# **Billing Project Documentation**

This documentation describes all modules of the **Billing** project, encompassing client, vendor, item, invoice, quotation/proforma, delivery chalan, credit/debit notes, purchase order, payment, reports, profile, bank details, and dashboard management. The system is built with a modern frontend and backend technology stack, and its relational design supports robust billing, reporting, and client–vendor management.

## **1. Overview**

The **Bill** project is an integrated billing and invoicing system aimed at providing robust modules for:

* **Client & Vendor Management:** Add, edit, and remove client and vendor details along with their contact information and addresses.
* **Item Management:** Create and manage products and services with detailed inventory and pricing information.
* **Invoicing:** Generate invoices complete with shipping charges, subtotals, and custom terms and conditions.
* **Quotations & Proforma Invoices:** Create and manage quotations and proforma invoices with line item details.
* **Delivery, Credit & Debit Notes, Purchase Orders:** Handle delivery chalans, accounting adjustments (credit/debit notes), and purchase orders.
* **Payments:** Record multiple types of payments and view client-specific payment history.
* **Reports & Dashboard:** Run reports by product, service, client, etc., and see dashboard aggregations such as total invoiced versus paid, current invoices, and overdue invoices.
* **Profile & Bank Details:** Maintain company profile information along with bank details for streamlined transactions.

## **2. System Architecture & Technology Stack**

### **Frontend**

* **React:** For dynamic, component-based UI.
* **Vite:** Providing fast development and bundling.
* **Tailwind CSS (or similar):** For clean, responsive designs.
* Modern JavaScript (ES6+) and JSX to deliver an interactive user experience.

### **Backend**

* **Node.js & Express.js:** For RESTful API development.
* **MySQL:** Relational database used to store all entities.
* Additional middleware for authentication, request validation, and error handling.

## **3. Modules & Features**

Each module is designed for ease-of-use and scalability. Below is an outline of the key modules:

### **3.1. Clients Module**

* **Clients List:**
  + Displays: Company Name, Contact Name, Balance, City, Email, Phone.
  + Action: “Create New Client” button.
* **Client Creation / Edit:**
  + **Inputs:**
    - Company Name, Phone, Email
    - GST Treatment (dropdown with options), GSTIN, PAN, TIN, VAT, Website
    - **Vendor Option:** (checkbox/toggle; for dual functionality)
    - **Contact Persons:** (Name, Phone, Email – one or more entries)
    - **Billing Address** and **Opening Balance**.
* **Operations:**
  + Add or remove client companies and their contacts.
  + View pending balances per client.

### **3.2. Vendors & Suppliers Module**

* **Vendors List:**
  + Displays: Company Name, Contact Name, City, Email, Phone.
  + Action: “Add New Vendor” button.
* **Vendor Creation / Edit:**
  + **Inputs:** Same as Clients (Company Name, Phone, Email, GST details, Website).
  + **Client Option:** (checkbox/toggle; for dual functionality).
  + **Addresses:**
    - Billing Address as primary.
    - Separate Shipping Address input (toggle enabled) if different.

### **3.3. Items Module**

* **Items List:**
  + Displays: Name, Description, SKU, Type (product or service), Price, Unit, Quantity.
  + Action: “Create New Item” button.
* **Item Creation / Edit:**
  + **For Products:**
    - **Inputs:** Name, Description, Opening Quantity, Unit, Tax, HSN, SKU.
    - **Sales Info:** Unit Price (currency INR), CESS% and CESS amount.
    - **Purchase Info:** Same as Sales Info.
  + **For Services:**
    - **Inputs:** Name, Description, Unit, Tax, SAC (instead of HSN), SKU.
    - **Sales & Purchase Info:** As above, excluding Opening Quantity.

### **3.4. Invoices Module**

* **Invoice List & Search:**
  + Displayed fields: Issue Date, Document No., Status, Client Name, Due Date, Tax, Amount, Date of Payment, Balance, DR/CR.
  + Action: “Add New Invoice” button.
* **Invoice Creation / Edit:**
  + **Header Inputs:**
    - Client Name (dropdown), Invoice No., PO No., Invoice Date, PO Date, Due Date, Payment Terms.
  + **Line Items Section:**
    - For each line, input: Item Name (dropdown), Unit, Quantity, Price, Discount %, Total, Description.
    - Option to add multiple line items via an “Add Line” button.
  + **Additional Fields:**
    - **Shipping Charges:** Input field for extra shipping cost.
    - **Subtotal:** Automatically computed field showing sum of line items (before shipping and taxes).
    - **Terms & Conditions:** Text input for payment conditions, return policies, etc.

### **3.5. Quotes & Proforma Invoices Module**

This module features a two-part screen that offers:

* **Search & List View:**
  + Search Bar (filter old quotations/proforma items).
  + List displays: Issue Date, Document No., Status, Client Name, Valid Until, Amount.

#### **3.5.1. New Quotation Creation**

* **Form Inputs:**
  + Client Name (dropdown), Quotation No., PO Number, Quotation Date, Valid Until.
* **Line Items Section:**
  + A subtable allowing multiple entries with columns:
    - Unit, Quantity, Price, Discount, Total, and Description.
  + “Add this Line” button to include additional items.
* **Summary Section:**
  + Displays: Subtotal and Grand Total.

#### **3.5.2. New Proforma Invoice Creation**

* **Form Inputs:**
  + Client Name (dropdown), Proforma No., PO Number, Proforma Date, Valid Until.
* **Line Items Section:**
  + Similar to the Quotation section with item selection, unit, quantity, price, discount, etc.

### **3.6. Delivery Chalan Page**

* **Purpose:**
  + It provides a streamlined page to create and view delivery documents (chalans) for shipments.
* **Features:**
  + Fields such as Chalan Date, Document No., Client/Vendor details, and line items delivered.

### **3.7. Credit & Debit Notes Pages**

* **Credit Notes:**
  + **Usage:** For issuing credit adjustments against invoices.
  + **Display & Input:** Issue Date, Document No., Client Name, Amount, Reason/Description.
* **Debit Notes:**
  + **Usage:** For increasing invoice amounts or issuing additional charges.
  + **Display & Input:** Similar to credit notes with fields for Issue Date, Document No., Client Name, Amount, and Description.

### **3.8. Purchase Order Page**

* **Purpose:**
  + Manage purchase orders for vendors/suppliers.
* **Inputs:**
  + Vendor Selection, PO Number, Order Date, Valid Until.
  + **Line Items:**
    - Items list with Unit, Quantity, Price, Discount, Total.
  + Summary calculations as in invoices.

### **3.9. Payments Page**

* **Payment Summary View:**
  + List view displays: Date, Number, Type, Account Name, Document #/Method, Amount, and Available Credit.
  + Action: “Add New Payment” button.
* **New Payment Entry:**
  + **Inputs:**
    - Choose Transaction Type (Payment Made, Advance Payment Made, Payment Received, Advance Payment Received).
    - Client Name (dropdown), Payment Number, Date, Amount, Payment Method (Cash, Cheque, UPI, etc.), Bank Charges, Reference.
* **Client-specific Payment History:**
  + After selecting a client, display their payment records showing:
    - Date, Number, Amount, Amount Due, Payment Value.
  + Provide search options to filter by the last 6 months or 1 year.
  + Summarize totals: Amount Received and Excess Amounts.

### **3.10. Reports Page**

* **Reports Options:**
  + **Sales Reports:** By Product, by Service, Sales Inventory, By Client, and By User.
  + **Tax Reports:** Invoices with Tax details.
* **Features:**
  + Date range selectors (“From Date” to “To Date”) for custom report generation.
  + Export functionality to generate PDF reports.

### **3.11. Profile & Bank Details Page**

* **Profile Section:**
  + **Inputs:**
    - Upload Logo, Company Name, Country, City, Pin Code, Default Currency, State, Address, Email, Phone, Service Tax No., Website, Taxation Type, Contact Name.
* **Bank Details Section:**
  + **Inputs:**
    - Bank Name, Branch Name, AD Code, UPI ID, Account Number, IFSC Code, SWIFT Code, Account Holder Name.
  + Options provided for both “Save” and “Edit.”

