

Software Requirement Specification for RP REDEMPTION AUTOMATION:

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| Project number | 26 |
| Problem statement | RP REDEMPTION AUTOMATION |

PROBLEM STATEMENT:

In the current manual system for managing and redeeming reward points, users face significant delays and inefficiencies. They struggle with tracking their points, submitting redemption requests, and receiving timely approvals. Administrators and reviewers are overwhelmed with managing and processing numerous requests, leading to errors and inconsistent handling of redemptions. This lack of automation results in user dissatisfaction and administrative burden.

The goal is to develop an automated reward point redemption system that leverages a robust DBMS for efficient data management. This system will provide secure user authentication, streamlined points management, an intuitive dashboard, approval automated workflows, and comprehensive report generation. By automating these processes, the system aims to enhance user experience, improve operational efficiency, and ensure timely and accurate reward redemptions.

STACK:

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| Component | Tech Stack |
| Frontend | React js |
| Backend | Node js with Express js |
| Database | MongoDB |
| API | OpenAPI |

PROGRESS - TIMELINE:

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|---------|-----------|---------------|------------------------------------|
| Phase | Deadline | Status | Notes |
| Stage 1 | 3/06/2024 | In Progress ▾ | Planning and Requirement Gathering |
| Stage 2 | | Not Started | Design and Prototyping |
| Stage 3 | | Not Started | DB Designing |

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| Stage 4 | | Not Started ▾ | Backend Implementation |
| Stage 5 | | Not Started ▾ | Testing & Implementation |
| Stage 6 | | Not Started ▾ | Deployment |

PROJECT OVERVIEW:

1. Purpose:
To create a website for automating the rewards points redemption process, aimed at streamlining the user experience and improving efficiency in managing and redeeming rewards points.
2. Scope:
This system will encompass user authentication, rewards management, points tracking, redemption workflow, and report generation functionalities. It aims to simplify the process of tracking and redeeming rewards points for both users and administrators.
3. Dependencies:
- Integration with the organization's email system for user authentication. - Availability of internet connectivity for system access.
4. Database Management System (DBMS);
The system relies on a robust DBMS for storing and managing user data, rewards points, redemption requests, and other relevant data. The database facilitates efficient data storage and retrieval, ensuring seamless operation of the system. It allows for structured organization and querying of data, enabling effective management of rewards points and redemption processes. This allows users and administrators to access and edit specific data.
5. User Personas:
- Admin: Responsible for managing rewards, redemption requests, and approvals. - User (Rewards Member): Submits redemption requests, monitors points balance, and redemption status. - Reviewer: Responsible for approving or rejecting redemption requests.

FUNCTIONAL REQUIREMENTS:

User Authentication

- **Description:** Users should be able to securely log in using their organization mail IDs.
- **Features:**
 - Secure authentication mechanism using organization mail IDs.
 - Password protection to ensure user account security.
 - Forgot password functionality for password recovery.

Rewards Points Management

- **Description:** Users and admins should be able to manage and track rewards points.
- **Features:**
 - Display of current points balance for each user.
 - Points accrual system for various activities (e.g., purchases, participation in events).
 - History of points transactions.

Home Page

- **Description:** Dashboard for users and admins.
- **Features:**
 - User/Admin Dashboard with a summary of rewards points and recent activities.
 - Display of available rewards categorized by type and points required.
 - Slideshow showcasing popular or featured rewards.
 - Admin can add or modify reward categories and details.

Adding Redemption Requests

- **Description:** Users can submit redemption requests by providing necessary details.

- **Features:**
 - Reward Title. ◦ Points Required. ◦ Redemption Date (automatically selected based on the current date). ◦ Optional Comments.
 - Users get notified of request submission.

Redemption Request Approval Workflow

- **Description:** Admins and reviewers can approve or reject redemption requests.
- **Features:**
 - Automatic assignment of reviewers for each request.
 - Reviewers can approve or reject requests with clear remarks for rejection.
 - System tracks the number of re-entries and edits made for each request.
 - Users are notified of approval or rejection and any required edits.

Redemption Report Creation

- **Description:** Users and admins can generate detailed reports on redemption activities.
- **Features:**
 - Date of redemption. ◦ Points spent.
 - Description of the redeemed reward.
 - User comments and feedback.
 - Attachments (e.g., receipts or confirmations) ◦ Reports are reviewed and approved by admins.

Approval Workflow

- **Description:** Reviewers can approve and review reports, provide clear remarks for disapproval, and allow users to re-edit specific sections.
- **Features:**
 - Clear status indicators for pending, approved, or rejected reports.
 - System tracks the number of edits and reviews for each report.
 - Notifications sent to users for any required edits or final approval.

Report Generation

- **Description:** Once approved, reports are downloadable in PDF format (max 2MB).
- **Features:**
 - 1.Detailed summary of redemption activities. 2.Points balance and transaction history.
 - 3.User feedback and comments.
 - 4.Admins can export data for further analysis. 5.Users are notified of report availability for download.

Strategies To Enhance Workflow:

1. Dynamic PDF Generation:

- Utilize pdf-lib to fetch user input in the backend and dynamically generate PDF documents for rewards redemption confirmations and summaries.
- Optimize PDF size by minimizing redundancy, compressing images, and using efficient text encoding.
- Limit the number of pages and experiment with various compression settings to ensure the PDFs meet the <2MB size requirement.

2. Edit and Submission Dashboard:

- Implement an edit feature allowing users to modify required fields in their redemption requests.
- Provide a user-friendly dashboard where users can view and edit their submissions within a specified timeframe.
- Incorporate version control to track changes, ensuring transparency and accountability.

- This feature will reduce resubmission time and enhance the overall user experience by allowing users to make necessary adjustments without starting the process from scratch.

FLOW CHART:

