**PROPOSAL**

**SOFTWARE CONSTRUCTION AND DEVELOPMENT**

**SE:5-2**

Here's a detailed breakdown of your Furniture Management System proposal, tailored to your current studies in software construction and development:

**Proposal Details**

**Project Name:**

**Furniture Management System (FMS)**

**Description:**

The Furniture Management System (FMS) is a comprehensive software application designed to streamline the management of furniture inventory, sales, and customer relationships for furniture stores or manufacturers. The system will allow users to efficiently track inventory levels, manage customer orders, handle sales transactions, and maintain detailed records of all furniture items. FMS aims to improve operational efficiency, reduce manual errors, and enhance customer satisfaction by providing real-time data and automated processes.

The system will consist of various modules such as inventory management, sales management, customer management, and reporting. The inventory module will handle the addition, update, and deletion of furniture items, along with tracking their availability and condition. The sales module will manage the entire sales process from order placement to delivery, including payment processing. The customer management module will store and manage customer information, including purchase history and preferences. The reporting module will generate various reports to aid in decision-making.

**Stakeholders:**

1. **Furniture Store/Manufacturing Management:**
   * **Role:** Oversee the operations and ensure the system aligns with business objectives.
   * **Interest:** Increased efficiency, real-time tracking, accurate reporting, and reduced operational costs.
   * **Impact:** High; the system’s effectiveness directly influences business performance.
2. **Sales Team:**
   * **Role:** Handle customer interactions, process orders, and complete sales transactions.
   * **Interest:** User-friendly interface, quick access to inventory, and order processing tools.
   * **Impact:** High; the system must support the sales process efficiently to improve sales performance.
3. **Inventory Managers:**
   * **Role:** Manage and track furniture inventory, ensuring that stock levels are maintained.
   * **Interest:** Accurate inventory tracking, automated alerts for low stock, and easy updates to the inventory database.
   * **Impact:** High; effective inventory management is crucial to avoid stockouts or overstocking.
4. **Customers:**
   * **Role:** End-users who purchase furniture through the store.
   * **Interest:** Smooth purchasing experience, order tracking, and access to detailed product information.
   * **Impact:** Medium; customer satisfaction is a key driver for system success.
5. **IT/Software Development Team:**
   * **Role:** Develop, implement, and maintain the Furniture Management System.
   * **Interest:** Clear requirements, manageable scope, and sustainable architecture.
   * **Impact:** Medium; responsible for the technical success of the project.
6. **Finance Department:**
   * **Role:** Manage financial transactions related to furniture sales and inventory costs.
   * **Interest:** Accurate and timely financial reports, integration with accounting systems.
   * **Impact:** Low; mainly concerned with the financial data produced by the system.

**Requirements:**

1. **Functional Requirements:**
   * **Inventory Management:**
     + Ability to add, update, and delete furniture items in the inventory.
     + Real-time inventory tracking with status indicators (e.g., in stock, out of stock, damaged).
     + Automated alerts for low stock levels.
   * **Sales Management:**
     + Process customer orders and manage sales transactions.
     + Integration with payment gateways for secure transactions.
     + Order tracking functionality for both staff and customers.
   * **Customer Management:**
     + Store and manage customer information, including contact details and purchase history.
     + Provide personalized recommendations based on purchase history and preferences.
   * **Reporting:**
     + Generate inventory reports (e.g., stock levels, sales trends).
     + Create sales reports with insights into top-selling products and customer preferences.
     + Financial reporting for revenue, expenses, and profit margins.
2. **Non-Functional Requirements:**
   * **Performance:**
     + The system should handle multiple simultaneous users without performance degradation.
     + Response times for data retrieval and transactions should be under 2 seconds.
   * **Usability:**
     + The user interface should be intuitive and easy to navigate for non-technical users.
     + Provide online help and tooltips to guide users through the system.
   * **Security:**
     + Implement role-based access control to ensure data privacy.
     + Secure all financial transactions with encryption.
   * **Scalability:**
     + The system should be able to handle a growing number of furniture items, customers, and transactions without requiring significant reengineering.
   * **Reliability:**
     + The system should have an uptime of 99.9%, with minimal downtime for maintenance.
3. **Software Construction Requirements:**
   * **Modular Design:** The system should be developed in a modular fashion, allowing for easy updates and maintenance of individual components like inventory, sales, and reporting.
   * **Code Quality:** Adherence to coding standards, with proper documentation and code comments to ensure maintainability.
   * **Version Control:** Utilize version control systems (e.g., Git) for tracking changes and managing different versions of the software.
   * **Testing:** Implement unit testing, integration testing, and user acceptance testing to ensure the system meets all functional and non-functional requirements.