### **3.12. Dashboard Overview**

The dashboard aggregates key metrics from across the modules:

* **Financial Metrics:** Total Invoiced vs. Paid.
* **Invoice Status:** Current invoices and Overdue invoices with their due dates.
* **Visualizations:** Graphs or charts providing quick insights into client balances, payment trends, and aging of invoices.

## **4. Database Design & Schema**

Below are the proposed tables (including extensions) for the extended modules. New fields are highlighted as additions.

### **4.1. Clients & Related Tables**

#### **clients Table**

| **Field Name** | **Data Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| client\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique identifier for the client. |
| company\_name | VARCHAR(150) | NOT NULL | Name of the client company. |
| phone | VARCHAR(20) | NOT NULL | Contact phone number. |
| email | VARCHAR(100) | NOT NULL, UNIQUE | Contact email address. |
| gst\_treatment | VARCHAR(50) | NULL | GST Treatment (e.g., Composition, Regular, etc.) |
| gstin | VARCHAR(20) | NULL | GST Identification Number. |
| pan | VARCHAR(20) | NULL | Permanent Account Number. |
| tin | VARCHAR(20) | NULL | Tax Identification Number. |
| vat | VARCHAR(20) | NULL | VAT number (if applicable). |
| website | VARCHAR(100) | NULL | Company website URL. |
| billing\_address | TEXT | NULL | Billing address of the client. |
| city | VARCHAR(50) | NULL | City where the client is located. |
| opening\_balance | DECIMAL(10,2) | DEFAULT 0.00 | Initial balance amount. |
| is\_vendor | BOOLEAN | DEFAULT FALSE | Indicates if the client also acts as a vendor. |

#### **client\_contacts Table**

| **Field Name** | **Data Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| contact\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique identifier for each contact. |
| client\_id | INT | NOT NULL, FOREIGN KEY | References clients(client\_id). |
| name | VARCHAR(100) | NOT NULL | Name of the contact person. |
| phone | VARCHAR(20) | NOT NULL | Phone number of the contact person. |
| email | VARCHAR(100) | NOT NULL | Email address of the contact person. |

### **4.2. Vendors & Related Tables**

#### **vendors Table**

| **Field Name** | **Data Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| vendor\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique identifier for the vendor. |
| company\_name | VARCHAR(150) | NOT NULL | Name of the vendor/supplier company. |
| contact\_name | VARCHAR(100) | NOT NULL | Main contact person’s name. |
| phone | VARCHAR(20) | NOT NULL | Contact phone number. |
| email | VARCHAR(100) | NOT NULL, UNIQUE | Email address. |
| gst\_treatment | VARCHAR(50) | NULL | GST Treatment (if applicable). |
| gstin | VARCHAR(20) | NULL | GST Identification Number. |
| pan | VARCHAR(20) | NULL | Permanent Account Number. |
| tin | VARCHAR(20) | NULL | Tax Identification Number. |
| vat | VARCHAR(20) | NULL | VAT number (if applicable). |
| website | VARCHAR(100) | NULL | Website URL of the vendor. |
| billing\_address | TEXT | NULL | Primary billing address. |
| shipping\_address | TEXT | NULL | Shipping address (if different) |
| city | VARCHAR(50) | NULL | City where the vendor is located. |
| is\_client | BOOLEAN | DEFAULT FALSE | Indicates if the vendor also acts as a client. |

#### **vendor\_contacts Table**

| **Field Name** | **Data Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| contact\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique identifier for each contact. |
| vendor\_id | INT | NOT NULL, FOREIGN KEY | References vendors(vendor\_id). |
| name | VARCHAR(100) | NOT NULL | Name of the vendor’s contact person. |
| phone | VARCHAR(20) | NOT NULL | Phone number of the contact person. |
| email | VARCHAR(100) | NOT NULL | Email address of the contact person. |

