

Project Assignment 1: Rewards Program & Sustainability Points System

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CPS 714

Software Project Management

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Manar Alafi

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Business Case for Rewards Program & Sustainability Points System

September 29th, 2024

Project Name: Rewards Program & Sustainability Points System

1.0 Introduction/ Background

GreenGrove Farms, a leading figure in organic farming and sustainable agriculture, seeks to enhance customer engagement and promote eco-friendly practices through the development of a **Rewards Program & Sustainability Points System**. The system will be integrated into the company's new Client Engagement Web Portal, rewarding customers, retailers, and partners for sustainable actions such as purchasing organic products and participating in environmentally conscious behaviors. This initiative aligns with GreenGrove Farms' mission of fostering sustainable agricultural practices and encouraging responsible consumption.

2.0 Business Objective

The objective of this project is to create a seamless **Rewards Program & Sustainability Points System** that incentivizes customers, retailers, and partners to engage in sustainable actions. The system will:

- Increase customer engagement and loyalty.
- Promote environmentally friendly practices.
- Enhance GreenGrove Farms' reputation as a leader in sustainability. The program will provide a platform where users can earn points, redeem rewards, and track their contributions to sustainability.

3.0 Current Situation and Problem/Opportunity Statement

Currently, GreenGrove Farms does not have a dedicated system for recognizing or rewarding customers' and partners' sustainable behaviors. This creates an opportunity to build stronger relationships and encourage eco-friendly actions through a formalized rewards system. The proposed program will not only strengthen customer loyalty but also differentiate GreenGrove Farms from competitors by showcasing its commitment to sustainability through direct incentives.

4.0 Critical Assumption and Constraints

Assumptions:

- Users are motivated by rewards for sustainable actions.
- The integration of the rewards system with existing web portal features will be smooth.
- The budget of \$20,000 will cover development, testing, and deployment of the system.

Constraints:

- The project must be completed within the two-month timeframe (September 29 to November 29, 2024).
- Budget limitations require efficient allocation of resources to avoid exceeding the \$20,000 budget.
- Integration with the client engagement portal must not disrupt other ongoing sub-projects.

5.0 Analysis of Options and Recommendation

Option 1: Develop a standalone rewards program separate from the client engagement portal.

Pros: Simpler to implement, fewer dependencies on other systems.

Cons: Misses the opportunity for a seamless user experience, leading to potential user dissatisfaction.

Option 2: Fully integrate the rewards program into the existing client engagement web portal.

Pros: Offers a seamless user experience, improves engagement, and ensures all sustainability efforts are centralized in one system.

Cons: More complex, may increase development time and require additional testing.

Recommendation: Proceed with **Option 2** to ensure a unified and seamless user experience. Although this option may be more complex, it aligns best with GreenGrove Farms' goal of enhancing customer engagement and sustainability efforts.

6.0 Preliminary Project Requirements

- Develop a points accumulation system tied to sustainable actions (e.g., eco-friendly purchases).
- Expand the rewards catalog to include eco-conscious rewards such as discounts on organic products.
- Integrate the rewards system with existing account management and tracking functionalities in the client engagement web portal.
- Ensure users can redeem points easily through their online accounts.

7.0 Budget Estimate and Financial Analysis

The estimated budget for the project is **\$20,000**, which will cover:

- **Development:** \$10,000
- **Testing and Quality Assurance:** \$3,000
- **Training and Documentation:** \$2,000
- **Deployment and Integration:** \$4,000

- **Contingency:** \$1,000

Financial projections suggest that the rewards program will increase customer retention by 15%, leading to a significant boost in repeat purchases, ultimately driving greater long-term profitability for GreenGrove Farms.

8.0 Schedule Estimate

Project Start Date: September 29, 2024

Project End Date: November 29, 2024

Key Milestones:

- Requirements Gathering: October 7, 2024
- Design and Development: October 28, 2024
- Testing: November 15, 2024
- Deployment: November 29, 2024

9.0 Potential Risks

Risk of Delays: Integration with the client engagement portal may take longer than anticipated, which could push back the project deadline.

Budget Overrun: Unexpected technical challenges during integration could increase costs.

Low User Adoption: If users do not fully understand the rewards program, adoption may be lower than expected, reducing its overall impact.

10.0 Exhibits

Exhibit A: Financial Analysis

- Initial Development Costs: \$10,000
- Potential ROI: A projected 15% increase in repeat customer purchases, with expected revenue growth from increased loyalty over the next year.

Project Charter

Date

Project Title: Rewards Program & Sustainability Points System			
Project Start Date: September 29 th , 2024		Projected Finish Date: November 29 th , 2024	
Budget Information: The project will operate under a budget of \$20,000, which will cover the costs associated with developing and implementing the rewards program and sustainability points system.			
Project Manager: Parneet Singh, 647-877-2693, parneet.singh@torontomu.ca			
Project Objectives: The project will be executed within an approved budget of \$20,000 and will underpin the whole rewards program with sustainability points.			
Success Criteria: The project will be considered successful if it reaches its critical objectives within the set budget and timeline. Success will be measured based on how well the rewards system integrates into the user profile and admin dashboards, positive feedback from user acceptance testing, and minimal post-deployment system. Additionally, the reward program should be able to achieve engagement metrics to incentivize users for more activity and involvement in sustainable actions while utilizing the provided platform.			
Approach: The project will follow a structured approach, starting with securing resources and defining project objectives in the initiation phase. The planning phase will involve gathering requirements, defining key features such as points accumulation and rewards catalog, and creating a detailed work plan and schedule. In the design phase, the focus will be on designing an end-to-end process flow for how users accumulate points and redeem rewards. During development, the system will be built, followed by extensive testing to ensure functionality and integration. Finally, the project will culminate in training users and admins, deploying the system, and conducting a thorough project closure, which includes documenting lessons learned and handing over the project to the operations team.			
Roles and Responsibilities			
<i>Name and Signature</i>	<i>Role</i>	<i>Position</i>	<i>Contact Information</i>
Parneet Singh	Front-end	Project Manager	parneet.singh@torontomu.ca
Sarim Shahwar	Back-end	Member	sshahwar@torontomu.ca
James Tampu	Back-end	Member	james.n.tampu@torontomu.ca
Omer Zulfiqar	Front-end	Member	omer.zulfiqar@torontomu.ca

Hamza Malik	Front-end	Member	Hamza.ejaz.malik@torontomu.ca
Comments: (Handwritten or typed comments from above stakeholders, if applicable)			

Change Request Date

Project Name: Rewards Program & Sustainability Points System

Date Request Submitted: October 29th, 2024

Title of Change Request: Expansion of Rewards Program to Include Sustainability Points for Eco-Friendly Purchases

Change Order Number: 001

Submitted by: Sarim Shahwar

Change Category: ☒Scope ☒Schedule ☒Cost ☐Technology ☐Other

Description of change requested:

The change request proposes an expansion of the Rewards Program to incorporate a Sustainability Points System. This system will reward customers, retailers, and partners for making eco-friendly purchases, such as choosing organic products, supporting sustainable farming practices, or reducing their carbon footprint in their supply chain. Sustainability points will be tracked through the Client Engagement Web Portal and can be redeemed for discounts, sustainable products, or GreenGrove Farms' exclusive eco-events. This feature will require adjustments to the existing rewards structure and integration with the portal's account management and tracking systems.

Events that made this change necessary or desirable:

Feedback from environmentally conscious customers and partners highlighted a strong demand for recognition of eco-friendly actions. GreenGrove Farms has always been a leader in sustainability, and incorporating a points system specifically tied to sustainability goals will enhance the rewards program by encouraging more meaningful eco-conscious choices. By adding this feature, GreenGrove Farms can strengthen its brand image as an advocate for sustainable farming while also increasing customer and partner engagement.

Justification for the change/why it is needed/desired to continue/complete the project:

The inclusion of sustainability points aligns with GreenGrove Farms' core mission of promoting sustainable agriculture and responsible consumption. Without this addition, the rewards program will lose an opportunity to engage a key customer demographic that is passionate about sustainability. In addition, the system will provide an extra layer of incentive for retailers and partners to adopt sustainable practices, further positioning GreenGrove Farms as a leader in eco-friendly initiatives.

Impact of the proposed change on:

Scope: The project scope will expand to develop additional tracking mechanisms for eco-friendly purchases and linking these to the existing rewards system within the portal.

Schedule: The new feature is expected to extend the project timeline by **two** weeks to allow time for developing and testing the sustainability points system, as well as integrating it with account management and tracking.

