Practical 1

Introduction of Furniture Management System

### Abstract

The Furniture Management System is an all-inclusive solution designed for managing custom furniture manufacturing and selling ready-made furniture. This system helps in the management of the furniture business as it offers an easy-to-use digital platform for customer orders, inventory, and production processes.

The system includes modules specifically for the making of custom furniture. Customers can place orders for such customized furniture by specifying their requirements, dimensions, materials, and design preferences, which the admin can manage and track to achieve production and delivery on time.

For customers purchasing readymade furniture, the system presents a catalog of the available furniture items that can be browsed through, view details of a product, and make a direct purchase. It is also possible to track an order status and follow updates from the customer side. The admin module also encompasses inventory management, production tracking of custom orders, sales data management, and producing reports on sales, production, inventory, and activity from customers.

### Introduction

The Furniture Management System is a digital solution designed to modernize traditional furniture business processes by providing an internet-based platform for managing both custom-made and ready-made furniture operations. It offers customers a seamless experience to browse, order, and track furniture, while administrators can efficiently manage inventory, orders, and production schedules. Supporting multi-user features, the software contains all such basic operations necessary for inventory, custom order tracking, sales processing, and report generation.

### Product features

There are three different users who will be using this system:

* **Admin**, who acts as the system manager.
* **Customer**, who can purchase ready-made furniture or request custom furniture.

**Features for Admin:**

* Manage the inventory of ready-made furniture, including adding, updating, and deleting furniture details.
* Handle custom furniture requests by reviewing customer specifications and tracking the production process.
* Monitor and update the status of customer orders (both custom and ready-made).
* Categorize furniture into different categories and update.

**Features for Customers:**

* Browse the catalog of ready-made furniture by categories and view product details.
* Place orders for ready-made furniture and track order status.
* Submit custom furniture requests by specifying dimensions, materials, and design preferences.

### Functional Requirement

Admin Requirements:

• **Add Furniture:** New entries must be entered in the database with category, dimensions, material, price, and availability.

• **Update Furniture:** Modify details of existing furniture, including price, stock, and specifications.

• **Delete Furniture:** Remove incorrect or obsolete furniture entries from the inventory.

• **Order Management:** Manage and track customer orders, approve/reject custom requests, and update order statuses.

• **Customer Management:** Maintain a detailed database of customers with contact details and order history.

• **Inventory Management:** Track and manage stock levels for furniture and raw materials.

• **Barcode Scanning:** Update the database via barcode scanning during sales or restocking.

• **Search Functionality:** Search furniture by category, attributes, or keywords.

• **Permission Management:** Set user permissions to restrict or enable access to functionalities.

• **Report Generation:** Generate detailed reports on sales, inventory, production, and customer activity.

Customer Requirements:

* + Authentication: Customers must securely log in before accessing the system.
  + **Browse Furniture:** View a categorized catalog of ready-made furniture with details and images.
  + **Custom Furniture Requests:** Submit requests specifying dimensions, materials, and design preferences.
  + **Order Tracking:** Track the status of both ready-made and custom orders.
  + **Search Functionality:** Search furniture by category, price range, materials, or other attributes.
  + **Request New Designs:** Suggest new furniture designs or request unavailable items.
  + **Account Management:** View and manage personal account details, purchase history, and order statuses.

### Non-Functional Requirement

• Accuracy:

The system must ensure correct inventory, customer orders, pricing, and stock levels, avoiding errors in orders or pricing.

• Availability:

The system should be operational during business hours, recoverable within one hour, and respond to requests within two seconds.

• Maintainability:

The system should be easy to maintain, with simple updates, bug fixes, and feature additions, and be modular and portable for easy deployment.