### **4.3. Items Module**

#### **items Table**

| **Field Name** | **Data Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| item\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique identifier for each item. |
| name | VARCHAR(150) | NOT NULL | Name of the item. |
| description | TEXT | NULL | Description of the item. |
| sku | VARCHAR(50) | NOT NULL, UNIQUE | Stock Keeping Unit – unique identifier for the item. |
| type | ENUM('product','service') | NOT NULL | Indicates if the item is a product or a service. |
| unit | VARCHAR(50) | NOT NULL | Unit of measurement (e.g., piece, hour, etc.). |
| opening\_quantity | DECIMAL(10,2) | NULL | Opening quantity (applicable for products only). |
| tax | DECIMAL(5,2) | NULL | Tax percentage applied. |
| code | VARCHAR(50) | NULL | HSN for products or SAC for services. |
| sales\_unit\_price | DECIMAL(10,2) | NOT NULL | Unit sales price. |
| sales\_currency | VARCHAR(10) | DEFAULT 'INR' | Currency for sales (default INR). |
| sales\_cess\_percentage | DECIMAL(5,2) | NULL | Applicable cess percentage on sales. |
| sales\_cess | DECIMAL(10,2) | NULL | CESS amount on sales. |
| purchase\_unit\_price | DECIMAL(10,2) | NOT NULL | Unit purchase price. |
| purchase\_currency | VARCHAR(10) | DEFAULT 'INR' | Currency for purchases (default INR). |
| purchase\_cess\_percentage | DECIMAL(5,2) | NULL | Applicable cess percentage on purchase. |
| purchase\_cess | DECIMAL(10,2) | NULL | CESS amount on purchase. |

### **4.4. Invoices Module**

#### **invoices Table**

| **Field Name** | **Data Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| invoice\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique identifier of the invoice. |
| client\_id | INT | NOT NULL, FOREIGN KEY | References clients(client\_id). |
| invoice\_no | VARCHAR(50) | NOT NULL, UNIQUE | Unique invoice number. |
| po\_no | VARCHAR(50) | NULL | Purchase Order number (if applicable). |
| invoice\_date | DATE | NOT NULL | Date when the invoice is issued. |
| po\_date | DATE | NULL | Date of the Purchase Order. |
| due\_date | DATE | NOT NULL | Payment due date. |
| payment\_terms | VARCHAR(50) | NOT NULL | e.g., On Receipt, NET 7, NET 15. |
| shipping\_charges | DECIMAL(10,2) | DEFAULT 0.00 | Additional shipping cost. |
| subtotal | DECIMAL(10,2) | NOT NULL | Sum of all line item totals before additional charges/taxes. |
| terms\_conditions | TEXT | NULL | Custom terms and conditions. |
| tax | DECIMAL(10,2) | NULL | Total tax amount applicable. |
| amount | DECIMAL(10,2) | NOT NULL | Grand total of the invoice. |
| payment\_date | DATE | NULL | Date of payment received. |
| balance | DECIMAL(10,2) | DEFAULT 0.00 | Outstanding balance. |
| dr\_cr | ENUM('DR','CR') | NOT NULL | Debit or Credit indicator. |

#### **invoice\_items Table**

| **Field Name** | **Data Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| invoice\_item\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique line item identifier. |
| invoice\_id | INT | NOT NULL, FOREIGN KEY | References invoices(invoice\_id). |
| item\_id | INT | NOT NULL, FOREIGN KEY | References items(item\_id). |
| unit | VARCHAR(50) | NOT NULL | Unit of measurement for this invoice line. |
| quantity | DECIMAL(10,2) | NOT NULL | Number of units billed. |
| price | DECIMAL(10,2) | NOT NULL | Price per unit. |
| discount\_percent | DECIMAL(5,2) | NULL | Discount percentage (if any). |
| total | DECIMAL(10,2) | NOT NULL | Calculated total for the line (quantity x price – discount). |
| description | TEXT | NULL | Additional notes or description for the line item. |

