Requirements – Brain Food Bookshops
Requirements for the case story

The purpose of the assignment for project session 2 is to make you think about different ways of capturing and managing requirements. For that purpose, we will use the small case story of Brain Food Bookshops we looked at in the last project session. You might want to do a quick re-scan of that first.

Contents

General need and requirements

Business Needs

1. **Operational Efficiency**: Centralize and streamline inventory, sales, and customer data to improve operations across all three bookshops.
2. **Enhanced Customer Experience**: Provide personalized services through customer data insights and loyalty programs.
3. **Increased Revenue**: Enable data-driven marketing and inventory decisions to boost sales and minimize losses.
4. **Data-Driven Decision Making**: Supply managers and owners with accurate, real-time data to support strategic planning and daily operations.
5. **Scalability and Flexibility**: Design the system to grow with the business, potentially supporting additional stores or new sales channels in the future.

General Requirements

1. **Centralized Inventory Management**: Integrated system for tracking, transferring, and replenishing inventory in real-time across all stores.
2. **Customer Relationship Management (CRM)**: Database to store customer preferences, purchase history, and engagement levels for personalized marketing and service.
3. **Point of Sale (POS) System**: Modern, user-friendly POS with transaction tracking, integrated CRM, and mobile access for sales staff.
4. **Sales and Financial Reporting**: Dashboards and reporting tools for sales, inventory turnover, and profitability.
5. **Marketing Integration**: Capabilities to launch and measure marketing campaigns and promotions tailored to customer preferences.
6. **Role-Based Access and Security**: Permissions-based system access to ensure data security while enabling collaboration across roles.

Expected Outcomes

1. **Reduced Operational Costs**: Minimize overstock and stockouts by optimizing inventory and reducing administrative overhead.
2. **Improved Customer Retention and Satisfaction**: Enhanced customer experience through personalized service and loyalty programs.
3. **Higher Sales and Profitability**: Targeted marketing and data-driven decision-making to increase revenue.
4. **Improved Staff Efficiency and Satisfaction**: User-friendly tools for staff that streamline work processes, enhancing their efficiency and engagement.
5. **Enhanced Data Security**: Secure and role-based access to ensure sensitive data protection across all levels.

Management Roles and Specific Needs for the Planned IT Project

1. Owner and General Manager (GM)

- **Project Role**: Project sponsor and primary decision-maker.
- **Specific Needs**:

- o **System Oversight**: High-level access to oversee project progress, ensure alignment with business goals, and address any major issues.
- o **Cost-Benefit Analysis**: Tools to analyze system costs and anticipated ROI to justify the investment.
- o **Change Management Support**: Features to manage organizational change, such as staff training tracking and adoption metrics.
- o **Customizable Reporting**: Ability to design and receive custom reports that focus on key business health indicators, growth metrics, and performance.
- o **Scalability for Future Growth**: Assurance that the system can scale to accommodate future business expansions or the addition of new functionalities.

2. Bookshop Managers (One for Each Shop)

- **Project Role**: Operational stakeholders; oversee daily usage of the system within their stores.
- **Specific Needs**:
  - o **Inventory Management Tools**: Capabilities to track store-specific inventory, transfer items between stores, and receive alerts for low stock or overstock situations.
  - o **Staff Scheduling and Management**: Scheduling features that help optimize employee shifts based on predicted customer traffic and store events.
  - o **Customer Service Tools**: Access to CRM features that provide insights into customer preferences and purchase history to personalize customer interactions.
  - o **Feedback Mechanism for Improvements**: A system to provide regular feedback on the system's usability and identify areas that require adjustments or improvements.
  - o **Performance Metrics**: Customizable dashboards that display store-specific metrics, such as daily sales, bestsellers, and staff performance.

3. IT Development Team

- **Project Role**: System designers and developers, tasked with translating requirements into technical solutions.
- **Specific Needs**:
  - o **Clear and Prioritized Requirements**: Detailed documentation of requirements from each stakeholder, organized by priority to manage development effectively.
  - o **Access to Feedback and Testing Data**: Regular feedback from users during each development phase to guide adjustments and ensure functionality aligns with needs.
  - o **System Security Specifications**: Defined security needs for handling customer data, sales data, and role-based access control.
  - o **Scalable and Modular Architecture**: Direction to build a system that can be adapted or expanded in the future without requiring significant redevelopment.
  - o **Project Management Tools**: Tools for tracking progress, managing project timelines, and clear documentation for future maintenance.

4. Private Investor

- **Project Role**: Financial stakeholder with a vested interest in ROI.
- **Specific Needs**:
  - o **Project Financial Tracking**: Updates on project costs versus budget, including justifications for any overages or adjustments.

- o **ROI Reporting**: Detailed analysis showing how the system contributes to financial performance improvements, particularly in terms of revenue growth and operational savings.
- o **Risk and Compliance Insights**: Reporting tools that provide visibility into project risks, compliance with data protection standards, and system security measures.

By addressing these detailed needs for each management role, the project team can ensure a clear, structured approach to system design, aligning with both strategic and operational goals while promoting system usability and performance across all stores.

Non-Managerial Roles and Their Needs in Relation to the Planned IT System

Sales Staff

- **Role**: Frontline employees interacting directly with customers, responsible for completing sales transactions and providing customer service.
- **Specific Needs**:
  - o **User-Friendly POS System**: An intuitive and efficient point-of-sale interface that speeds up the checkout process and reduces customer wait times.
  - o **CRM Access**: Basic access to customer profiles (e.g., purchase history, preferences) to personalize service, recommend products, and engage loyal customers.
  - o **Mobile Access to Inventory Data**: Ability to check stock levels and product locations on the floor to quickly answer customer inquiries and find items.
  - o **Loyalty Program Integration**: Tools to easily enroll customers into loyalty programs, check reward points, and apply discounts.
  - o **Clear Communication Tools**: In-system messaging to quickly communicate with managers and colleagues, ensuring everyone stays informed of any updates or customer requests.
  - o **Basic Reporting**: Access to daily or weekly summaries of individual sales performance, allowing staff to track their own sales goals and contributions.

Inventory Managers

- **Role**: Employees responsible for managing stock levels, tracking orders, and coordinating with suppliers to ensure inventory availability.
- **Specific Needs**:
  - o **Centralized Inventory Management**: Access to real-time, multi-store inventory levels, allowing for immediate insights into what is available across the chain and where.
  - o **Automated Reorder Alerts**: Notifications for when stock falls below certain thresholds, enabling timely reorders to prevent stockouts.
  - o **Easy Stock Transfer Tools**: Features that streamline the process of transferring stock between stores, including tracking of items in transit and expected delivery dates.
  - o **Inventory Analytics**: Access to data insights on stock turnover rates, bestseller trends, and seasonal demand fluctuations to better plan orders and manage stock levels.

- o **Supplier Integration**: Tools to place and track orders with suppliers directly within the system, reducing the need for manual order tracking.
- o **Damage and Loss Reporting**: A simple mechanism for logging and reporting damaged or lost items, helping maintain accurate stock levels.

Marketing Team

- **Role**: Responsible for designing and implementing promotions, engaging customers, and driving foot traffic to stores.
- **Specific Needs**:
  - o **Customer Segmentation and Analytics**: Tools to segment customers based on purchase history, preferences, and engagement to create targeted marketing campaigns.
  - o **Campaign Management**: Ability to design, track, and analyze marketing campaigns, including integration with loyalty programs to boost engagement.
  - o **Sales Data Access**: Insights into which products or promotions perform best, enabling the team to refine offers and identify opportunities for future campaigns.
  - o **CRM and Engagement Tracking**: Access to customer activity and engagement metrics to help tailor communications and determine the impact of loyalty initiatives.
  - o **Event and Promotion Scheduling**: Tools to schedule in-store and online events, communicate with store managers, and ensure event details are accessible to frontline staff.
  - o **Social Media Integration**: Integration capabilities with social media platforms to manage online promotions, with metrics to assess online engagement and conversion.

Customer Support Staff

- **Role**: Handle customer inquiries, assist with product information, and resolve complaints or issues.
- **Specific Needs**:
  - o **Centralized Customer Data**: Access to up-to-date customer profiles, including purchase history and any previous inquiries or issues, to provide seamless support.
  - o **Knowledge Base Access**: A centralized repository of common inquiries, FAQs, and detailed product information to enable consistent, accurate responses.
  - o **Ticketing and Issue Tracking**: Tools to log customer complaints or requests and assign them to the relevant staff or managers for resolution.
  - o **Customer Communication Tools**: Integrated chat, email, or messaging tools for responding to customer queries quickly, either online or in-store.
  - o **Escalation Protocols**: Clear guidelines within the system on how to escalate certain issues, particularly if they require managerial attention or involve sensitive data.

IT Support Staff

- **Role**: Provide technical assistance to users, troubleshoot system issues, and ensure the IT system's smooth operation.
- **Specific Needs**:
  - o **Access to User Data and Permissions**: Tools for managing user accounts, access levels, and permissions across different roles, ensuring proper data access controls.
  - o **System Monitoring and Alerts**: Real-time monitoring and alerts for any issues, such as connectivity problems, system downtime, or security threats.

- o **Troubleshooting Tools**: Detailed logs, diagnostic tools, and error-tracking features to quickly identify and resolve system issues.
- o **User Support Tools**: An internal ticketing system to manage user inquiries, report issues, and document solutions for future reference.
- o **Training and Documentation Access**: Ready access to system documentation and training materials to help them support other staff with system use or troubleshoot common issues.
- o **Testing and Rollout Coordination**: Tools for coordinating system updates, new feature rollouts, and testing changes before implementation.

