**CRM Database Schema Documentation**

This document explains the CRM database design, including all tables, relationships, and how leads, opportunities, deals, and products connect together.

**1. Lead Table**

Holds **basic information about potential clients** before they are converted into customers.

**Fields:**

* id → Unique identifier.
* name, email, phone → Contact details.
* source → Origin of the lead (LinkedIn, Web Form, Referral, etc.).
* status → Current high-level state of the lead (see below).
* score → Lead scoring metric (numerical).
* created\_at, updated\_at → Audit timestamps.
* team\_id → The team responsible for the lead.
* user\_id → The specific sales rep handling the lead.

**Lead Status Values:**

* Open → Lead created but not yet worked on.
* Unassigned → Lead exists but no sales rep owns it.
* In Progress → Being actively pursued.
* Converted → Lead successfully turned into a customer.
* Lost → Lead disqualified or unresponsive.

**2. Customer Table**

Represents **leads that have been converted into paying customers**.

**Fields:**

* id, name, email, phone → Core contact info.
* company, industry → Business details.
* created\_at, updated\_at → Tracking info.
* lead\_id → Reference to the original lead (one-to-one relationship).

**3. User Table**

Represents **CRM users (employees, sales reps, admins, etc.)**.

**Fields:**

* id, name, email → Basic identity.
* role → Defines permission level (Admin, Sales Rep, Manager).
* team\_id → Team they belong to.

**4. Team Table**

Groups multiple **users into teams**.

**Fields:**

* id, name, description.

**5. Interaction Table**

Tracks **touchpoints with leads or customers** (emails, calls, meetings, etc.).

**Fields:**

* id, type → Interaction type (Email, Call, Meeting, etc.).
* content → Notes or actual message.
* timestamp → When it happened.
* is\_automated → Whether the system generated it.
* lead\_id, customer\_id → Who the interaction is linked to.

**6. Campaign Table**

Represents **marketing campaigns** in CRM.

**Fields:**

* id, name, description.
* channel → Campaign type (Email, WhatsApp, etc.).
* start\_date, end\_date.

**7. Opportunity Table**

Represents **potential deals** that are being worked on.

**Fields:**

* id, name → Deal name/title.
* value → Monetary deal size (before probability applied).
* currency → Currency code (default = INR).
* probability → % chance of winning the deal (0–100).
* expected\_revenue → Auto-calculated = value × probability.
* status → Stage of opportunity lifecycle (Open, Won, Lost).
* close\_date → Expected or actual closing date.
* created\_at → When deal was created.
* lead\_id → Reference to the lead this deal came from.
* customer\_id → If tied directly to a customer.
* pipeline\_stage\_id → Current stage in pipeline journey.

**Uses:**

* Tracks deals in progress.
* Provides revenue forecasting (expected\_revenue).
* Connects to **products** via DealProduct.

**8. PipelineStage Table**

Defines the **sales journey stages**.

**Pipeline Stage Values (in order):**

1. New → Lead created, no contact yet.
2. Contacted → First outreach done.
3. Qualified → Lead meets requirements.
4. Opportunity → Converted into a potential deal.
5. Deal/Won → Deal successfully closed.
6. Lost → Deal/lead dropped or disqualified.

**Mapping with Lead.status:**

* Stages New, Contacted, Qualified, Opportunity → Status = In Progress.
* Stage Deal/Won → Status = Converted.
* Stage Lost → Status = Lost.

**9. Task Table**

Tracks **activities or tasks assigned to users**.

**Fields:**

* id, title, description.
* due\_date, status (Pending, Completed).
* priority.
* user\_id → Owner of the task.
* opportunity\_id → Linked deal (optional).

**10. LeadCampaign Table**

Junction table for **many-to-many relation** between leads and campaigns.

**Fields:**

* lead\_id
* campaign\_id

**11. Conversation Table**

Represents **threads of communication**.

**Fields:**

* id, channel → WhatsApp, LinkedIn, Email.
* subject → For email threads.
* created\_at.
* lead\_id or customer\_id → Who the conversation belongs to.

**12. Message Table**

Stores **individual messages** in a conversation.

**Fields:**

* id, conversation\_id.
* sender → Lead, User, or external email address.
* content, timestamp.
* direction → inbound (from lead/customer) or outbound (from CRM user).
* is\_read.

**13. Product Table**

Represents the **catalog of products/services** that can be sold.

**Fields:**

* id, name, description.
* base\_price → Default listed price.
* currency → Pricing currency.

**14. DealProduct Table**

Links **Opportunities and Products**.  
This allows deals to contain multiple products with their own pricing and quantities.

**Fields:**

* id.
* opportunity\_id → Which deal this product is part of.
* product\_id → The product being sold.
* quantity → Number of units.
* unit\_price → Price at which it was sold (can differ from base\_price).
* total\_price → Auto-calculated (quantity × unit\_price).

**🔄 Relationships & Flow**

1. **Lead → Customer**
   * A lead may convert into a customer.
2. **Lead → Opportunity**
   * A lead can create an opportunity (potential deal).
3. **Opportunity → PipelineStage**
   * Each opportunity is tied to a pipeline stage (progress in sales funnel).
4. **Opportunity → DealProduct → Product**
   * Opportunities can contain one or multiple products/services.
5. **Opportunity → Customer**
   * When a deal closes, it links directly to the customer.
6. **Campaign → Lead → Customer**
   * Campaigns generate leads, which may later convert into customers.
7. **Conversation → Message**
   * Tracks ongoing communication history across multiple channels.