

Given the project's scope and the team size, the sprint duration is set to 21 days. Here's a proposed sprint schedule with user tasks from different epics and an associated technical infrastructure activity for each sprint:

Sprint 1 (Days 1-21)

User Stories:

- Epic 1: User Story 1 (Register for a new account using email and password)
- Epic 1: User Story 2 (Receive a confirmation email upon successful registration)
- Epic 2: User Story 1 (Search for products by keyword, category, and price range)

Technical Infrastructure Activity:

- Set up a secure authentication system, including database schema for user accounts and integration with an email service provider for confirmation emails ⁵.

Sprint 2 (Days 22-42)

User Stories:

- Epic 1: User Story 3 (Reset password)
- Epic 1: User Story 4 (Update personal information in account settings)
- Epic 2: User Story 3 (Filter search results by various criteria)

Technical Infrastructure Activity:

- Implement a password reset mechanism with secure token generation and email service integration. Update the user profile management system to handle personal information changes ⁵.

Sprint 3 (Days 43-63)

User Stories:

- Epic 1: User Story 5 (Link social media accounts for easier login)
- Epic 2: User Story 2 (See personalized product recommendations)
- Epic 3: User Story 1 (Add products to shopping cart from the product detail page)

Technical Infrastructure Activity:

- Integrate social media authentication APIs and develop a recommendation engine that leverages user browsing and purchase history data ⁵.

Sprint 4 (Days 64-84)

User Stories:

- Epic 2: User Story 4 (Receive real-time notifications for new products, promotions, and price drops)
- Epic 3: User Story 2 (View and edit the contents of the shopping cart before checking out)
- Epic 3: User Story 3 (Apply discount codes and see the adjusted total price)

Technical Infrastructure Activity:

- Build a notification system for real-time alerts and enhance the shopping cart system to include editing capabilities and discount code application logic ⁵.

Sprint 5 (Days 85-105)

User Stories:

- Epic 3: User Story 4 (Select different shipping and payment options during checkout)
- Epic 3: User Story 5 (Receive an order confirmation email with purchase details)

Technical Infrastructure Activity:

- Integrate with multiple shipping carriers and payment gateways. Ensure the checkout process is streamlined and secure. Set up an order confirmation email system ⁵.

This sprint plan ensures a balanced workload across sprints, with each sprint focusing on a mix of user stories from different epics. The technical infrastructure activities are aligned with the user stories to ensure that the necessary systems and tools are in place to support the new features being developed.