive.
- **September 6: Security Enhancements Preparation**
 - **Review UX for Security Features:**
 - Collaborate with the frontend and backend teams to review the design and implementation of security features.
 - Ensure that security measures like authentication prompts and secure data handling do not compromise user experience.