Software Development Life Cycle and Agile Principles

Assignment 1: Agile Project Planning - Create a one-page project plan for a new software feature using Agile planning techniques. Include backlog items with estimated story points and a prioritized list of user stories.

Project Overview

- New Feature: Online Food Ordering and Delivery System for a Restaurant Chain

Product Backlog (Estimated Story Points)

1. User Registration and Login (3)
2. Browse Menu and Select Items (5)
3. Add Items to Cart and Place Order (8)
4. Track Order Status (5)
5. Payment Integration (8)
6. Delivery Logistics and Driver Assignment (13)
7. Restaurant Dashboard for Order Management (10)
8. Ratings and Reviews System (5)
9. Promotional Offers and Discounts (5)
10. Loyalty Program Integration (8)

Prioritized User Stories

1. **Browse Menu and Select Items (5)**
    - As a customer, I want to be able to browse the restaurant's menu, view item details, and select items to order, so that I can easily place my food order.
    - Acceptance Criteria:
        - User can view the full menu with categories and item details
        - User can add items to the cart and specify quantities

        - User can remove items from the cart or modify quantities
2. **Add Items to Cart and Place Order (8)**
    - As a customer, I want to be able to add selected items to the cart, review my order, and place the order, so that I can complete the food ordering process.
    - Acceptance Criteria:
        - User can review the cart with item details and total cost
        - User can provide delivery address or select pickup option
        - User can choose payment method and complete the order
        - Order confirmation is displayed with estimated delivery time
3. **Restaurant Dashboard for Order Management (10)**
    - As a restaurant staff member, I want to have a dashboard to manage incoming orders, so that I can efficiently process and fulfill customer orders.
    - Acceptance Criteria:
        - Staff can view a list of new and ongoing orders
        - Staff can update order status (accepted, prepared, dispatched)
        - Staff can assign orders to delivery drivers
4. **Delivery Logistics and Driver Assignment (13)**
    - As a restaurant manager, I want to be able to assign orders to available delivery drivers and track their delivery progress, so that orders are delivered efficiently.
    - Acceptance Criteria:
        - Manager can view a list of available delivery drivers
        - Manager can assign orders to drivers based on location and availability
        - Drivers can update delivery status and mark orders as completed
5. **Payment Integration (8)**

    - As a customer, I want to be able to securely pay for my order using various payment methods, so that I can complete the transaction conveniently.
    - Acceptance Criteria:
        - User can choose from multiple payment options (credit/debit card, digital wallets, cash on delivery)
        - Payment gateway integration for secure transactions
        - Payment confirmation and receipt are provided after successful payment

This example project plan includes a product backlog with estimated story points and a prioritized list of user stories for an online food ordering and delivery system. The user stories cover key features such as menu browsing, order placement, payment integration, restaurant order management, and delivery logistics.

Assignment 2: Daily Standup Simulation - Write a script for a Daily Standup meeting for a development team working on the software feature from Assignment 1. Address a common challenge and incorporate a solution into the communication flow.

Here's a script for a Daily Standup meeting for a development team working on the Online Food Ordering and Delivery System software feature, addressing a common challenge and incorporating a solution into the communication flow.

Scrum Master: Good morning, everyone! Let's start today's Daily Standup. As a reminder, we'll go around and each team member will briefly share their progress, any blockers, and their plan for today. Let's start with you, Alex.

Sanjay(Front-end Developer): Sure, yesterday I completed the implementation of the menu browsing feature, allowing users to view the full menu with categories and item details. Today, I'll be

working on the cart functionality, where users can add items, modify quantities, and review their order.

Scrum Master: Great, thanks, Alex. Sarah, what's your update?

Shirish(Back-end Developer): Yesterday, I made progress on the order placement API, handling the submission of orders and generating order confirmations. However, I'm currently facing a challenge with the integration of the payment gateway. The documentation provided by the payment service provider is quite outdated, and I'm unsure about the proper way to implement secure transactions.

Scrum Master: Okay, that's a valid concern. Let's address this after the standup and involve our technical lead, Mark, to provide guidance on the payment gateway integration.

Dadapeer(Technical Lead): Sure, I've worked with that payment gateway before. After the standup, Sarah and I can review the documentation together and explore alternative approaches if needed.

Scrum Master: Sounds good. Thank you, Mark. John, how about you?

Sudheer(DevOps Engineer): Yesterday, I set up the deployment pipeline for the staging environment and tested the continuous integration process. Today, I'll be working on configuring the production environment and ensuring seamless deployments.

Scrum Master: Excellent. And finally, Emma, what's your update?

Venky(QA Engineer): Yesterday, I finalized the test cases for the menu browsing feature and started testing the cart functionality. Today, I'll continue with cart testing and prepare for the upcoming payment integration testing.

Scrum Master: Great, thanks for the updates, everyone. Before we wrap up, let's discuss the challenge Sarah raised about the payment gateway integration. Mark, could you please share your thoughts and suggest a solution?

Dadapeer: Absolutely. From my experience, the documentation for that payment gateway can be confusing, and there have been some changes in their API over time. My suggestion would be to reach out to their support team and request updated documentation or seek clarification on the proper implementation steps. Additionally, we could explore third-party libraries or SDKs that simplify the integration process and provide better support.

Shirish: That's a great idea. I'll contact their support team and gather more information. If needed, we can also look into alternative libraries or SDKs to streamline the integration.

Scrum Master: Sounds like a solid plan. Let's keep this on our radar and provide any necessary support to Sarah. If there are no further questions or concerns, we'll wrap up today's standup. Thank you, everyone, for your updates and participation.

In this script, the team addresses a common challenge faced by Sarah, the back-end developer, regarding the integration of the payment gateway. The Scrum Master facilitates the discussion, and Mark, the technical lead, suggests a solution by reaching out to the payment service provider's support team and exploring alternative libraries or SDKs.

The script demonstrates effective communication, collaboration, and problem-solving within the team, ensuring that challenges are addressed promptly and solutions are provided to keep the project moving forward.