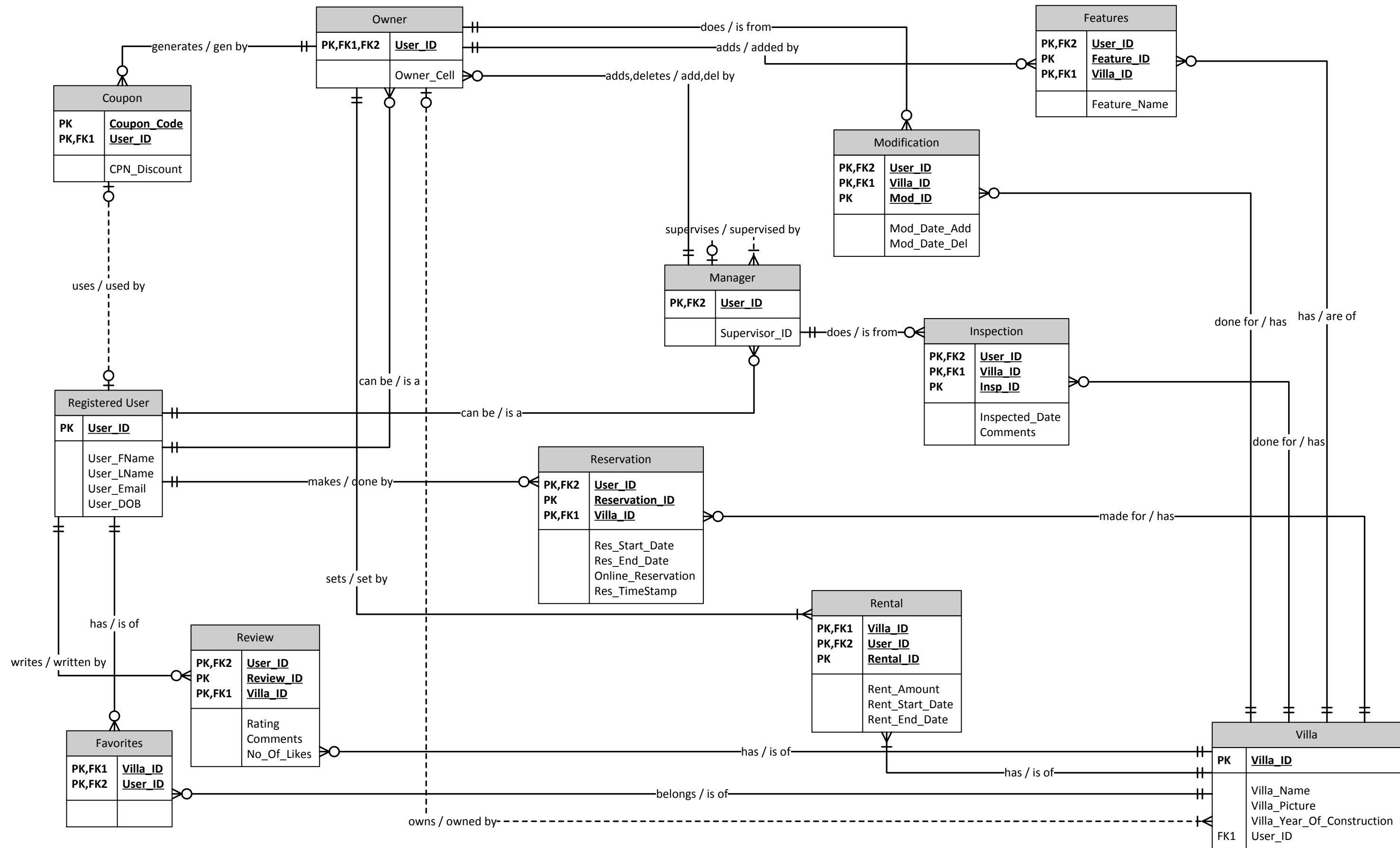


Vacation Rental Website

Database design using ER Model



Assumptions and Comments:

- Age of Villa is derived from Villa_Year_Of_Construction.
- Rent of Villa is derived by looking at the Rental from start_date to end_date and comparing with current reservation dates.
- Features is a multi-valued attribute and hence a new weak entity is defined. A feature is defined only when the owner decides to add it to a Villa. We can have same feature id for different villas hence a composite key is defined.
- Manger and Owner entities are defined to store additional attributes namely cell and supervisor ID. CEO doesn't have a supervisor, hence the unary relationship is made optional at one end.
- Reservation made online is captured in Online_reservation attribute and the balance rent amount for the villa is calculated after accounting this factor. Res_TimeStamp is used to resolve conflict between two users reserving the same Villa.
- User Favorite List is a multi valued attribute and hence new weak entity is defined to store his favorite villas.
- Manager's inspection comments and visit date are captured in weak Inspection entity along with ID to uniquely identify the repeated inspections. Manager adds/deletes the user to the system directly.
- Owner's modification dates are also captured in weak entity along with the mod_ID to uniquely identify modifications done to same villa.
- Top review for the Villa is calculated based on the count of No_Of_likes attribute. Each review has aunique Review_ID to identify the reviews given to same villa.
- Coupons generated with a code can be used by users and the coupon discount is subtracted from the rent amount and remaining balance will be calculated. User need not use coupon always, but a generated coupon should have owner's user ID as PK since he generates them. Coupon expires once it has been used by any user.
- Rent of the villa is defined by the Owner of the villa along with the range of dates. Same villa can have many rents on different days distinguished by Rental_ID.