User Stories from the Perspective of a Bookshop Manager

1. **User Story: Inventory Visibility**
   - o **As a** bookshop manager,
   - o **I want** to view real-time inventory levels for all products across all three locations from a single dashboard,
   - o **So that** I can manage stock efficiently and ensure we meet customer demand without overstocking or running into stock shortages.
2. **User Story: Low Stock Alerts**
   - o **As a** bookshop manager,
   - o **I want** to receive automated alerts when any item's stock level falls below a predefined threshold,
   - o **So that** I can reorder stock in a timely manner and maintain continuous availability of all books.
3. **User Story: Inter-store Transfers**
   - o **As a** bookshop manager,
   - o **I want** to easily initiate, track, and complete transfers of stock between stores,
   - o **So that** I can balance stock levels across stores without waiting for central approval, improving response time to stock imbalances.
4. **User Story: Sales Reporting**
   - o **As a** bookshop manager,
   - o **I want** to generate customizable sales reports that can break down sales by time period, genre, author, or individual titles,
   - o **So that** I can understand sales trends, make informed decisions on stock purchasing, and tailor our stock to customer preferences.
5. **User Story: Order Processing**
   - o **As a** bookshop manager,
   - o **I want** to process purchase orders and customer orders through the same system with the ability to view past orders and track current ones,
   - o **So that** I can streamline ordering processes, reduce errors, and ensure that customer orders are fulfilled accurately and promptly.

Job Stories from an Inventory Manager's Perspective

1. **Job story: Centralized Inventory Visibility**
   - o **When** *managing inventory across multiple stores*, **I need** a centralized system that provides an overview of stock levels at all locations, **so that** I can balance inventory and prevent stock shortages or overages in any particular store.
2. **Job story: Real-Time Inventory Updates**

- When *sales are made or new shipments are received*, **I need** the inventory levels updated in real-time across all platforms, **so that** all staff have up-to-date information and can make informed decisions about sales and restocking.

3. **Job story: Efficient Ordering Process**
   - When *inventory levels fall below a predetermined threshold*, **I need** the system to suggest or automatically generate reordering quantities based on past sales data and current trends, **so that** I can maintain sufficient stock without manual calculations.

4. **Job story: Inventory Forecasting**
   - When *planning for future sales periods*, **I need** robust reporting and forecasting tools that analyze sales data and predict future inventory needs, **so that** I can prepare for peak sales periods without overstocking.

5. **Job story: Return and Damaged Goods Management**
   - When *dealing with returned or damaged goods*, **I need** a straightforward process for logging these items, assessing the situation, and deciding whether to return, replace, or dispose of them, **so that** I can keep the inventory system accurate and minimize losses.

Improvement Stories from the Sales Staff's Perspective

1. **Inventory Check Efficiency**
   - **We have** a manual process for checking book availability that requires calling other stores or searching through unorganized records, which is time-consuming. **We want to have** an integrated system that provides real-time visibility of inventory across all stores from any terminal, allowing for immediate responses to customer queries.

2. **Mobile Point of Sale Capabilities**
   - **We have** fixed point-of-sale stations which limit our ability to assist customers quickly and flexibly on the sales floor. **We want to have** mobile point-of-sale devices that allow us to check out customers and provide information anywhere in the store, reducing waiting times and enhancing customer service.

3. **Customer Relationship Management**
   - **We have** limited information about customer preferences and purchase history, which restricts personalized service. **We want to have** a customer relationship management (CRM) tool integrated with our sales system that tracks customer preferences and past purchases to offer personalized recommendations and promotions.

4. **Special Orders Tracking**
   - **We have** a cumbersome process for managing special orders that often leads to errors and customer dissatisfaction due to lack of updates and miscommunication. **We want to have** a streamlined, automated system for placing and tracking special orders that update both staff and customers about order status through notifications.

5. **Return and Exchange Process**
   - **We have** a slow manual returns and exchanges process that frustrates customers and staff, leading to long lines and errors in inventory updates. **We want to have** a fast, automated returns system that immediately updates inventory and provides

options for customer refunds, store credits, or exchanges, simplifying the process for both staff and customers.

Ten arbitrarily chosen features for the inventory management system

Here's how ten arbitrarily chosen features for Sweet Delights Bakery's IT system can be expressed in the FDD style:

1. Track the inventory levels in real-time for all bookshop locations.
2. Automate the reordering process by generating purchase orders when stock levels fall below a predefined threshold.
3. Enhance the checkout process by implementing quick-scan technology at point-of-sale terminals.
4. Update the inventory database instantly by integrating sales and stock receipt data.
5. Improve customer engagement by personalizing marketing emails based on purchase history and browsing behavior.
6. Facilitate the return process by automating returns and exchanges at the point of sale.
7. Optimize staff efficiency by enabling mobile access to the inventory and sales system for floor staff.
8. Provide decision support by generating customizable sales and inventory reports for management.
9. Increase system reliability by implementing robust data backup and recovery procedures.
10. Enhance user experience by designing an intuitive and user-friendly interface for all system modules.