Cost: The estimated additional cost for this change is **\$2,500**. This covers the extra development hours, testing, and updates to the user interface to accommodate sustainability point tracking and reward redemption.

Staffing: The existing development team will need to be reallocated to work on this new feature, particularly those focusing on rewards and account management. This may slightly delay progress on other subprojects.

Risk: The primary risk is the potential delay in the overall project due to the added complexity of tracking eco-friendly purchases and ensuring the accuracy of points calculations. Another risk is user confusion if the new system is not clearly explained or integrated seamlessly.

Other: Additional user and partner training materials will be required to introduce the Sustainability Points System. The portal's help section will need updates to explain how sustainability points are earned, tracked, and redeemed.

Suggested implementation if the change request is approved:

Required approvals:

Name/Title	Date	Approve/Reject
Parneet Singh	October 14 th , 2024	Approved
Sarim Shahwar	October 14 th , 2024	Approved
James Tampu	October 14 th , 2024	Approved
Omer Zulfiqar	October 14 th , 2024	Approved
Hamza Malik	October 14 th , 2024	Approved

Requirements Traceability Matrix for Rewards & Loyalty (Rewards Program & Sustainability Points System)

Prepared by: Hamza Malik

Date: Oct 23, 2024

Requirement No.	Name	Category	Source	Status	Priority	Dependencies / Risks	Acceptance Criteria	Acceptance Criteria	Stakeholders Involved
1	User Registration & Authentication	Functional	Stakeholder Interviews	Open	High	API access required	Users can sign up and log in with email or SMS authentication (99% reliability).	Users can sign up and log in with email or SMS authentication (99% reliability).	Product Owner, Development Team, Users
2	Reward Points Accumulation	Functional	Business Case	Open	High	None	Users can accumulate points on 90% of transactions without delays.	Users can accumulate points on 90% of transactions without delays.	Business Analysts, End Users
3	Sustainability Points Calculation	Functional	Stakeholder Meetings	Open	Medium	Dependent on data from third-party providers	Correct points are calculated based on eco-friendly actions as defined in the system.	Correct points are calculated based on eco-friendly actions as defined in the system.	Development Team, Third-Party Data Providers
4	System Integration with Partner Merchants	Technical	System Design	Open	Medium	API readiness from partner merchants	Partners' systems can securely exchange data with the platform within 1 second.	Partners' systems can securely exchange data with the platform within 1 second.	System Architects, Partner Merchants
5	Data Security & User Privacy	Non - Functional	Regulatory Guidelines	Open	High	Compliance with GDPR or other privacy laws	The system encrypts user data at rest and in transit, meeting 100% compliance.	The system encrypts user data at rest and in transit, meeting 100% compliance.	Regulatory Team, Legal Department

Scope Statement

Project Title: Rewards & Loyalty Sub-Program

Date: 10/23/2024

Prepared by: James

Project Justification:

GreenGrove Farms is committed to enhancing customer engagement, fostering loyalty, and promoting sustainable practices. The company seeks to strengthen their relationship with their customers, retailers and partners.

The Client Engagement Web Portal is designed to meet these strategic goals by creating a centralized platform that enhances communication, provides engagement opportunities, and rewards sustainable choices through a Rewards Program & Sustainability Points System.

This will help maintain a competitive edge in the agricultural and consumer goods sectors, increasing market share and brand value as well as promoting sustainability, one of the company's core values.

Product Characteristics and Requirements:

1. Customer-Centric
2. Emphasis on rewarding Sustainability through Eco-Friendly choices
3. Seamlessly Integrated into System
4. Close Stakeholder collaboration
5. Points Accumulation Feature - Develop a points accumulation system tied to sustainable actions and purchases
6. Rewards Catalog Feature - Includes discounts for on GreenGrove products or the option to donate to sustainable causes
7. Redemption Tracking - Tracks points used for rewards, notify users on redemption status
8. Bonus Points for Engagement - Either in social events or sustainability campaigns
9. Unit Testing on Features and Usability Testing
10. Clear, Concise Training for Users and Admins

Product User Acceptance Criteria:

The Client Engagement Web Portal must be fully functional, secure, and user-friendly. Users must be able to easily accumulate points, browse and redeem rewards. The system must also integrate smoothly with user profiles and provide updates on points and point redemptions. Unit testing should be done to assure features such as point accumulation, point redemption, and point redemption updates function as defined in the implementation and integration specifications.

A user acceptance testing phase will confirm that features align with customer and stakeholder expectations, with any issues to be resolved before final approval. User feedback and stakeholder sign-off will be required to ensure the system meets GreenGrove Farms' engagement and sustainability goals.

Summary of Project Deliverables

Project management-related deliverables: Project Charter, Project Scope Statement, Task Schedule, WBS, Risk List & Mitigation Strategies, Requirements & Traceability Matrix, Gantt Chart, Testing Results, User Feedback Document, Lessons Learned.

Product-related deliverables: Implementation and Integration Specifications, Source Code, UI Mockups, DB Schema, Process Flow Diagram, Test Case Documentation, Training Materials.

Work Breakdown Structure (WBS)

Project Name: Rewards Program & Sustainability Points System

1.0 Project Initiation

1.1 Develop Project Charter

1.2 Define Project Scope and Objectives

2.0 Planning

2.1 Requirements Gathering

2.1.1 Feature and Requirements Definition (Points Accumulation, Rewards Catalog, etc.)

2.1.2 Consult with Integration Teams (User Profile, Admin Dashboard)

2.2 Create Work Plan and Schedule

2.2.1 Break down tasks for each key feature

2.2.2 Schedule for Integration with Sub-projects

2.3 Risk Management Plan

2.3.1 Identify Potential Integration Risks

2.3.2 Develop Mitigation Strategies

3.0 Design

3.1 Design Process Flow for Points Accumulation and Redemption

3.2 Specify Feature Implementation Design

3.2.1 Specify Back-End Implementation Design

3.2.2 Specify Front-End Implementation Design

4.0 Testing Preparation

4.1 Define Test Cases and Criteria for Unit Testing

5.0 Development

5.1 Develop Rewards & Loyalty Features

5.1.1 Develop Back-End

5.1.2 Develop Front-End

6.0 Testing

6.1 Unit Testing

6.1.1 Test Points Accumulation Feature

6.1.2 Test Rewards Catalog and Redemption

6.1.3 Test Bonus Points for Engagement Feature

6.2 Integration Testing

6.2.1 Test Integration with User Profile (Sub-project 2)

6.2.2 Test Integration with Admin Dashboard (Sub-project 7)

6.3 User Acceptance Testing

6.3.1 Collaborate with Users for Feedback and Final Adjustments

7.0 Training & Deployment

7.1 Develop User Training Materials

7.1.1 Develop Training for Users on Rewards & Loyalty Program

7.1.2 Develop Training for Admins on Point Management & Redemption Tracking

7.2 Deploy Rewards & Loyalty Features

7.2.1 Coordinate Deployment with Integration Teams

7.2.2 Perform Final System Validation

8.0 Project Closure

8.1 Gather and Document Lessons Learned

8.2 Handover to Operations Team

8.3 Sign-off

WBS Dictionary Entries

<p>WBS Item Number: 1.0 WBS Item Name: Project Initiation Responsible person: Sarim, TBD Estimated Cost: TBD Estimated duration: TBD Resource requirements: Relevant Templates Description: Formally starting the project, defining Project Objectives and Scope to align team and organization. Deliverables: Project Charter, Project Scope Statement</p>
<p>WBS Item Number: 1.1 WBS Item Name: Develop Project Charter Responsible person: Sarim Estimated Cost: TBD Estimated duration: TBD Resource requirements: Project Charter Template Description: The purpose of the project charter is to provide direction on the project's objectives and management for the whole team/organization. This project charter will be created using the provided template in the textbook and will integrate the provided assignment and sub-project instructions. Deliverables: Project Charter</p>
<p>WBS Item Number: 1.2 WBS Item Name: Define Project Scope and Objectives Responsible person: TBD Estimated Cost: TBD Estimated duration: TBD Resource requirements: Project Scope Statement Template Description: The purpose of establishing the scope and objectives is to define project goals and formalize a scope baseline for the team to follow and avoid misaligning development from the actual purpose of the project. It also provides the team/organization with an idea of the deliverables and a rough schedule of where the team should be at a given time. This will be accomplished using the project scope statement template. Deliverables: Project Scope Statement</p>

