

Best Home Real Estate

Entity-Relationship Data Modelling

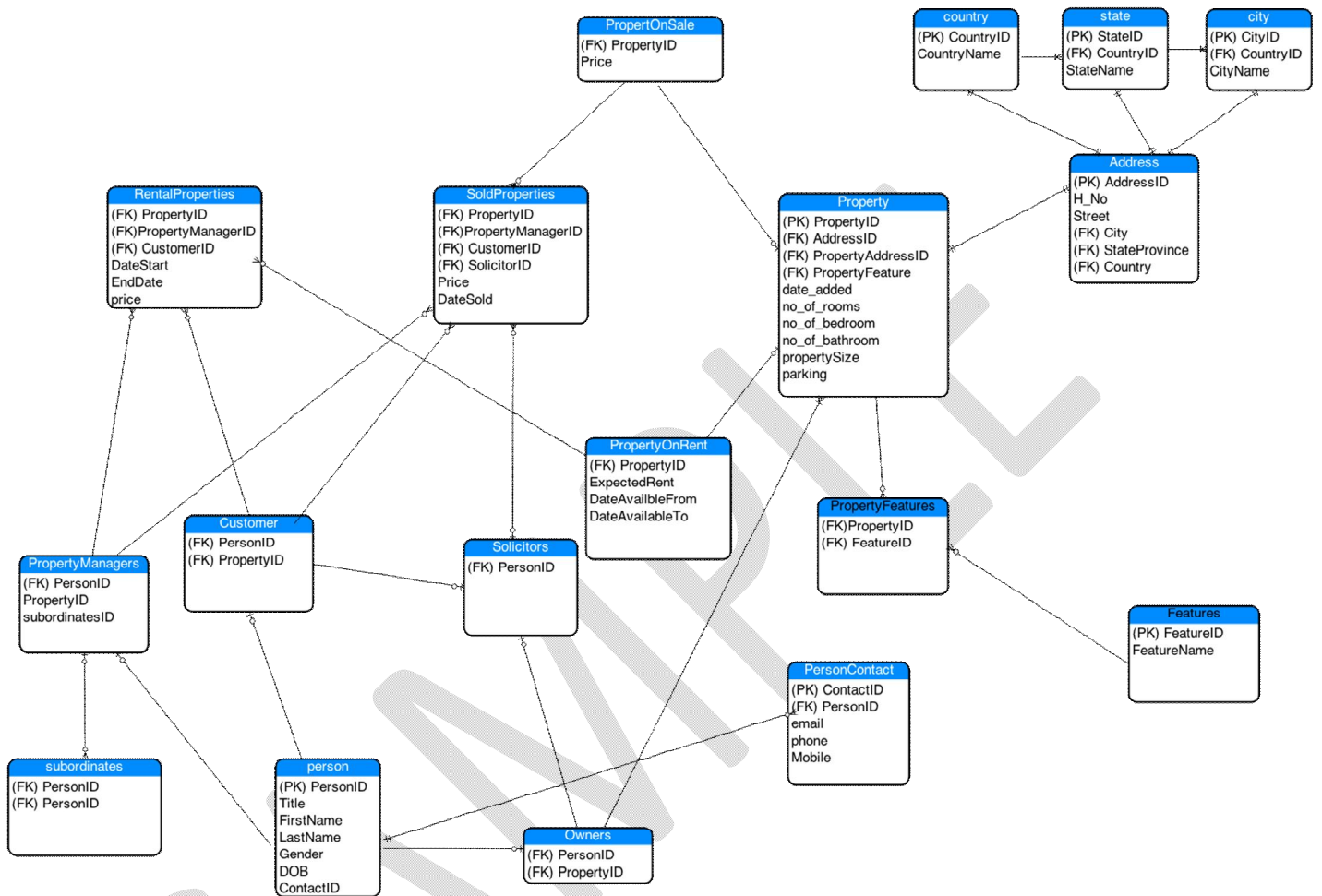
SAMPLE

1. Assumptions

The following assumptions have been made while creating the ER Diagram from the Best Home Real estate Company:

1. In Future company can expand into many countries so that is why separate table for country, state, city and Addresses has been created.
2. A property can have many features like Air Conditioning, parking or swimming pool etc. to cover that property features table and master table for all facilities features has been created
3. A person can have many contact details, to cover that a separate table PersonContact has been created with composite primary keys ContactID and PersonID
4. To cover the status of the property PropertOnSale and PropertyOnRent tables has been created
5. Properties which are unavailable are recorded under Rental properties and SoldProperties.
6. A solicitor is involved when the property is sold to cover this in SoldProperties table entry for solicitor is also made.
7. To record which property managers has subordinates a subordinates table has been created with both its columns are primary key

2. Entity-Relationship Diagram



3. Entity and relationship and cardinality definition

1. **Property** ((PK) PropertyID, (FK) AddressID, (FK) PropertyFeature, date_added, no_of_rooms, no_of_bedroom, no_of_bathroom, propertySize, parking)

Primary Key: PropertyID

Foreign Keys :

AddressID References Address.AddressID

PropertyFeature References propertyFeatures.PropertyID

2. **PropertyFeatures** ((FK)PropertyID, (FK) FeatureID)

Primary Keys: (PropertyID, FeatureID)

Foreign keys:

PropertyID References Property.PropertyID

FeatureID References Features.FeatureID

3. **Features**((PK) FeatureID, FeatureName)

Primary Key: FeatureID

4. **Address** ((PK) AddressID, H_No, Street, (FK) City, (FK) StateProvince, (FK) Country)

Primary Key: AddressID

Foreign Keys :

City References City.CityID

Country References Country.CountryID

StateProvince References state.StateID

5. Country ((PK) CountryID, CountryName)

Primary Key: CountryID

6. City((PK)CityID, (FK)CountryID, CityName)

- Primary Key:** CityID
Foreign Key: CountryID References **Country**.CountryID
7. **State**((PK) StateID, (FK)CountryID)
Primary Key: StateID
Foreign Keys: CountryID References Country.CountryID
8. **Person**((PK) PersonID, Title,FirstName,LastName,Gender,DOB,(FK)ContactID)
Primary Key: PersonID
Foreign Key: ContactID References PersonContact.ContactID
9. **PropertyManager**((FK)PersonID, (FK)PropertyID,(FK) SubordinateID)
Primary Keys: PersonID, PropertyID
Foreign Keys:
PersonID References Person.PersonID
PropertyID References Property.PropertyID
10. **Customer** ((FK) PersonID, (FK) PropertyID)
Primary Key: (PersonID, PropertyID)
Foreign Keys:
PersonID References Person.PersonID
PropertyID References Property.PropertyID
11. **Owner** ((FK) PersonID, (FK) PropertyID)
Primary Key: (PersonID, PropertyID)
Foreign Keys:
PersonID References Person.PersonID
PropertyID References Property.PropertyID
12. **Solicitor**((FK) PersonID)
Primary Key: PersonID
Foreign Key: PersonID References Person.PersonID
13. **Subordinates**((FK) PersonID, (FK)PersonID)
Composite Primary Key: PersonID, PersonID
Foreign Key: PersonID References Person.PersonID
14. **PersonContact** ((PK) ContactID, (FK) PersonID, email, phone, Mobile)
Composite Primary Key: ContactID, PersonID

Foreign Key: PersonID References Person.PersonID

15. **RentalProperties** ((FK) PropertyID, (FK)PropertyManagerID, (FK) CustomerID, DateStart, EndDate, price)

Composite primary Key: (PropertyID, PropertyManagerID, CustomerID)

Foreign Key:

PropertyID References property.PropertyID

PropertyManagerID References PropertyManager.PersonID

CustomerID References Customer.PersonID

16. **SoldProperties** ((FK) PropertyID, (FK)PropertyManagerID, (FK) CustomerID, (FK) SolicitorID, Price, DateSold)

Composite Primary Key: (PropertyID, PropertyManagerID, CustomerID)

Foreign Key:

PropertyID References property.PropertyID

PropertyManagerID References PropertyManager.PersonID

CustomerID References Customer.PersonID

17. **PropertOnSale** ((FK) PropertyID, Price)

Primary Key: Property ID

Foreign Key: PropertyID References property.PropertyID

18. **PropertyOnRent** ((FK) PropertyID, ExpectedRent, DateAvailableFrom, DateAvailableTo)

Primary Key: Property ID

Foreign Key: PropertyID References property.PropertyID