Database Systems
Project Scope Document

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1 Project Description

Cafés are an important sector of almost every organization and are social hubs where people meet, work or just enjoy a snack to refresh themselves. We know that technology provides many benefits. Therefore, to ensure luxury and efficiency we have decided to build the Café Management System to streamline and automate various processes ranging from adding product to inventory to customer ordering products, processing payments and analysing data. This will enhance both customer and staff experience. The system is being designed for medium-sized cafés like university cafés.

2 Problem Statement

Cafés struggle with manual processes ranging from maintaining inventory to processing customer orders and are prone to errors. This leads to inefficiency in many processes and bad customer service. There is a high degree of difficulty in keeping track of various records especially sales and revenue. This creates problems in analysing trends and gathering useful insights to improve and prosper. These hindrances lead to revenue loss and customer dissatisfaction.

3 Problem Solution

The solution to the identified problem is designing and building a Café Management System which will automate the various processes. Tasks like inventory management, accounts management, daily reports and analytics will be automated to a great extent allowing respective staff member to manage processes efficiently and by getting analytics one can increase profit margin and reduce losses by removing market losers. This eventually leads to more focus on customer service and the ultimate result is prosperity and customer satisfaction.

4 Advantages / Benefits of proposed system

1. **Increased Efficiency**: The system will allow efficient management of processes from keeping track of inventory to finding out winner and looser products, meaning from simple and straight forward tasks to analytics. The system will provide **views** according to respective personnel.
2. **Reduced Chances of Errors**: The system will do heavy calculation and perform analytics based on metrics defined once. This will provide accurate results minimizing the room of error to only data entry.
3. **Decision Making**: The system will provide analytics and reports allowing respective person to make appropriate and effective decisions.

4. **Inventory and Accounts Tracking**: The system will allow real time tracking on inventory and accounts allowing accurate management and exception handlings.
5. **Increase in Revenue**: The system will provide analytics and reports and help identity reasons leading to less profit like a product which does not sell much, increased demand of a product but not available, etc.
6. **Marketing**: The system will allow marketers to implement marketing strategies and identify demands of segments of audiences based on metrics like age, etc.
7. **Smooth Transaction**: The system is designed efficiently to accommodate a large number of users so that multiple transactions can occur concurrently without reliability issues.

5 Scope / List of features

5.1 Users

1. Customer
2. Admin
3. Staff
4. Manager
5. Cashier
6. Accountant
7. Marketing Manager
8. Data Analyst

5.2 Modules of the project

1. Inventory Management: To automate inventory related tasks such as stock levels etc.
2. Point of Sale System: To automate transactions and related tasks such as sales tracking etc.
3. Analytics and Reports: To automate generation of analytics and reports to analyse trends and understand demand.
4. Employee Management: To manage staff members and their related data.
5. Finance Management: To manage all finance related tasks of the Café.
6. Customer Management: To manage customers and their related details.

5.3 Functional Requirement / Features for every user

1. Customer:
   - Access and browse menu.
   - Select products and place order.
   - Apply discounts and coupons on orders.
   - Give special instructions with order.
   - Register for loyalty program.
   - Receive notifications.
   - View transaction and order history.
2. Admin:
   - Configure and manage database.
   - Add and remove any type of users.
   - Set user permissions.
   - Perform data backup and recovery.
   - Update and maintain system.

3. Staff:
   - Access POS system for entry and management.
   - Check and perform inventory related operations.
   - View shift schedules.
   - Log time in and out.
4. Manager:
   - View and generate reports on sales, revenue and expenses.
   - Manage staff related operations such as scheduling shifts.
   - Manage inventory related operations.
   - Create and manage offers and discounts.
   - See performance reviews of staff.
5. Cashier:
   - Process payment by cash, card, loyalty card or online transaction.
   - Apply discounts.
   - Process order and issue a receipt.
   - Manage returns.
   - Access sales and transaction history.
6. Accountant:
   - Access and manage employees related operations.
   - Generate reports based on different metrics.
   - Prepare and submit tax filings.
   - Manage and analyse budget.
   - View and generate transaction and financial reports.

7. Marketing Manager
   - Execute marketing campaigns and track performance.
   - Analyse trends and demands.
   - Launch campaigns and manage return on investment.
   - Conduct surveys from customers.
8. Data Analyst:
   - Analyse and access data to understand statistics and find trends.
   - Visualize data trends.
   - Generate reports and showcase findings.
   - View and analyse Café finances and inventory.

6 Planning Approach

To ensure thorough and effective planning and requirements gathering we used various elicitation techniques.

1. Brainstorming
2. Goal-Based Approach
3. Observation
4. Introspection
5. Scenarios

As we are adopting an agile methodology for this project, so these initial requirements are the beginning of an iterative process. We anticipate new requirements in later stages of development which will be welcomed and integrated in the system.