### **4.5. Quotes & Proforma Invoices**

#### **quotations Table**

| **Field Name** | **Data Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| quotation\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique identifier for the quotation. |
| client\_id | INT | NOT NULL, FOREIGN KEY | References clients(client\_id). |
| quotation\_no | VARCHAR(50) | NOT NULL, UNIQUE | Unique quotation number. |
| po\_number | VARCHAR(50) | NULL | Purchase Order number. |
| quotation\_date | DATE | NOT NULL | Date when the quotation is issued. |
| valid\_until | DATE | NOT NULL | Quotation validity period. |
| subtotal | DECIMAL(10,2) | NOT NULL | Sum of line item totals before additional charges. |
| total | DECIMAL(10,2) | NOT NULL | Final total after all adjustments. |

#### **quotation\_items Table**

| **Field Name** | **Data Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| quotation\_item\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique line item identifier for quotation. |
| quotation\_id | INT | NOT NULL, FOREIGN KEY | References quotations(quotation\_id). |
| unit | VARCHAR(50) | NOT NULL | Unit of measurement. |
| quantity | DECIMAL(10,2) | NOT NULL | Quantity for the line item. |
| price | DECIMAL(10,2) | NOT NULL | Price per unit. |
| discount\_percent | DECIMAL(5,2) | NULL | Discount percentage (if any). |
| total | DECIMAL(10,2) | NOT NULL | Calculated total for the item. |
| description | TEXT | NULL | Additional line item description or note. |

#### **proforma\_invoices Table**

| **Field Name** | **Data Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| proforma\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique identifier for the proforma invoice. |
| client\_id | INT | NOT NULL, FOREIGN KEY | References clients(client\_id). |
| proforma\_no | VARCHAR(50) | NOT NULL, UNIQUE | Unique proforma invoice number. |
| po\_number | VARCHAR(50) | NULL | Purchase Order number associated. |
| proforma\_date | DATE | NOT NULL | Date when the proforma invoice is created. |
| valid\_until | DATE | NOT NULL | Validity period of the proforma invoice. |

#### **proforma\_items Table**

| **Field Name** | **Data Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| proforma\_item\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique line item identifier for proforma invoice. |
| proforma\_id | INT | NOT NULL, FOREIGN KEY | References proforma\_invoices(proforma\_id). |
| unit | VARCHAR(50) | NOT NULL | Unit of measurement. |
| quantity | DECIMAL(10,2) | NOT NULL | Quantity for the line item. |
| price | DECIMAL(10,2) | NOT NULL | Price per unit. |
| discount\_percent | DECIMAL(5,2) | NULL | Discount percentage if applicable. |
| total | DECIMAL(10,2) | NOT NULL | Calculated total for the item. |
| description | TEXT | NULL | Additional item description or note. |

### **4.6. Delivery Chalan, Credit Notes, Debit Notes & Purchase Orders**

#### **delivery\_chalans Table**

| **Field Name** | **Data Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| chalan\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique delivery chalan identifier. |
| invoice\_id | INT | FOREIGN KEY | Optionally linked to an invoice. |
| client\_id | INT | NOT NULL, FOREIGN KEY | References clients(client\_id). |
| chalan\_date | DATE | NOT NULL | Date when delivery is made. |
| doc\_no | VARCHAR(50) | UNIQUE | Document number for the chalan. |
| notes | TEXT | NULL | Additional delivery instructions or notes. |

#### **credit\_notes Table**

| **Field Name** | **Data Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| credit\_note\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique identifier for the credit note. |
| invoice\_id | INT | FOREIGN KEY | Linked invoice (if applicable). |
| client\_id | INT | NOT NULL, FOREIGN KEY | References clients(client\_id). |
| issue\_date | DATE | NOT NULL | Date of the credit note issuance. |
| doc\_no | VARCHAR(50) | UNIQUE | Credit note document number. |
| amount | DECIMAL(10,2) | NOT NULL | Amount credited. |
| description | TEXT | NULL | Reason or description for the credit note. |

