House Rental Database System

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Changes to the Initial ERD:

Enhanced User Entity Structure:
The 'User' entity has been optimized to serve as a super type that now exclusively contains 'Name', 'Contact', and 'Address' attributes. This centralization removes the need for these attributes to be repeated across the subtype entities, which streamlines the database design by avoiding unnecessary duplication of data.

Refined Ownership and Property Relationships:
The 'Landlord' entity no longer holds the 'PropertyID'. Instead, an 'Owner' entity has been introduced to represent the ownership of properties. This entity has a one-to-many relationship with the 'Property' entity, which now includes 'OwnerID' as a foreign key. This change provides a clearer and more direct representation of which owner owns which properties.

Property Entity as a Strong Entity:
The 'Property' entity has been strengthened to ensure that while it can be associated with numerous leases over time, at any given period, it is only leased to a single renter. This adjustment enforces real-world leasing constraints and maintains the integrity of leasing records within the database.

Landlord Management Classification:
Landlords are categorized into two types: 'Management Driven' and 'Individually Managed'. The 'Management Driven' subtype indicates those landlords who have their properties managed by a management company. This allows the ERD to reflect the business practice that management companies can manage multiple properties from various landlords.

Lease as an Associative Entity:
'Lease' has been redefined as an associative entity that forms a relationship between 'Renter' and 'Property'. This explicitly models the connection between renters and the properties they lease, facilitating the tracking and management of leases within the application.

Broker Firm and Property Listings Connection:
'Broker Firm' is now associated with properties through the addition of a 'Property Listing' entity. This creates a more structured relationship between properties on the market and the broker firms that represent them, enabling broker firms to manage and list multiple properties efficiently.

Introduction of Brokerage Associative Entity:
A new associative entity named 'Brokerage' has been introduced, effectively replacing the previous many-to-many relationship between 'Broker Firm' and 'Renter'. 'Brokerage' serves to streamline the interactions

between renters and broker firms, providing a clearer structure for managing these relationships and the transactions that occur as renters seek to lease properties.

Final ERD