Dataset Documentation – Real Estate Management Company

**🏢 Company Background & Assumptions**

This dataset simulates a **real estate management company** operating across multiple U.S. states.  
The company is responsible for **property sales, rentals, maintenance (repairs), and client/agent management**.

**Key assumptions made while generating the dataset:**

* A **property** can only be sold once (unless it’s resold), but it can be rented multiple times with sequential contracts.
* **Commission** for sales and rentals is calculated differently:
  + Sale: one-time % of the selling price.
  + Rent: % of the rent amount × contract duration (months).

**Tables & Columns**

**clients.csv**

Stores client details.

* client\_id (PK) – Unique identifier.
* full\_name – Client’s full name.
* gender – Male/Female.
* phone – Phone number.
* email – Email address.
* Address id – Client’s location.

**agents.csv**

Information about real estate listing, rent, sales, manager agents.

* agent\_id (PK) – Unique identifier.
* full\_name – Agent’s full name.
* gender, age – Demographics.
* phone, email – Contact info.
* hire\_date – Date when the agent was hired.
* agent\_type

**owners.csv**

Represents property owners.

* owner\_id (PK).
* full\_name, gender, age.
* phone, email.

**properties.csv**

Property information.

* property\_id (PK).
* owner\_id (FK → owners).
* agent\_id (FK → Listing Agent).
* listing\_date – When property was listed.
* listing\_type – Sale / Rent.
* property\_type – House, Apartment, Condo, etc.
* asking\_amount – Price or monthly rent.
* Features: num\_bedrooms, num\_bathrooms, kitchen, parking.
* Address\_id – property’s location.

**visits.csv**

Represents property visits made by clients.

* visit\_id (PK).
* client\_id (FK → clients).
* property\_id (FK → properties).
* visit\_date.
* purpose – Short description ( Viewing before rent, Considering purchase,..).

**sales.csv**

Property sales transactions.

* sale\_id (PK).
* client\_id (FK).
* agent\_id (FK).
* property\_id (FK).
* sale\_date.
* sale\_price.
* commission\_rate.
* commission\_amount (**derived as sale\_price × rate**).
* payment\_method (Cash, Bank Transfer, etc.).
* payment\_date.

**rent.csv**

Rent.

* rental\_id (PK).
* client\_id (FK).
* agent\_id (FK).
* property\_id (FK).
* owner\_id (FK).
* agreement\_date.
* monthly\_rent.
* commission\_rate,
* commission\_amount (**derived as monthly\_rent × months × rate**).
* payment\_method.
* commission\_payment\_date.
* contract\_id (FK).

**rent contract.csv**

Rent contracts.

* rental\_id (FK).
* rent\_start\_date,
* rent\_end\_date.
* Contract terms

**maintenance.csv**

Repairs and maintenance for properties.

* maintenance\_id (PK).
* property\_id (FK).
* maintenance \_date.
* description – e.g., “Replace bathroom sink”, “Fix air conditioning”.
* category – Plumbing, Electrical, Painting, HVAC
* cost.

\*responsible\_party – Typically the owner.

**address.csv**

Reference table for states and cities.

* Address\_id.
* Street.
* state.
* city.
* Country.
* latitude, longitude.

**🔗 Relationships**

* **Clients (1) → (N) Visits**
* **Clients (1) → (N) Sales / Rentals**
* **Properties (1) → (N) Visits / Sales / Rentals**
* **Properties (1) → (N) Maintenance**
* **Owners (1) → (N) Properties**
* **Agents (1) → (N) Sales / Rentals**
* **Address (1) → (N) Clients & Properties**
* **Contracts (1) → (1) Rentals**