<p>WBS Item Number: 2.0</p> <p>WBS Item Name: Planning</p> <p>Responsible person: Whole Team</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: Instructions</p> <p>Description: General Planning activities, including specifying features, sub-features, integration details, scheduling and risk management.</p> <p>Deliverables: Feature List, Requirements & Traceability Matrix, Integration Specifications, Implementation Tasks, WBS, Task Schedule, Integration Schedule, Risks List, Mitigation Strategies</p>
<p>WBS Item Number: 2.1</p> <p>WBS Item Name: Requirements Gathering</p> <p>Responsible person: Hamza, Project Manager</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: Sub-project instructions</p> <p>Description: Gather requirements for features and specify integration details with integration teams.</p> <p>Deliverables: Feature List, Requirements & Traceability Matrix, Integration Specifications, Traceability Matrix</p>
<p>WBS Item Number: 2.1.1</p> <p>WBS Item Name: Feature and Requirements Definition (Points Accumulation, Rewards Catalog, etc.)</p> <p>Responsible person: Hamza</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: Sub-project instructions</p> <p>Description: Using Sub-project instructions, define all features required for the sub-project with a rough idea of implementation as well as requirements & traceability matrix.</p> <p>Deliverables: Feature List, Requirements & Traceability Matrix</p>
<p>WBS Item Number: 2.1.2</p> <p>WBS Item Name: Consult with Integration Teams (User Profile, Admin Dashboard)</p> <p>Responsible person: Project Manager</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: NA</p> <p>Description: Consult with integration teams to formalize interoperability of respective sub-projects. This may include API calls and data formatting.</p> <p>Deliverables: Integration Specifications</p>

<p>WBS Item Number: 2.2</p> <p>WBS Item Name: Create Work Plan and Schedule</p> <p>Responsible person: James, Hamza, Project Manager</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: Feature List, Sub-project instructions</p> <p>Description: Split Sub-project into tasks, assign tasks, schedule tasks and integration.</p> <p>Deliverables: WBS, Task Schedule, Integration Schedule, Gantt Chart</p>
<p>WBS Item Number: 2.2.1</p> <p>WBS Item Name: Break down tasks for each key feature</p> <p>Responsible person: James, Hamza, Omer</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: Feature List, Sub-project instructions</p> <p>Description: Use Feature List and Sub-project instructions to define individual tasks for team members to implement. Assign tasks to individuals in this stage and create a schedule to ensure tasks are completed in time.</p> <p>Deliverables: WBS, Task Schedule, Gantt Chart</p>
<p>WBS Item Number: 2.2.2</p> <p>WBS Item Name: Schedule for Integration with Sub-projects</p> <p>Responsible person: Project Manager</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: NA</p> <p>Description: Consult with integration teams to schedule a time to both test and actually integrate sub-projects together.</p> <p>Deliverables: Integration Schedule</p>
<p>WBS Item Number: 2.3</p> <p>WBS Item Name: Risk Management Plan</p> <p>Responsible person: TBD</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: Integration Specifications, Feature List</p> <p>Description: Identify potential risks with integrating features in the whole system, and design mitigation strategies to reduce or eliminate risk.</p> <p>Deliverables: Risks List, Mitigation Strategies</p>
<p>WBS Item Number: 2.3.1</p> <p>WBS Item Name: Identify Potential Integration Risks</p> <p>Responsible person: TBD</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: Integration Specifications, Feature List</p>

<p>Description: Brainstorm potential risks associated with integrating sub-projects. This will involve studying the specifications and feature list to make sure our sub-project is aligned with prior agreed upon integration details, and there is no confusion.</p> <p>Deliverables: Risks List</p>
<p>WBS Item Number: 2.3.2</p> <p>WBS Item Name: Develop Mitigation Strategies</p> <p>Responsible person: TBD</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: Risk List, Feature List</p> <p>Description: Develop Mitigation Strategies to reduce risk of failures when integrating.</p> <p>Deliverables: Mitigation Strategies</p>
<p>WBS Item Number: 3.0</p> <p>WBS Item Name: Design</p> <p>Responsible person: TBD</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: Feature List, Integration Specification, Mitigation Strategies</p> <p>Description: Design underlying flow for our sub-project, based on feature list, and specify design of features to get implementation details.</p> <p>Deliverables: Process Flow Diagram, Implementation Details, Schema Design, UI mockups</p>
<p>WBS Item Number: 3.1</p> <p>WBS Item Name: Design Process Flow for Points Accumulation and Redemption</p> <p>Responsible person: TBD</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: Feature List</p> <p>Description: Based on feature list, create end-to-end process flow for how users accumulate points and redeem rewards. This will involve outlining the conditions under which points are earned and how users can redeem these points for rewards. The design will incorporate logic for tracking points balances, restrictions, and redemption validation. The process flow should include user interactions, backend interaction, and error handling.</p> <p>Deliverables: Process Flow Diagram</p>
<p>WBS Item Number: 3.2</p> <p>WBS Item Name: Specify Feature Implementation Design</p> <p>Responsible person: TBD</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: Feature List, Mitigation Strategies, Process Flow Diagram, Integration Specification</p>

<p>Description: Based on feature list, integration specification, the process flow diagram and utilizing the relevant mitigation strategies, formalize feature and sub-feature design.</p> <p>Deliverables: Implementation Details, Schema Design, UI mockups</p>
<p>WBS Item Number: 3.2.1</p> <p>WBS Item Name: Specify Back-End Implementation Design</p> <p>Responsible person: TBD</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: Feature List, Mitigation Strategies, Process Flow Diagram, Integration Specification</p> <p>Description: Specify Back-End implementation details including API calls and design schema for back-end development. This will need to be coordinated with the integration specifications to ensure seamless integration in the future.</p> <p>Deliverables: Implementation Details, Schema Design</p>
<p>WBS Item Number: 3.2.2</p> <p>WBS Item Name: Specify Front-End Implementation Design</p> <p>Responsible person: TBD</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: Feature List, Mitigation Strategies, Process Flow Diagram, Integration Specification</p> <p>Description: Specify Front-End implementation details including UI mockups for front-end development, following the integration specification where relevant to ensure seamless integration.</p> <p>Deliverables: Implementation Details, UI mockups</p>
<p>WBS Item Number: 4.0</p> <p>WBS Item Name: Testing Preparation</p> <p>Responsible person: TBD</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: Implementation Details, Integration Specification</p> <p>Description: Define test cases for future feature and integration testing.</p> <p>Deliverables: Test Case Documentation</p>
<p>WBS Item Number: 4.1</p> <p>WBS Item Name: Define Test Cases and Criteria for Unit Testing</p> <p>Responsible person: TBD</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: Implementation Details, Integration Specification</p> <p>Description: Design Unit Tests for features/components based on implementation details and integration specification. This task is critical in verifying the core</p>

<p>functionality of each component before they are integrated into the broader system. Deliverables: Test Case Documentation</p>
<p>WBS Item Number: 5.0 WBS Item Name: Development Responsible person: Whole Team Estimated Cost: TBD Estimated duration: TBD Resource requirements: Implementation Details, Integration Specification, Implementation Tasks, Task Schedule, Schema Design, UI mockups Description: Develop the Sub-project features and sub-features according to specifications. Deliverables: Source Code</p>
<p>WBS Item Number: 5.1 WBS Item Name: Develop Rewards & Loyalty Features Responsible person: Whole Team Estimated Cost: TBD Estimated duration: TBD Resource requirements: Implementation Details, Integration Specification, Implementation Tasks, Task Schedule, Schema Design, UI mockups Description: Develop code, following Implementation Details and Integration Specifications. This will involve group members completing their assigned tasks on schedule for future testing. Deliverables: Source Code</p>
<p>WBS Item Number: 5.1.1 WBS Item Name: Develop Back-End Responsible person: TBD Estimated Cost: TBD Estimated duration: Sarim, James Resource requirements: Implementation Details, Integration Specification, Implementation Tasks, Task Schedule, Schema Design Description: Develop code for Back-End, this will support front-end development afterwards. This will be done according to implementation and integration specifications to make sure DB schema and API calls follow strict specifications. Deliverables: Source Code</p>
<p>WBS Item Number: 5.1.2 WBS Item Name: Develop Front-End Responsible person: Parneet, Omer, Hamza Estimated Cost: TBD Estimated duration: TBD Resource requirements: Implementation Details, Implementation Tasks, Task Schedule, UI mockups Description: Develop code for Back-end, following Implementation Details and any UI</p>

