Kanban Board Project Week 4 Deliverable

Week 4 Deliverables (August 26 - August 30)

Stage 3: Core Development and Testing Objective: Develop core functionalities, integrate frontend with backend, and perform thorough testing.

Backend Team:

August 26-27: Core API Development

- **Task 1: Task Management API Endpoints**
  - Develop API endpoints for creating, updating, and deleting tasks.
  - Implement logic for task assignment to specific users.
  - Ensure that tasks can be updated with status changes (e.g., "In Progress," "Completed").
  - Test these endpoints using tools like Postman to verify correct functionality and error handling.
- **Task 2: Comments and Notifications API Endpoints**
  - Develop API endpoints to allow users to add, edit, and delete comments on tasks.
  - Implement notification mechanisms for task updates, including assignment changes, status updates, and new comments.
  - Ensure notifications are delivered to the appropriate users based on their roles and task involvement.
  - Validate these endpoints with testing tools to ensure they work as expected.
- **Task 3: Advanced Business Logic Implementation**
  - Implement advanced business logic, including role-based task assignment and conditional task status updates.
  - Ensure tasks can only be updated by authorized users (e.g., only the assigned user or project manager can update the task status).
  - Conduct thorough testing to ensure the accuracy of business logic under various scenarios.

August 30: Authentication Implementation

- **Task 4: User Authentication and Authorization**
  - Set up user authentication using JSON Web Tokens (JWT) for secure session management.
  - Implement role-based access control (RBAC) to define different levels of access based on user roles (Admin, Project Manager, Volunteer).
  - Secure API endpoints by integrating middleware to verify JWTs and enforce RBAC.

○ Test authentication flow, including login, session persistence, and access control, to ensure security and usability.

Frontend Team:

August 28-29: Frontend Components Development

- **Task 1: Task Board Component**
  - ○ Implement the Task Board component to visually display tasks assigned to users.
  - ○ Use drag-and-drop functionality to allow users to move tasks between different statuses (e.g., "To Do," "In Progress," "Completed").
  - ○ Integrate the Task Board with backend APIs to fetch tasks and update their statuses in real-time.
  - ○ Ensure that the Task Board is responsive and user-friendly, providing clear visual cues for different task states.
- **Task 2: Task Details Component**
  - ○ Develop the Task Details component to allow users to view detailed information about a task.
  - ○ Include functionality for users to update task details, such as changing the status or reassigning the task.
  - ○ Integrate with the backend API to save updates and reflect changes in the Task Board.
  - ○ Implement input validation and error handling to ensure data integrity.
- **Task 3: Comments and Notifications Components**
  - ○ Implement the Comments component to display and manage user comments on tasks.
  - ○ Allow users to add, edit, and delete comments, with real-time updates.
  - ○ Develop the Notifications component to alert users about important updates, such as task assignments and status changes.
  - ○ Ensure seamless integration with backend APIs to fetch and display real-time notifications.

UI/UX Team:

August 28-29: Design Integration and Testing

- **Task 1: Finalize UI Components for Task Management**
  - ○ Work closely with the frontend team to ensure the Task Board, Task Details, and Comments components adhere to the design system.
  - ○ Focus on creating an intuitive and visually appealing user interface, ensuring consistency in design elements like colors, typography, and spacing.
  - ○ Provide feedback and iterate on the design to improve usability and user satisfaction.
- **Task 2: Usability Testing and Feedback**

- ○ Conduct usability testing sessions with a small group of users to evaluate the user interface and user experience.
- ○ Gather feedback on the overall look and feel, ease of navigation, and clarity of information presented in the Task Board and Task Details components.
- ○ Work with the frontend team to make necessary adjustments based on the feedback received.

August 30: Final Authentication Design and Integration

- ● **Task 3: Design Authentication and Authorization Interfaces**
  - ○ Finalize the design of login, registration, and role-based access interfaces.
  - ○ Ensure a smooth user flow for authentication processes, focusing on clarity and security.
  - ○ Review the frontend implementation to ensure it aligns with the design system and provides a consistent user experience.
- ● **Task 4: Feedback and Iteration**
  - ○ Gather feedback from stakeholders and users on the authentication interfaces.
  - ○ Make any necessary design adjustments to enhance usability and security.
  - ○ Ensure that all changes are properly documented and communicated to the development teams.

Testing and Quality Assurance:

August 30: End-to-End Testing

- ● Conduct end-to-end testing to ensure all components, from the backend API to the frontend UI, work seamlessly together.
- ● Test user scenarios for each role (Admin, Project Manager, Volunteer) to ensure that all functionalities, such as task management, comments, and notifications, are functioning as expected.
- ● Identify any bugs or issues, and prioritize fixes to be addressed in the following week.

These deliverables for Week 4 ensure the core functionalities are developed, thoroughly tested, and integrated, setting the stage for final testing and deployment in the upcoming weeks.