DATABASE MANAGEMENT SYSTEM - PROJECT

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About Client: Naveen Kumar Bansal is the owner of a garment showroom for men named "Magnet Men's Wear" located in Shukan Mall, Shahibaug, Ahmedabad, Gujarat - 380004

Objective: Due to the current pandemic situation people prefer to buy their stuff online so to sell their products online the client would like to have a web application for their showroom. The objective is to build a database backend system to facilitate the trading of Magnet Men's Wear, and an e-commerce web application that allows the client to manage its customers and vendors and allows customers to pre-book their orders.

Website Requirements

- There should be a section on the website describing the owner details, shop details, its name, location, an overview of its products, its business policies, terms and conditions, etc. The return/exchange policies should also be mentioned in this section.

Customer Sign up/Login

- Every customer must sign up and create their account on the website by using their email id. The verification link will be sent to their email id to verify their email address. If a customer has already registered he can just sign in and proceed to purchase the products online.
- When a customer creates their account for the first time, he will be needed to fill some basic details like address, name, phone number, etc. on the Customer Details page. This information will be required later on for effective communication between the client and the customer. The customer can change these details later on after customer authentication to avoid the misuse by a third party.

Vendor Interface

- The website would also contain an interface for the local wholesale vendors who wish to sell their products to the client. They can fill out a form that will contain the details such as product information, quality, cost, delivery charges, durability, their contact details, address, etc. The client can choose the best deal among the available vendors.

Cart and Wishlist

- After logging in, the customer can select the items that he wants to purchase and add them to his cart. If the customer likes some product but wants to purchase it later, or if the product is currently out-of-stock, the customer can move that product to his wishlist. There should be a feature to move the product directly from the wishlist to the cart if the customer wishes to do so. Once all the required items are moved to the cart, the customer can move forward with the transaction.

Payment and Transaction

- Different modes of payment should be provided to the customers like net banking, debit card, credit card, UPI, etc. Before processing the transaction, proper authentication should be done via OTP to avoid any malicious use by a third-party. Cash on Delivery option should also be provided to the trustworthy customers and for a limited time like after 24 hours of order placement, the order would stand cancelled if payment is not done.
- After completing the transaction along with the payment, the invoices containing the details like product name, product Id, its quantity, price, the taxes applied, and the discounts offered(if any) and transaction receipt containing information about payment details should be sent to the registered email id of the customer which would act as a proof of the transaction, in case any issue arises later on regarding purchase, return or replacement.
- Now the customer simply needs to take this transaction receipt to the store to get his products. Currently, the shop does not have a home delivery option but purchasing products online will save the customer from the process of roaming around in the entire shop to select what they want to buy.

Store Inventory Information
- The website should show the inventory state of the product if it is in-stock or out-of-stock. These products should be categorized into appropriate divisions such as shirts, t-shirts, pants, etc. If any offers are present, they must be highlighted on the home page itself to attract the customers.
- The in-stock quantity of each product should be updated after every purchase. Also when the fresh supply of certain products is received from the vendor, the in-stock quantity should be updated accordingly. The client should be able to update the database with offline sales also. Hence the database should be consistent with both online and offline transactions.
- There can be a scarcity of products during the times of heavy demand like the festival time or sometimes the products become abundant due to the introduction of new and better products. So the database should keep track of the abundant and scarce products. In case of sparse products, an email should be sent to the vendor to supply more products and in case of substantial products, the vendor should be informed to stop the product supply until further notice. This will keep the collection of the store up to date with the demand of customers.

Order Information
- A database should contain a separate table for all orders, whether completed or pending. There should be an upper limit on the maximum number of pending orders to avoid too much traffic. If a customer tries to place an order when the pending orders are at the threshold, an appropriate message requesting the customer to try again after some time should be displayed.
- The customer should also be able to view all of his previous orders.
- Each customer should be offered different discount policies based on the frequency of purchase, quantity, and price. Therefore the database should keep track of every

purchase by each customer. The client can prioritize the customers depending upon their purchase history.

Feedback/Reviews and FAQ
- There should also be a section where customers can share their feedback about the shop and review the products.
- The website should also contain an FAQ section where users can find the answer to some common queries such as information about payment methods, return/exchange queries, etc.
- We can add a form-based query system through which customers can contact the client for any complaints and queries. This would make communication between customers and the client smooth and easier.
- If the shop is closed on some days due to a particular reason, then all the registered customers should be informed about the same via email.

Database Requirements
- The database should store information about all the customers and vendors, their details, order history, transactions, bills, etc.
- The database should contain the details about all the products sold by the store such as unique product ID, cost, in-stock quantity, size, fabric of cloth, colour, etc. These products should be categorized into appropriate divisions such as shirts, jeans, formal pants, etc.
- The information about vendors from whom the client purchases products should also be stored in the database. This would help the client to prioritize the vendors based on the quality of their products, price, etc. and he can decide from which vendor he wants to buy. For each vendor, the information like products sold, their wholesale price, quantity, quality, etc. should be stored.
- The database should store information about all the purchases and sales of the store till date. All the sales should be properly organised so that it acts as a proof of transaction for both the client and the customer, in case of any discrepancy. The status of the order should also be stored in the database as if the order is pending or placed. All returns, replacements, and exchanges should be properly recorded too.
- The database should also store information about the wallet of each customer. If the customer returns a product the refund will be credited in his wallet that he can use later on to purchase from the shop.