#### **debit\_notes Table**

| **Field Name** | **Data Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| debit\_note\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique identifier for the debit note. |
| invoice\_id | INT | FOREIGN KEY | Linked invoice (if applicable). |
| client\_id | INT | NOT NULL, FOREIGN KEY | References clients(client\_id). |
| issue\_date | DATE | NOT NULL | Date of the debit note issuance. |
| doc\_no | VARCHAR(50) | UNIQUE | Debit note document number. |
| amount | DECIMAL(10,2) | NOT NULL | Amount debited. |
| description | TEXT | NULL | Reason or description for the debit note. |

#### **purchase\_orders Table**

| **Field Name** | **Data Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| purchase\_order\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique purchase order identifier. |
| vendor\_id | INT | NOT NULL, FOREIGN KEY | References vendors(vendor\_id). |
| po\_no | VARCHAR(50) | NOT NULL, UNIQUE | Purchase Order number. |
| order\_date | DATE | NOT NULL | Date when the order was placed. |
| valid\_until | DATE | NOT NULL | Order validity date. |
| subtotal | DECIMAL(10,2) | NOT NULL | Sum of line item totals before adjustments. |
| total | DECIMAL(10,2) | NOT NULL | Final total for the purchase order. |

### **4.7. Payments Module**

#### **payments Table**

| **Field Name** | **Data Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| payment\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique identifier for the payment record. |
| date | DATE | NOT NULL | Payment date. |
| number | VARCHAR(50) | NOT NULL, UNIQUE | Payment number or document identifier. |
| type | VARCHAR(50) | NOT NULL | Payment category (e.g., Payment Made, Advance Recvd, etc.). |
| account\_name | VARCHAR(100) | NOT NULL | Name of the account involved in the transaction. |
| document\_method | VARCHAR(50) | NULL | Payment document reference or method details. |
| amount | DECIMAL(10,2) | NOT NULL | Payment amount. |
| available\_credit | DECIMAL(10,2) | DEFAULT 0.00 | Calculated available credit after payment. |

#### **payment\_details Table**

This table captures detailed payment entries – whether made or received.

| **Field Name** | **Data Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| payment\_detail\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique identifier for a detailed payment entry. |
| payment\_id | INT | NOT NULL, FOREIGN KEY | References payments(payment\_id). |
| client\_id | INT | NOT NULL, FOREIGN KEY | References clients(client\_id). |
| number | VARCHAR(50) | NOT NULL | Payment detail number. |
| date | DATE | NOT NULL | Date of the payment detail record. |
| amount | DECIMAL(10,2) | NOT NULL | Amount of the payment detail entry. |
| method | VARCHAR(50) | NOT NULL | Payment method (e.g., Cash, Cheque, UPI). |
| bank\_charges | DECIMAL(10,2) | NULL | Bank charges applied (if any). |
| reference | VARCHAR(100) | NULL | Payment reference details. |

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### **4.8. Profile & Bank Details Module**

#### **profiles Table**

| **Field Name** | **Data Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| profile\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique identifier for the profile record. |
| logo | VARCHAR(255) | NULL | URL or file path for the company logo. |
| company\_name | VARCHAR(150) | NOT NULL | Name of the company. |
| country | VARCHAR(50) | NOT NULL | Country. |
| city | VARCHAR(50) | NOT NULL | City. |
| pin\_code | VARCHAR(15) | NULL | Postal code. |
| default\_currency | VARCHAR(10) | DEFAULT 'INR' | Default operating currency. |
| state | VARCHAR(50) | NULL | State name. |
| address | TEXT | NOT NULL | Complete address. |
| email | VARCHAR(100) | NOT NULL, UNIQUE | Company email. |
| phone | VARCHAR(20) | NOT NULL | Contact phone number. |
| service\_tax\_no | VARCHAR(50) | NULL | Service tax number. |
| website | VARCHAR(100) | NULL | Company website. |
| taxation\_type | VARCHAR(50) | NULL | Taxation regime/type. |
| contact\_name | VARCHAR(100) | NULL | Primary contact person’s name. |

