

## 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.**

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## 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.