

1. Role-Based Access Control System (RBAC)

- The system will implement a **role-based access control (RBAC)** mechanism, ensuring that users can only access modules and perform actions they have explicit permissions for.
 - The **Super Admin** will have full access to all modules and will manage user roles and permissions.
 - Each module (Accounting, Sales, Logistics, etc.) will have specific access rights assigned to different user roles.
 - Permissions can be customized at a granular level, allowing fine-tuned control over **read, write, edit, delete, and approval** actions.
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2. Accounting Module

2.1 Supplier Management

- Store and manage supplier details, including:
 - Business name, contact information, address, and banking details.
 - Purchase orders issued to the supplier.
 - Invoices received and their payment statuses.
 - Order details linked to the supplier.
- Generate **supplier statistics**, including:
 - **Total purchases** made from a supplier.
 - **Number of orders** placed with the supplier.
 - **Most frequently purchased goods** (based on quantity and value).
 - **Average purchase value per order**.

2.2 Customer Accounting

- Maintain a record of all customers, including:
 - Order history (completed, pending, and canceled orders).
 - Invoices linked to each order.
 - Current order status with estimated delivery dates.
- Display **customer financial statistics**, such as:
 - **Total value of goods purchased by the customer**.
 - **Total payments made**.

- **Pending balance amount and due dates.**
- **Outstanding payments with overdue alerts.**

2.3 Payment Verification & Reconciliation

- The **Accountant role** will have access to verify payments against **bank transactions**.
 - Once verified, the **order status will be updated automatically** to reflect the cleared payment.
 - If a discrepancy is found, the accountant can flag the payment for review.
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3. Data Entry Module

- **Diamond Price Updates**
 - Users with **Data Entry permissions** can update loose diamond prices dynamically based on market rates.
 - Changes in pricing should **log a record** for auditing purposes.
 - **Inventory Stock Management**
 - Update stock levels when new diamonds are added or removed from inventory.
 - Maintain a **real-time stock tracking system**.
 - Generate reports showing stock movement trends.
 - **Supplier Order Tracking**
 - Track goods purchased from suppliers, including:
 - **Quantity received** per order.
 - **Price paid** per unit.
 - **Invoice details** linked to each order.
 - Set **alerts for pending deliveries** from suppliers.
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4. Salesman Module

- **User Activity Tracking & Behavior Monitoring**
 - Track customer **login frequency** and monitor activity patterns.
 - Capture user interactions, such as:
 - Items added to **cart** or **wishlist**.
 - Frequent **price checking** without making a purchase.

- Flag **unusual activity** (e.g., excessive price checking without purchasing).
- Provide an option to **restrict website access** for suspicious users (e.g., **block IP address** or disable the account).
- Generate **user activity reports** for admins and sales teams.
- **Broadcast Messaging**
 - Enable **bulk messaging** via:
 - **Verified WhatsApp Business API.**
 - **Email notifications.**
 - Allow admins to send **promotional updates, product alerts, and order status messages.**
 - Track **message delivery and response status.**
- **Shop Details & Feedback Management**
 - Salesmen can **add new shop details** they visit, including:
 - Shop name, owner's name, location, and contact details.
 - Business type (retail, wholesale, distributor, etc.).
 - Salesmen can **log interactions with shops**, including:
 - **Response type** (Interested, Not Interested, Follow-up Required).
 - **Additional comments** and insights from the visit.
 - **Next follow-up date** for reminders.
 - Sales reports should be available for managers to track **shop visit history and conversion rates.**

5. Logistics Module

- **Shipping & Delivery Management**
 - Logistics users can **enter customer details** and generate **shipping labels.**
 - Option to select from **multiple shipping providers** such as:
 - **DHL, FedEx, UPS,** or any custom carrier.

- Orders should be assigned a **tracking number** that is linked to the respective carrier.
- **Shipment Tracking & History**
 - Display a **shipment status dashboard** showing:
 - **Orders in transit, pending dispatch, and delivered shipments.**
 - Expected delivery dates.
 - Maintain a **complete log of past shipments**, including:
 - **Process status (Ready to Ship, In Transit, Delivered, Returned).**
 - **Delivery completion date.**
 - **Invoice details linked to the shipment.**
 - Customers can view **real-time tracking details** from their portal.

6. Multi-Language Support

- The system will support **multiple languages**, including:
 - **English (Default)**
 - **Spanish**
 - **French**
 - Additional languages can be added in the future.
- **Implementation Details:**
 - All user-facing content (website, mobile app, email notifications, invoices, etc.) will be translatable.
 - Language preference can be selected during **registration** or updated in **user settings**.
 - The system will automatically detect the user's **browser language** and suggest the preferred option.

7. 2. System-Wide Activity Logging (ADMIN)

Comprehensive Audit Logging (CRUD Operations)

- **Log all create, update, and delete (CRUD) operations** across all modules.
- Capture and store:
 - **Who** performed the action (User ID & Role).

- **What** change was made.
 - **When** the action occurred (Timestamp).
 - **Previous and new values** (for updates).
- Maintain **tamper-proof logs** with role-based access.
- Generate **audit reports** for compliance and security reviews.