<p>mockups done during the design phase.</p> <p>Deliverables: Source Code</p>
<p>WBS Item Number: 6.0</p> <p>WBS Item Name: Testing</p> <p>Responsible person: TBD</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: Test Case Documentation, Integration Schedule</p> <p>Description: Test features, integration and validate user</p> <p>Deliverables: Verification Test Results, Integration Test Results, Validation Test Results, User Feedback</p>
<p>WBS Item Number: 6.1</p> <p>WBS Item Name: Unit Testing</p> <p>Responsible person: TBD</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: Test Case Documentation</p> <p>Description: Test sub-project features based on unit tests previously defined. This will verify that the code functions as designed.</p> <p>Deliverables: Verification Test Results</p>
<p>WBS Item Number: 6.1.1</p> <p>WBS Item Name: Test Points Accumulation Feature</p> <p>Responsible person: TBD</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: Test Case Documentation</p> <p>Description: Based on defined test cases, test the points accumulation feature.</p> <p>Deliverables: Verification Test Results</p>
<p>WBS Item Number: 6.1.2</p> <p>WBS Item Name: Test Rewards Catalog and Redemption</p> <p>Responsible person: TBD</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: Test Case Documentation</p> <p>Description: Based on defined test cases, test the Rewards Catalog and Redemption features.</p> <p>Deliverables: Verification Test Results</p>
<p>WBS Item Number: 6.1.3</p> <p>WBS Item Name: Test Bonus Points for Engagement Feature</p> <p>Responsible person: TBD</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p>

<p>Resource requirements: Test Case Documentation</p> <p>Description: Based on defined test cases, test the Bonus Points for Engagement feature.</p> <p>Deliverables: Verification Test Results</p>
<p>WBS Item Number: 6.2</p> <p>WBS Item Name: Integration Testing</p> <p>Responsible person: TBD</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: Test Case Documentation, Integration Schedule</p> <p>Description: Test that the sub-project components seamlessly integrate with other sub-projects.</p> <p>Deliverables: Integration Test Results</p>
<p>WBS Item Number: 6.2.1</p> <p>WBS Item Name: Test Integration with User Profile (Sub-project 2)</p> <p>Responsible person: TBD</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: Integration Schedule, Test Case Documentation</p> <p>Description: At the agreed time, work with the User Profile team to test integration and make sure all components are functioning properly, as defined.</p> <p>Deliverables: Integration Test Results</p>
<p>WBS Item Number: 6.2.2</p> <p>WBS Item Name: Test Integration with Admin Dashboard (Sub-project 7)</p> <p>Responsible person: TBD</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: Integration Schedule, Test Case Documentation</p> <p>Description: At the agreed time, work with the User Profile team to test integration and make sure all components are functioning properly, as defined.</p> <p>Deliverables: Integration Test Results</p>
<p>WBS Item Number: 6.3</p> <p>WBS Item Name: User Acceptance Testing</p> <p>Responsible person: TBD</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: NA</p> <p>Description: Validate that the system meets business requirements and user expectations by having end users test the system.</p> <p>Deliverables: Validation Test Results, User Feedback</p>

<p>WBS Item Number: 6.3.1</p> <p>WBS Item Name: Collaborate with Users for Feedback and Final Adjustments</p> <p>Responsible person: TBD</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: NA</p> <p>Description: Collaborate with end users to gather feedback on the system's functionality and usability. Based on this feedback, make necessary adjustments and improvements to ensure the final product meets user expectations before launch.</p> <p>Deliverables: Validation Test Results, User Feedback</p>
<p>WBS Item Number: 7.0</p> <p>WBS Item Name: Training & Deployment</p> <p>Responsible person: TBD</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: Process Flow Diagram, Integration Schedule</p> <p>Description: Develop Training materials for users and finally, deploy fully integrated system</p> <p>Deliverables: User Training Materials, Admin Training Materials</p>
<p>WBS Item Number: 7.1</p> <p>WBS Item Name: Develop Training For Users</p> <p>Responsible person: TBD</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: Process Flow Diagram</p> <p>Description: Develop Training Materials for each group of users, in this case Users and Admins.</p> <p>Deliverables: User Training Materials, Admin Training Materials</p>
<p>WBS Item Number: 7.1.1</p> <p>WBS Item Name: Develop Training for Users on Rewards & Loyalty Program</p> <p>Responsible person: TBD</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: Process Flow Diagram</p> <p>Description: Create training materials to educate users on how to navigate and use the Rewards & Loyalty Program, including how to accumulate points, redeem rewards, and track engagement activities.</p> <p>Deliverables: User Training Materials</p>

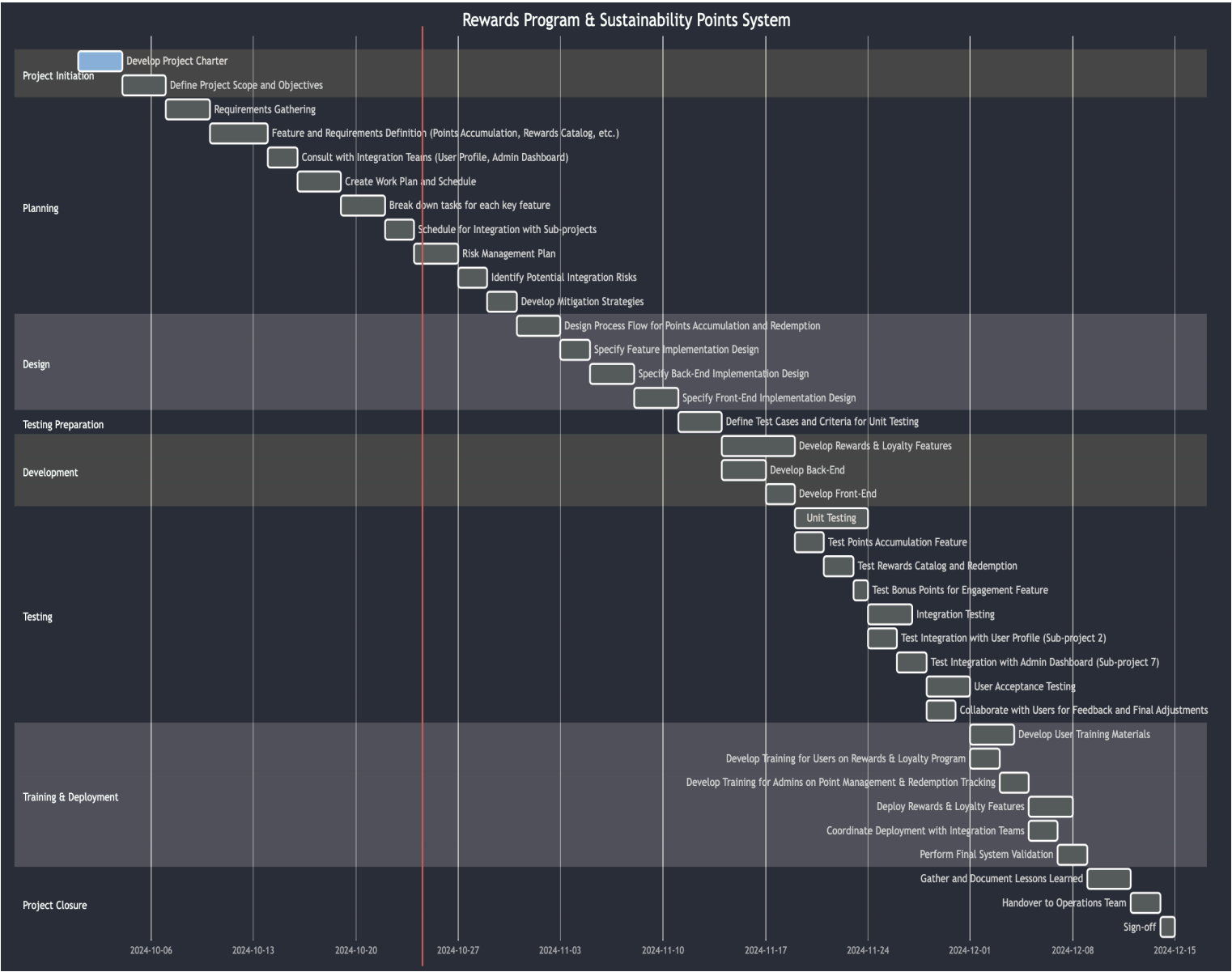
<p>WBS Item Number: 7.1.2</p> <p>WBS Item Name: Develop Training for Admins on Point Management & Redemption Tracking</p> <p>Responsible person: TBD</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: Process Flow Diagram</p> <p>Description: Develop training materials for administrators on managing points balances, monitoring redemption activities, and resolving issues related to points or rewards.</p> <p>Deliverables: Admin Training Materials</p>
<p>WBS Item Number: 7.2</p> <p>WBS Item Name: Deploy Rewards & Loyalty Features</p> <p>Responsible person: TBD</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: Integration Schedule</p> <p>Description: Deploy and monitor fully-integrated system post-deployment.</p> <p>Deliverables: Deployed System</p>
<p>WBS Item Number: 7.2.1</p> <p>WBS Item Name: Coordinate Deployment with Integration Teams</p> <p>Responsible person: TBD</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: Integration Schedule</p> <p>Description: Work with integration teams to schedule and execute the system deployment, ensuring that all integrated components function correctly and are deployed.</p> <p>Deliverables: Deployed System</p>
<p>WBS Item Number: 7.2.2</p> <p>WBS Item Name: Perform Final System Validation</p> <p>Responsible person: TBD</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: NA</p> <p>Description: Conduct a final validation of the system to ensure all features and integrations function as expected after deployment, addressing any last-minute issues before full launch.</p>