#### **bank\_details Table**

| **Field Name** | **Data Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| bank\_detail\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique bank detail record identifier. |
| profile\_id | INT | NOT NULL, FOREIGN KEY | References profiles(profile\_id). |
| bank\_name | VARCHAR(100) | NOT NULL | Bank name. |
| branch\_name | VARCHAR(100) | NULL | Branch name. |
| ad\_code | VARCHAR(50) | NULL | AD code (if applicable). |
| upi\_id | VARCHAR(100) | NULL | UPI identifier. |
| account\_number | VARCHAR(50) | NOT NULL | Bank account number. |
| ifsc\_code | VARCHAR(20) | NOT NULL | IFSC code for the bank branch. |
| swift\_code | VARCHAR(20) | NULL | SWIFT/BIC code. |
| account\_holder\_name | VARCHAR(100) | NOT NULL | Name as per bank records. |

## **5. Entity Relationship Overview**

A high-level relationship mapping for key modules:

[clients] 1 --- \* [client\_contacts]

[vendors] 1 --- \* [vendor\_contacts]

[clients] 1 --- \* [invoices] 1 --- \* [invoice\_items]

[clients] 1 --- \* [quotations] 1 --- \* [quotation\_items]

[clients] 1 --- \* [proforma\_invoices] 1 --- \* [proforma\_items]

[vendors] 1 --- \* [purchase\_orders]

[invoices] (optionally linked) --- [delivery\_chalans]

[clients] 1 --- \* [credit\_notes]

[clients] 1 --- \* [debit\_notes]

[payments] 1 --- \* [payment\_details]

[profiles] 1 --- 1 [bank\_details]

**Clients Module:**

* **Master Table:** clients This table holds the primary data for each client (e.g., company name, contact details, GST information, etc.).
* **Detail Tables:** client\_contacts, credit\_notes, debit\_notes
  + client\_contacts stores additional contact persons linked to a client.
  + credit\_notes and debit\_notes record adjustments related to a client’s transactions.

**Vendors Module:**

* **Master Table:** vendors Contains core vendor or supplier information.
* **Detail Table:** vendor\_contacts Stores multiple contacts for each vendor.

**Items Module:**

* **Master Table:** items Holds the complete details for products or services.

**Invoices Module:**

* **Master Table:** invoices Each invoice (with headers such as invoice date, client, PO no., etc.) is stored here.
* **Detail Table:** invoice\_items Contains the line items with quantity, price, and discounts linked to an invoice.

**Quotations Module:**

* **Master Table:** quotations Each quotation record is maintained here.
* **Detail Table:** quotation\_items Includes the individual line items contained in a quotation.

**Proforma Invoices Module:**

* **Master Table:** proforma\_invoices Stores the header information for each proforma invoice.
* **Detail Table:** proforma\_items Contains the line items or breakdowns for a proforma.

**Purchase Orders Module:**

* **Master Table:** purchase\_orders This table stores the primary purchase order information provided to vendors. (If needed, a detail table like purchase\_order\_items can be created similarly to the invoice-line items, though it wasn’t explicitly included in the earlier design.)

**Payments Module:**

* **Master Table:** payments Contains overarching payment records.
* **Detail Table:** payment\_details Breaks down each payment into its details (such as splitting the amounts or capturing multiple components).

**Profile & Bank Details Module:**

* **Master Table:** profiles Stores the primary company profile information.
* **Associated Table:** bank\_details Linked via a one-to-one relationship, this table holds the bank details for the corresponding profile.

## **6. Conclusion**

This documentation outlines the full scope of the **Billing** project—from managing clients, vendors, items, and invoices to additional modules like quotations, proforma invoices, delivery chalans, credit/debit notes, purchase orders, payments, reports, profile management, and bank details. It also describes the dashboard metrics for an at-a-glance view of invoicing and payment performance. With a modular design and clearly defined database schema, the system is designed to be scalable, maintainable, and ready for future extensions.