

Assignment-1: Scrum Development Plan Online Shopping System

Instructor: Usama Musharaf

Submitted by: Muhammad Abdullah (22P-9371)

Abdullah (22P-9358)

Saim Haider (22P-9244)

Subject: Software Engineering

BCS-6C

March 02, 2025

Introduction

This document outlines the Scrum development plan for an Online Shopping System. The system enables users to browse products, manage carts, make payments, track orders, and maintain profiles. Development follows Scrum principles with incremental sprints.

1 Task 1: Product Backlog

The Product Backlog lists key features as Product Backlog Items (PBIs).

Table 1: Product Backlog Items

ID	PBI Description
1	Product Browsing - View catalog with categories and filters
2	Search Functionality - Search products by keywords or attributes
3	Shopping Cart - Add, remove, or update cart items
4	User Registration - Create account with email and password
5	User Login - Secure login to account
6	Secure Checkout - Payments via credit cards or digital wallets
7	Order Tracking - Real-time order status viewing
8	User Profile Management - Update personal details and preferences
9	Product Reviews - Rate and review purchased products
10	Order History - View past orders with details

2 Task 2: Sprint Backlog

The 10 PBIs are split: 5 for Sprint 1, 3 for Sprint 2, and 2 for Sprint 3.

2.1 Sprint 1 Backlog (PBIs 1–5)

1. **Product Browsing:** Design UI, implement filtering, add sorting.
2. **Search Functionality:** Build search bar, integrate keyword search, enable filters.
3. **Shopping Cart:** Create UI, add "Add to Cart," enable updates/removal.
4. **User Registration:** Design form, validate email/password, store data.
5. **User Login:** Design form, implement authentication, add "Forgot Password."

2.2 Sprint 2 Backlog (PBIs 6–8)

1. **Secure Checkout:** Design UI, integrate payment gateway, confirm payments.
2. **Order Tracking:** Create status UI, link real-time updates, notify users.
3. **User Profile Management:** Design editing UI, allow updates, save changes.

2.3 Sprint 3 Backlog (PBIs 9–10)

1. **Product Reviews:** Design submission UI, allow ratings/comments, display reviews.
2. **Order History:** Create UI, fetch/display past orders, include details.

3 Task 3: User Stories

User stories follow the format: *As a [user role], I want to [feature] so that [benefit].*

3.1 Sprint 1 User Stories

1. **Product Browsing:** As a shopper, I want to browse products by category and sort by price so that I can find items within my budget and preferences.
2. **Search Functionality:** As a shopper, I want to search products using keywords or filters so that I can quickly locate specific items.
3. **Shopping Cart:** As a shopper, I want to add items to my cart and adjust quantities so that I can prepare my order before checkout.
4. **User Registration:** As a new user, I want to create an account with email and password so that I can save preferences and order history.
5. **User Login:** As a registered user, I want to log in securely so that I can access my cart and details.

3.2 Sprint 2 User Stories

1. **Secure Checkout:** As a shopper, I want to make secure payments with my credit card or digital wallet so that I can complete purchases quickly and safely.
2. **Order Tracking:** As a customer, I want to track my order status in real-time so that I know when to expect delivery.
3. **User Profile Management:** As a registered user, I want to update my details and preferences so that my account reflects my current needs.

3.3 Sprint 3 User Stories

1. **Product Reviews:** As a customer, I want to rate and review purchased products so that I can share my experience with others.
2. **Order History:** As a registered user, I want to view past orders with details so that I can track my shopping history.

4 Task 4: Acceptance Criteria

Acceptance criteria are clear, testable, and measurable.

4.1 Sprint 1 Acceptance Criteria

1. Product Browsing

- Displays products by categories (e.g., electronics).
- Sort by price (low-to-high/high-to-low) updates in ≤ 2 seconds.
- Filters (e.g., brand) reflect accurate results.

2. Search Functionality

- Keyword search returns results in ≤ 3 seconds.
- Filters (e.g., size) refine results dynamically.
- Non-existent product shows "No results found."

3. Shopping Cart

- "Add to Cart" updates cart icon with item count.
- Quantity changes update total price instantly.
- Removal reflects in cart within 1 second.

4. User Registration

- Valid email/password (8+ chars) creates account, redirects to login.
- Existing email shows "Email already in use."
- Data is encrypted and stored securely.

5. User Login

- Correct credentials log in, redirect to homepage in ;2 seconds.
- Incorrect password shows "Invalid credentials."
- "Forgot Password" sends reset link to email.

4.2 Sprint 2 Acceptance Criteria

1. Secure Checkout

- Displays credit card and digital wallet (e.g., PayPal) options.
- Valid payment processes in ;5 seconds, redirects to confirmation.
- Invalid details show "Payment declined, check details."

2. Order Tracking

- Shows status (e.g., "Shipped") for each order.
- Updates reflect within 1 minute of backend change.
- Order click shows tracking details and delivery estimate.

3. User Profile Management

- Edit name/address saves in ;2 seconds.
- Invalid address shows "Provide complete address."
- Updates are visible immediately on profile revisit.

4.3 Sprint 3 Acceptance Criteria

1. Product Reviews

- Post-delivery, allows 1–5 star rating and 500-char review.
- Reviews appear on product page in ;10 seconds.
- Non-purchased product shows "Only review purchased items."

2. Order History

- Lists orders with number/date/cost/status in ;3 seconds.
- Order click expands to itemized details.
- Orders ;1 year are archived, accessible via "Show Archived."