<p>WBS Item Number: 8.0</p> <p>WBS Item Name: Project Closure</p> <p>Responsible person: Whole Team</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: All Documentation and Specifications</p> <p>Description: Finalize the project by documenting key insights, handing over the system to the operations team, and obtaining formal sign-off to officially close the project.</p> <p>Deliverables: Lessons Learned</p>
<p>WBS Item Number: 8.1</p> <p>WBS Item Name: Gather and Document Lessons Learned</p> <p>Responsible person: Whole Team</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: NA</p> <p>Description: Collect feedback from the project team and stakeholders on what worked well and what could be improved, then document these insights to help guide future projects.</p> <p>Deliverables: Lessons Learned</p>
<p>WBS Item Number: 8.2</p> <p>WBS Item Name: Handover to Operations Team</p> <p>Responsible person: TBD</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: All Documentation and Specifications</p> <p>Description: Transfer ownership of the system to the operations team, ensuring they have all necessary documentation, training, and support to manage ongoing operations.</p> <p>Deliverables: NA</p>
<p>WBS Item Number: 8.3</p> <p>WBS Item Name: Sign-off</p> <p>Responsible person: Whole Team</p> <p>Estimated Cost: TBD</p> <p>Estimated duration: TBD</p> <p>Resource requirements: NA</p> <p>Description: Obtain formal approval from key stakeholders to confirm that all project deliverables have been met and the project is complete.</p> <p>Deliverables: NA</p>

Gantt Chart For Rewards & Loyalty (Rewards Program & Sustainability Points System)

Prepared by: Hamza Malik

Date: Oct 24, 2024



Project Overview: Rewards Program & Sustainability Points System

This Gantt chart outlines the detailed project timeline for the “**Rewards Program & Sustainability Points System**,” covering all phases from initiation to project closure. The structured layout provides a comprehensive view of key deliverables, task dependencies, and the project’s progress.

1. Project Phases and Structure

The project is divided into seven primary phases:

- **Project Initiation:** Focuses on developing the project charter and defining the scope and objectives.
- **Planning:** Encompasses gathering requirements, defining features, consulting with integration teams, and creating the work plan and schedule.
- **Design:** Involves feature and implementation designs, as well as the definition of risk management strategies.
- **Testing Preparation:** Specifies criteria for testing and unit test case development.
- **Development:** Consists of back-end and front-end development, alongside unit testing for feature implementation.
- **Testing:** Includes rigorous feature testing, integration testing, and user acceptance testing.
- **Training & Deployment:** Covers training for both users and administrators, final deployment, and system validation.

Each phase is carefully detailed to ensure alignment with the project’s overall objectives, and the chart visually distinguishes between overlapping tasks, minimizing resource conflicts.

2. Task Dependencies and Milestones

The chart displays clear task dependencies, ensuring that all critical activities are logically sequenced:

- Planning activities must be completed before design work begins.
- Development tasks, particularly front-end and back-end feature development, are prerequisites for the testing phase.
- Testing activities such as unit testing, integration testing, and user acceptance testing are dependent on successful feature implementation.

Key milestones, such as the completion of risk management planning and the final system sign-off, are clearly marked, helping the team focus on essential deliverables. This ensures effective project tracking and that critical deadlines are met.

3. Timeline and Deadlines

The project runs from **October 2024 to December 2024**, with well-defined timelines for each phase:

- Project Initiation began in early October, with expected completion by mid-December.
- Development and Testing occur in parallel, optimizing project efficiency and minimizing the overall timeline.
- The red vertical line marks the current project date, allowing for real-time tracking of progress against scheduled tasks, ensuring alignment with project deadlines.

4. Risk Management and Quality Control

The inclusion of a Risk Management Plan and task identification of potential risks demonstrates a proactive approach to mitigating issues. Moreover, the emphasis on testing preparation, including detailed unit testing and feature validation, ensures a high level of quality control throughout the project lifecycle.

5. Training & Deployment

The Gantt chart highlights a focus on training both users and administrators. This ensures that once the system is deployed, stakeholders are well-equipped to utilize and manage the rewards program effectively. Additionally, deployment coordination with integration teams is carefully scheduled to ensure a smooth transition.

6. Project Closure and Handover

The final phase includes a well-defined closure process:

- Performing final system validation.
- Gathering and documenting lessons learned.
- Handover to the operations team for ongoing management.

This organized approach to project closure ensures that all knowledge is transferred effectively, and any post-implementation challenges can be addressed promptly.

Scope Validation & Change Control Strategy

Our Scope Validation and Change Control Strategies were designed to ensure that the work being completed aligns with the scope and meets stakeholder expectations, as well as ensuring that only necessary changes are implemented, in order to avoid scope creep and misalignment with the approved scope.

For Scope Validation, we must define acceptance criteria, approved by stakeholders, for each deliverable so that stakeholders can validate our deliverables when completed. For this point, the project manager should collaborate with stakeholders to finalize these criteria during the *Planning Phase*. An example of this would be during development, ensuring certain features are functioning as intended such as the Rewards Catalog displaying all items with correct rewards points requirements. These should be clear, verifiable criteria that will aid stakeholders in validating our deliverables.

Another aspect of our Scope Validation Strategy, is actually ensuring stakeholders sign-off on our completed milestones, prior to moving forward with any planned activities or tasks. This will ensure that feedback is integrated early-on into the process, hopefully reducing any backtracking and the amount of work to be done. An example of this would be ensuring that our designed process flow for our features aligns with stakeholder expectations prior to following through and designing our back-end and front-end specifications.

The final aspect of our Scope Validation Strategy, is to conduct regular demos, once our sub-project is in some presentable state, so that although the project won't be in a final state, stakeholders can gain confidence in our work being done, as well as potentially give feedback for changes to be made, to better align with the scope. This should also be done after early integration testing with the User Profile and Admin Dashboard teams to ensure stakeholders have a more complete demo, and to potentially point out any misaligned integration issues.

For our Change Control strategy, we must formalize a change request process, where any change to the scope, schedule or budgeting must be documented and approved by the relevant stakeholders. The requests should include a description of the change, impact analysis, and justification for the change. The project manager should initiate the process, and the stakeholders and relevant integration teams should provide input to the change to give everyone involved a sense of responsibility and investment in the change request.

Another aspect of the Change Control strategy is to regularly audit the change request process, ensuring that change requests are being approved by the proper parties to ensure that the project is not undergoing scope creep. This should be done by an unbiased party not involved in the project from either within or outside the organization.

The final aspect of our Change Control strategy is to document all approved change requests and to update project documentation accordingly (WBS, Task Schedule, etc.), in order to ensure that the changes made are traceable and that the evolution of our scope is well documented for future reference. This should also involve communicating the changes to relevant parties that weren't directly involved in the change request approval process. The documentation could be done with some project management software such as JIRA or potentially creating a timeline document that links to the change requests to see when each approved change request was made.

Request for Proposal Date

Project Name: Rewards Program & Sustainability Points System

RFP Name: Proposal for Project Resource and Time Management Activities

Purpose of RFP:

To include extra tasks that aid in estimating time and resources needed to create and execute a rewards program that uses sustainability points to encourage user participation. The RFP seeks to guarantee that the project is carried out within the allocated money, time, and resource constraints.

