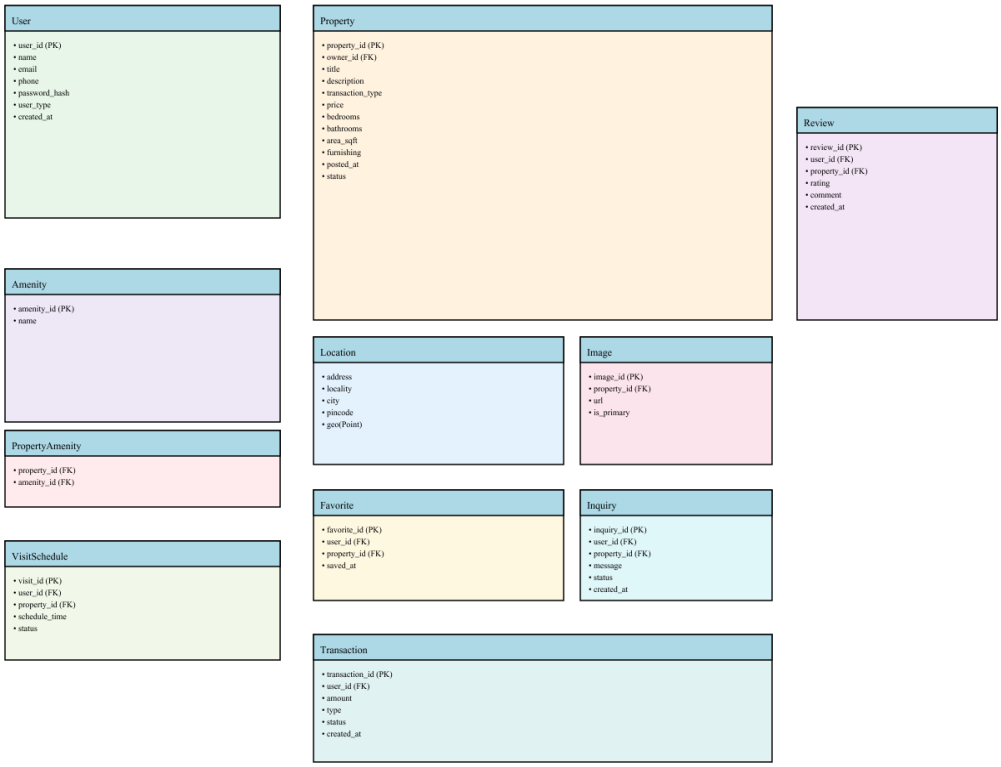
HUNT PROPERTY

Complete MongoDB Data Model & ER Diagram Documentation

Colored ER Diagram



MongoDB Design Strategy

Hunt Property uses a hybrid MongoDB model combining document embedding and referencing.
This balances fast reads for property listings with scalable write-heavy collections like inquiries and reviews.

- Embedded: location, images, amenities
- Referenced: users, reviews, inquiries, favorites, visits, transactions

Collections Overview

1. users
2. properties
3. reviews
4. inquiries
5. favorites
6. transactions
7. property_stats (optional)

Property Document Schema (JSON)

```
{
_id: ObjectId(),
owner_id: ObjectId(),
title: "2 BHK Apartment",
description: "Spacious flat near sector 62",
transaction_type: "rent",
price: 18000,
bedrooms: 2,
bathrooms: 2,
area_sqft: 900,
furnishing: "semi-furnished",
location: {
address: "...",
locality: "Raj Nagar",
city: "Ghaziabad",
geo: { type: "Point", coordinates: [77.412, 28.673] }
},
images: [{ url: "...", is_primary: true }],
amenities: ["Lift", "Parking", "Power Backup"],
posted_at: ISODate(...)
}
```

Index Recommendations

• Geo Search Index

```
db.properties.createIndex({ "location.geo": "2dsphere" });
```

• Full Text Search
db.properties.createIndex({ title: "text", description: "text" });

• Filters
db.properties.createIndex({ transaction_type: 1, price: 1 });
db.properties.createIndex({ bedrooms: 1, bathrooms: 1 });

Sample Search Queries

1) Geo-based property search
db.properties.find({
"location.geo": {
$near: {
$geometry: { type: "Point", coordinates: [lon, lat] },
$maxDistance: 5000
}
}
});

2) Text search
db.properties.find({ $text: { $search: "2 BHK metro" } });

3) Filter by price and bedrooms
db.properties.find({ transaction_type: "rent", price: { $lte: 20000 }, bedrooms: { $gte: 2 } });