Background Information

Overview of the Project: One of the main projects of the Rewards & Loyalty team is the Rewards Program & Sustainability Points System. By giving points for actions like making purchases, providing comments, and attending events, the system hopes to promote user involvement with sustainability concerns. You may exchange these points for prizes or contributions to environmental projects.

The project's objectives are to provide a fully integrated rewards system with a smooth user experience, where administrators can administer awards and keep an eye on user engagement through an admin dashboard, and where users can check their points and redeem prizes inside their profiles.

Basic Requirements

- The following characteristics have to be included in the project:
- Points Accumulation: Keep track of the points earned by users for different actions.
- Rewards Catalog: Let consumers exchange points for gifts or cash.
- Redemption tracking: Keep tabs on the status of redemptions and alert users.
- Bonus Points for Participation: Give participants who attend special events extra points.

RFP Process

The procedure entails examining suggestions for extra tasks that will help with project scheduling and resource allocation estimation. The suggested activities will be assessed by the project team according to their applicability to the project's goals, their simplicity of incorporation into the project plan, and their capacity to enhance time and resource management.

Statement of Work and Schedule Information

- Activity 1: Establish the Rules for Point Allocation

Description: Create a thorough points system that will assist the team in comprehending the resources needed to create this feature.

Schedule: Arranged for the first week of the project schedule.

- Activity 2: Create a Prototype Rewards Catalog

Description: Create an early version of the rewards catalog. Stakeholders will be able to calculate the front-end and back-end resource requirements as a result.

Schedule: Set for Weeks Two and Three.

- Activity 3: Configuring the Admin Dashboard for Redemption Monitoring

Description: Create the admin dashboard to assist estimate admin interface resources and enable reward administration and redemption monitoring.

Schedule: Set for Weeks 4-5.

- Activity 4: Testing the User Profile and Points System Integration

Description: Examine how well the rewards system is integrated into the user profile.

Schedule: Set for Week 6.

- Activity 5: Planning a Bonus Points Campaign

Description: Create and carry out campaigns to give users extra points for attending sustainability events.

Schedule: Set for Weeks 7-8.

Milestone Identification

Milestone 1: (1.0 Complete) Project Charter & Scope Completion

Milestone 2: (2.1 Complete) Requirements Gathering Completion

Milestone 3: (2.3 Complete) Risk Management Plan Completion

Milestone 4: (3.0 Complete) Design Specifications Completion

Milestone 5: (5.0 Complete) Feature Development Completion

Milestone 6: (6.0 Complete) All Testing Completion

Milestone 7: (7.1 Complete) Training Materials Completion

Milestone 8: (8.0 Complete) Deployment and Handover

Milestone Explanations

Milestone 1

This is a significant milestone that will add value, as it marks the completion of the Project Charter and the Project Scope. These should be approved by relevant stakeholders prior to continuing with the project activities, as the following stages are directly dependent on these documents. Thus, a task that can be implemented for this milestone is to communicate with stakeholders to sign-off and allow the project to continue. This may delay future tasks until approval is given.

Milestone 2

This milestone will mark the completion of requirements gathering and the integration requirements. This is another significant stage that will require an analysis on integration requirements to ensure that they are correct and there are no logical inconsistencies that might hinder integration efforts in the future. It will also require approval from stakeholders and potentially users on the requirements gathered. This is important to make sure that the defined features and their requirements align with stakeholder expectations and that the defined product is something users want. This may delay future tasks until approval is given.

Milestone 3

This milestone will mark the completion of the risk management plan, following the identifying risks task and developing mitigation strategies task. This is a significant stage that will require approval from stakeholders prior to moving forward. It will ensure that the identified risks are relevant to the project, and that the proposed mitigation strategies manage the risks effectively. This may delay future tasks until analysis is complete and approval is given.

Milestone 4

This milestone marks the completion of the design phase, where detailed specifications for both the front-end and back-end of the system are finalized. This includes the process flow

diagram for all features defined in the requirements gathering stage. It is a critical stage that determines how the system will work and be implemented, and thus should be closely scrutinized by a design team to determine the viability of the design plans. Stakeholder approval will also be required prior to moving forward with development.

Milestone 5

This milestone signifies the successful completion of all feature development for the rewards and loyalty program, including both the back-end and front-end. Core features are expected to be fully functional at this stage, and a demo may be given to stakeholders. This milestone is important to ensure that the features meet stakeholder expectations, and if any issues are identified, there is still time to fix them prior to deployment. Stakeholder approval, will thus be required before moving forward with testing.

Milestone 6

At this milestone, all testing activities, including unit testing, integration testing, and user acceptance testing, should be completed. Testing reports should be analyzed to ensure unit testing and integration testing went well and that the project meets user needs as well as meeting any performance needs in a real-world environment, ensuring user satisfaction prior to deployment. Stakeholders will need to approve this to signify a successful testing phase prior to deploying the system.

Milestone 7

This milestone marks the completion of training materials for both users and admins of the portal. It is a significant step as the training will facilitate a smooth transition for users and administrators into the new system, reducing the risk of any user error and confusion. Stakeholders will need to give their approval, as well as potentially a legal team to ensure that there are no issues with the training materials.

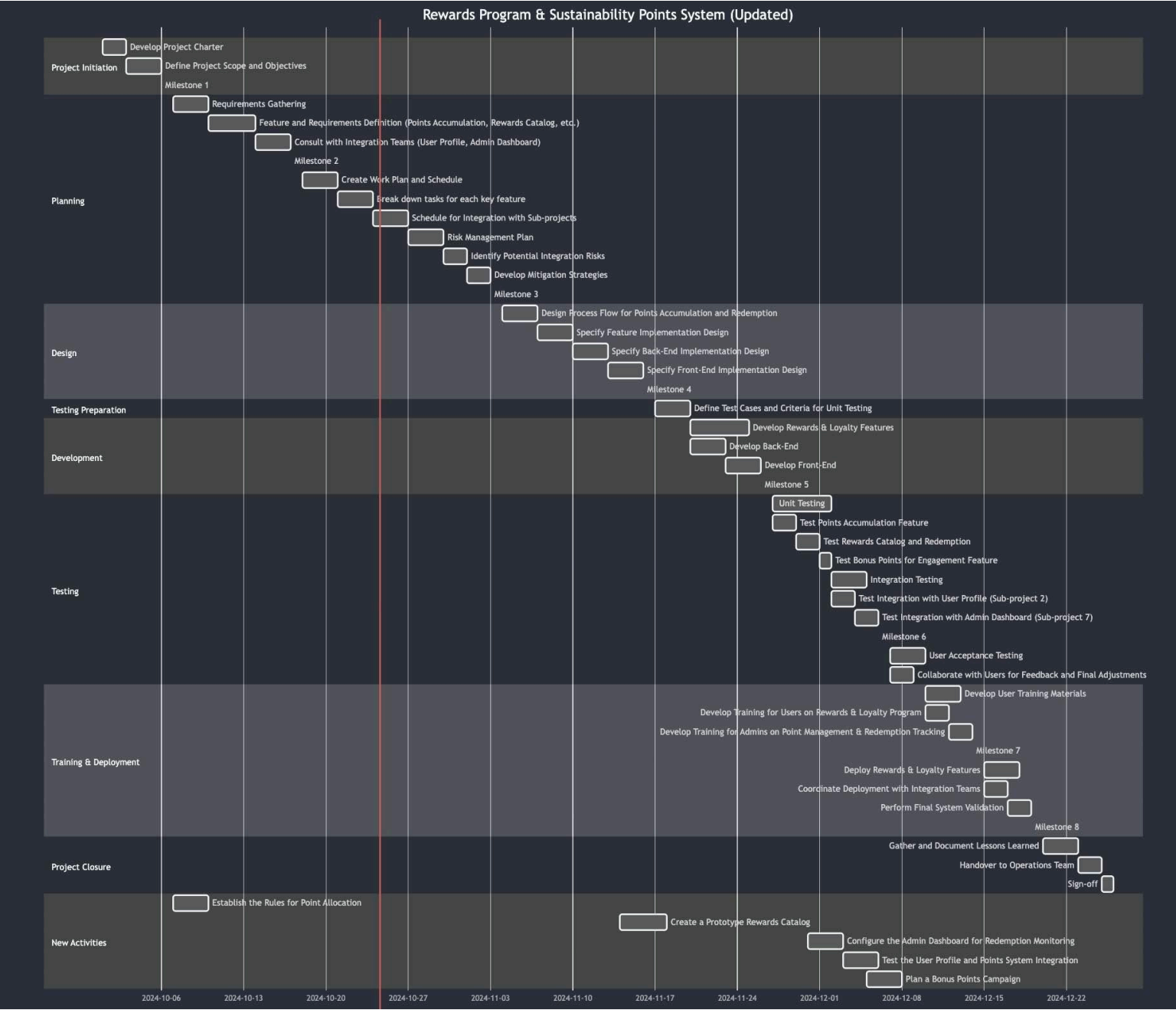
Milestone 8

This milestone represents the final stage of the project, where the system is fully deployed and handed over to the operations team. Final system validation checks will confirm that all components integrate smoothly and perform as expected in a fully deployed environment. Also, a formal handover to the operations team will have been completed, ensuring they have all required documentation and training to take over and ensure that the system remains in an operational state after handover. This milestone includes collecting lessons learned and obtaining final sign-off from stakeholders to close the project successfully. Delays in this phase may result in delays or issues post-launch.

Updated Gantt Chart For Rewards & Loyalty (Rewards Program & Sustainability Points System)

Prepared by: Hamza Malik

Date: Oct 24, 2024



Project Overview: Rewards Program & Sustainability Points System (Updated)

This updated Gantt chart presents the revised project timeline and key milestones for the **“Rewards Program & Sustainability Points System.”** The updated version incorporates clear milestones, expanded task categories, and new activities to ensure the project remains on schedule and aligns with business objectives.

1. Project Phases and Structure

The project follows a structured approach across the following phases:

- **Project Initiation:** Key deliverables include developing the project charter and defining the project scope and objectives, followed by achieving the first milestone. This sets a clear foundation for the project's execution.
- **Planning:** This phase focuses on gathering requirements, feature definition, consulting with integration teams, and scheduling tasks, ensuring all stakeholders are aligned on the project's technical and functional needs. Two significant planning milestones (Milestone 2 and 3) are highlighted, providing checkpoints for project alignment and adjustments.
- **Design:** Involves detailing the points accumulation and redemption flows, as well as specifying back-end and front-end implementation designs. The inclusion of Milestone 4 here ensures the design phase is completed before testing preparation begins.
- **Development and Testing Preparation:** These stages involve coding, developing rewards features, and specifying test cases. The project ensures that the development of back-end and front-end components is streamlined, with testing criteria well-defined.
- **Testing:** This phase covers unit testing, integration testing, and user acceptance testing, with critical milestones validating the system's functionality and readiness for deployment (Milestone 6 and 7).
- **Training & Deployment:** Detailed training activities for users and administrators are scheduled, ensuring stakeholders are fully prepared to operate the system. Deployment tasks are clearly defined and lead into final system validation.
- **Project Closure:** This final phase ensures post-deployment activities are captured, including gathering lessons learned and handover to operations, leading to a structured project conclusion (Milestone 8 and Sign-off).

2. Milestones and Dependencies

The updated chart introduces eight key milestones, strategically placed to track the project's progression:

- **Milestone 1:** Marks the completion of initial project setup and scope definition.
- **Milestones 2 & 3:** Ensure that the planning phase has clearly defined work plans and schedules, setting the stage for seamless execution in the design phase.

- **Milestones 4 & 5:** Establish the completion of designs and the initiation of testing preparations, leading into development and system feature testing.
- **Milestones 6 & 7:** Key milestones for ensuring successful integration and user testing before final deployment.
- **Milestone 8:** Captures project handover and final sign-off, signifying project completion.

By clearly identifying these milestones, the chart helps manage project performance and ensures that major goals are achieved before proceeding to the next phase.

3. Expanded Timeline and New Activities

The timeline has been updated to span from **October 2024 to December 2024**, with additional tasks under New Activities, such as establishing the rules for point allocation and configuring the admin dashboard for points monitoring. These updates reflect a more detailed focus on both the user-facing and administrative aspects of the rewards system.

The newly introduced activities show proactive planning for sustainability features (e.g., planning for bonus points systems and integrating points with user profiles). This ensures a more comprehensive system that aligns with the program's goals of rewarding sustainability initiatives.

4. Task Dependencies and Sequential Flow

The chart maintains clear task dependencies, ensuring that phases such as planning, development, and testing are completed in sequence before proceeding to the next steps. For instance:

- Testing of individual features, such as points accumulation and bonus points, is dependent on the successful completion of development tasks.
- Training and deployment activities are scheduled after all testing phases are completed, ensuring that system integrity is maintained before going live.

This clear dependency structure ensures no phase is prematurely initiated, minimizing project risks.

5. Real-Time Tracking and Adjustment

The red vertical line continues to serve as an indicator of the current project date, allowing for real-time tracking. This facilitates ongoing monitoring, enabling teams to make necessary adjustments to ensure timely completion.

6. Training, Deployment, and Handover

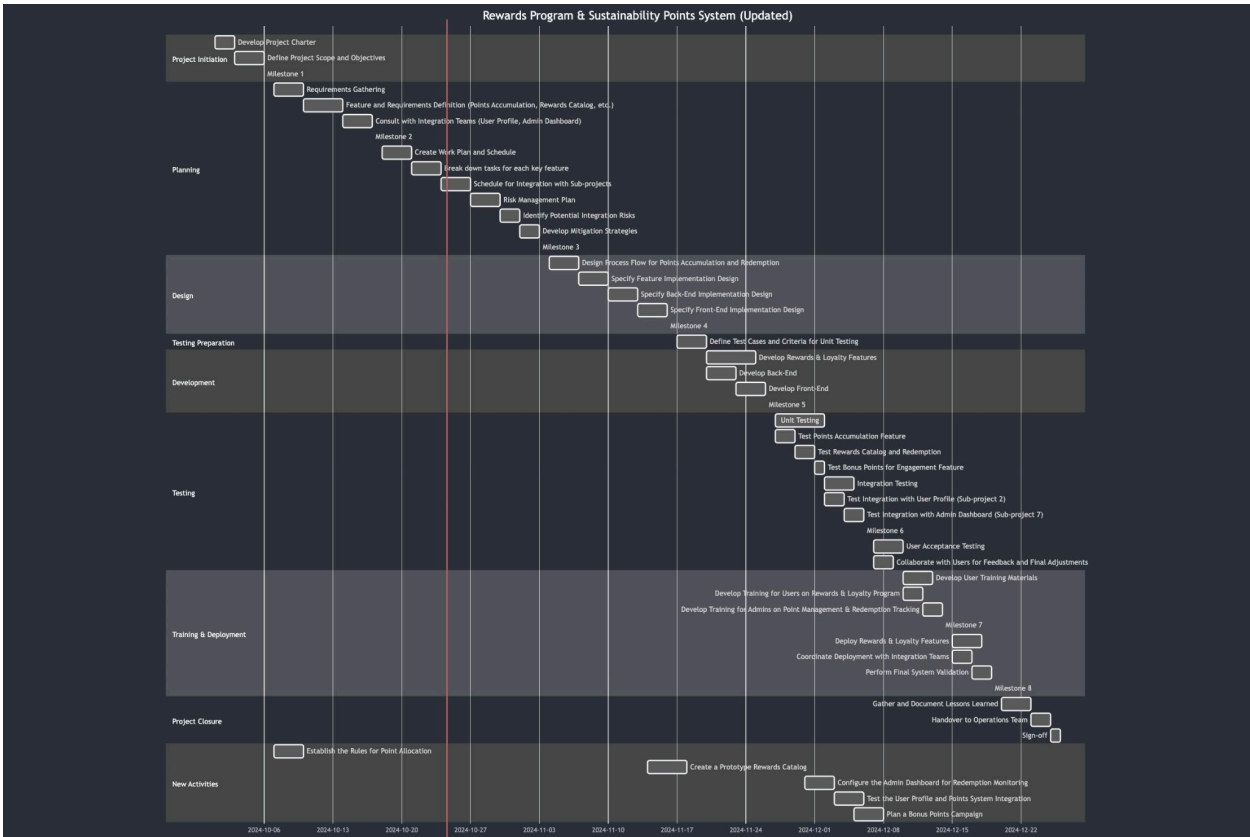
The training and deployment phases have been expanded to include both user and admin training, covering topics like rewards program usage and point management. This ensures that all stakeholders, from users to system administrators, are well-prepared for the system's launch.

The final steps involve thorough system validation, knowledge transfer, and handover to the operations team.

The updated Gantt chart reflects a well-structured project management approach with clearly defined milestones, logical task dependencies, and real-time tracking. The expanded tasks under New Activities demonstrate forward-thinking, ensuring the project meets both functional and strategic objectives. This update will enable the team to maintain focus, minimize risks, and deliver a more prominent rewards system on time.

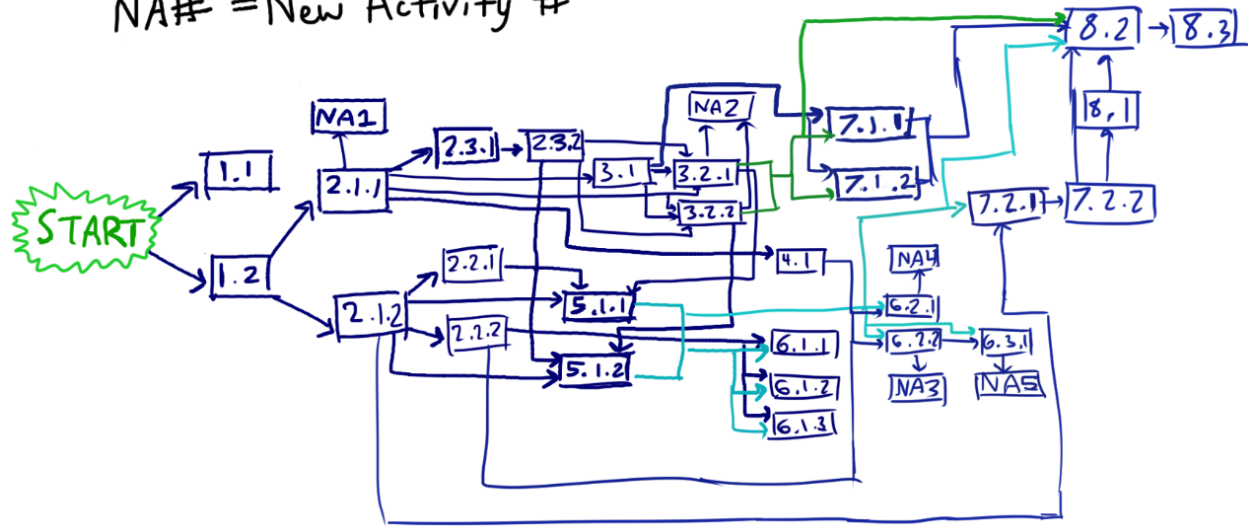
Task Durations and Dependencies

Gantt Chart



Network Diagram

NA# = New Activity #



Durations are Below, adding all the days = 71 days. However, many are done in parallel and this can fit a 2-month schedule

Table for Network Diagram

Activity	Predecessor	Duration
1.1 Project Charter	START	1 day
1.2 Project Scope + Objectives	START	1 day
2.1.1 Feature and Requirements Definition	1.2	3 days
New Activity 1	2.1.1	2 days
2.1.2 Consult with Integration Teams	1.2	1 day
2.2.1 Break down tasks for each key feature	2.1.2	2 days
2.2.2 Schedule for Integration with Sub-projects	2.1.2	1 day
2.3.1 Identify Potential Integration Risks	2.1.1	1 day
2.3.2 Develop Mitigation	2.3.1	1 day

Strategies		
3.1 Design Process Flow	2.1.1	2 days
3.2.1 Specify Back-End Implementation	2.1.1, 2.3.2, 3.1	3 days
3.2.2 Specify Front-End Implementation	2.1.1, 2.3.2, 3.1	3 days
New Activity 2	3.2.1, 3.2.2	5 days
4.1 Define Test Cases and Criteria for Unit Testing	2.1.1	3 days
5.1.1 Develop Back-End	2.1.2, 2.2.1, 2.3.2, 3.2.1	5 days
5.1.2 Develop Front-End	2.1.2, 2.2.1, 2.3.2, 3.2.2	5 days
6.1.1 Test Points Accumulation Feature	4.1, 5.1.1, 5.1.2	2 days
6.1.2 Test Rewards Catalog and Redemption	4.1, 5.1.1, 5.1.2	2 days
6.1.3 Test Bonus Points for Engagement Feature	4.1, 5.1.1, 5.1.2	2 days
6.2.1 Test Integration with User Profile	2.2.2, 4.1, 5.1.1, 5.1.2	2 days
6.2.2 Test Integration with Admin Dashboard	2.2.2, 4.1, 5.1.1, 5.1.2	2 days
New Activity 3	6.2.2	3 days
New Activity 4	6.2.1	3 days
6.3.1 Collaborate with Users for Feedback and Final Adjustments	5.1.1, 5.1.2, 6.2.2	3 days
New Activity 5	6.3.1	2 days
7.1.1 Develop Training For Users	3.1, 3.2.1, 3.2.2	1 day
7.1.2 Develop Training for Admins	3.1, 3.2.1, 3.2.2	1 day
7.2.1 Coordinate Deployment with Integration Teams	2.1.2, 5.1.1, 5.1.2	2 days

7.2.2 Perform Final System Validation	7.2.1	3 days
8.1 Gather and Document Lessons Learned	7.2.2	1 day
8.2 Handover to Operations Team	3.2.1, 3.2.2, 5.1.1, 5.1.2, 7.1.1, 7.1.2, 7.2.2, 8.1	2 days
8.3 Sign-off	8.2	1 day

Resource Assignment

Roles:

Project Manager: Parneet Singh

Back-End Developers: Sarim Shahwar and James Tampu

Front-End Developers: Omer Zulfiqar and Hamza Malik

Each Person assigned to Task by Hours:

Task	Parneet Singh (PM) (hrs)	Sarim Shahwar (BE) (hrs)	James Tampu (BE) (hrs)	Omer Zulfiqar (FE) (hrs)	Hamza Malik (FE) (hrs)
Project Charter	2	0	0	0	0
Project Scope & Objectives	2	0	0	0	0
Feature and Requirements Definition	4	4	4	0	0
New Activity 1	2	2	0	0	0
Consult with Integration Teams	2	0	0	0	0
Break Down Tasks for Each Key Feature	3	3	3	0	0
Schedule for Integration with Sub-Projects	1	0	0	0	0
Identify Potential Integration Risks	2	0	0	0	0

Develop Mitigation Strategies	2	0	0	0	0
Design Process Flow	3	0	0	3	3
Specify Back-End Implementation	2	6	6	0	0
Specify Front-End Implementation	2	0	0	6	6
New Activity 2	3	5	5	5	5
Define Test Cases and Criteria for Unit Testing	2	0	0	0	6
Develop Back-End	4	10	10	0	0
Develop Front-End	4	0	0	10	10
Test Points Accumulation Feature	0	0	0	8	8
Test Rewards Catalog and Redemption	0	0	0	8	8
Test Bonus Points for Engagement Feature	0	0	0	8	8
Test Integration with User Profile	0	4	4	4	4
Test Integration with Admin Dashboard	0	4	4	4	4
New Activity 3	3	0	0	6	6
New Activity 4	3	0	0	6	6
Collaborate with Users for Feedback & Adjustments	2	4	4	4	4

New Activity 5	2	0	0	0	4
Develop Training for Users	4	2	2	2	2
Develop Training for Admins	4	2	2	2	2
Coordinate Deployment with Integration Teams	2	0	0	0	0
Perform Final System Validation	2	0	0	6	6
Gather and Document Lessons Learned	2	0	0	0	0
Handover to Operations Team	2	2	2	2	2
Sign-off	2	0	0	0	0

Summary for Short Paper

Parneet Singh is the project manager for the Rewards Program & Sustainability Points System, while Omer Zulfiqar and Hamza Malik are the front-end developers and Sarim Shahwar and James Tampu are the back-end developers. To guarantee effective development and adherence to the project timeline, each member is given assignments according to their area of competence and their projected number of hours.

Project Manager (Parneet Singh) is in charge of overseeing the whole project management process, making sure that everything is coordinated and that milestones are completed on time. In addition to advising with teams and supporting deployments and final sign-off, Parneet is involved in formulating project objectives.

Back-End Developers (Sarim Shahwar and James Tampu) concentrate on server-side implementation and essential features like the admin dashboard and rewards catalog. They work together on backend development, feature definition, and component integration.

Front-End Developers (Omer Zulfiqar and Hamza Malik) handle the user-facing elements, including the design and development of the rewards catalog and integration with the user profile. They also contribute to testing and implementing the front-end components.