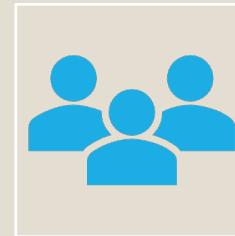




**Extended ER system**



**MIS631 GROUP NO. 13**  
**PROF J.MORABITO**



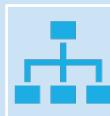
**Property  
management project**

Renu deepya Iska, Siddanth makonahalli manu,  
Bhuvan vardhan reddy dereddy, Vaishnav  
shivalingegowda, Joel araujo.

# Property management project



ABC Property Management organization manages the properties which are owned by the property buyers.

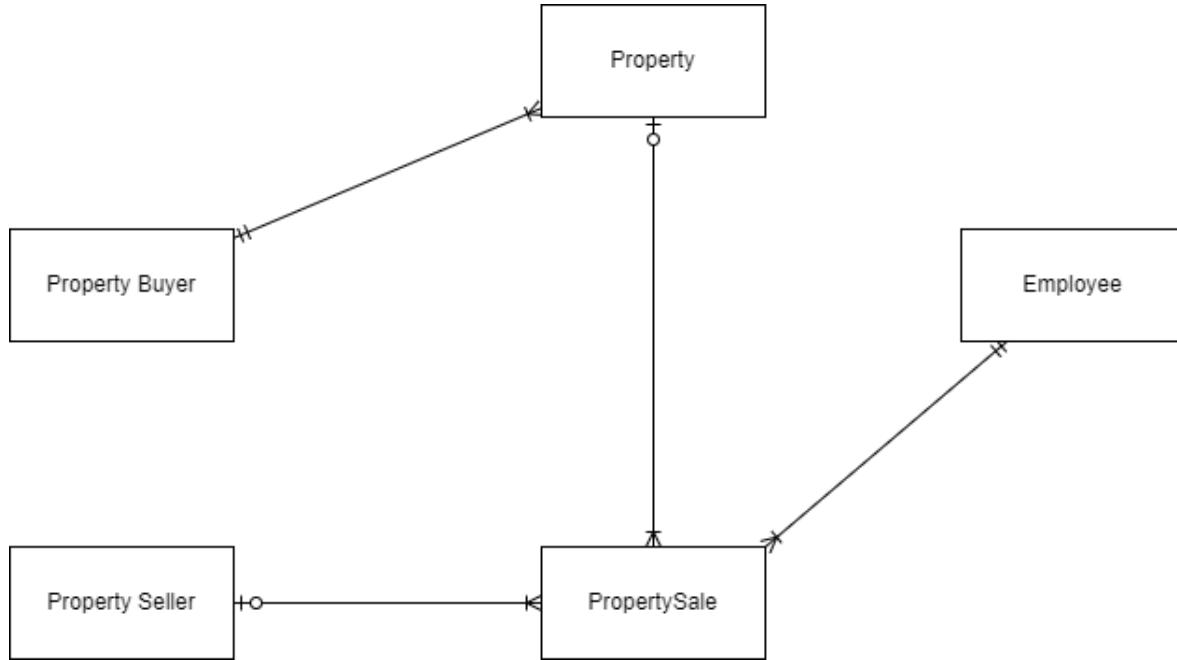


Business Model: This organization uses a database named property management to manage the sale details of the properties.

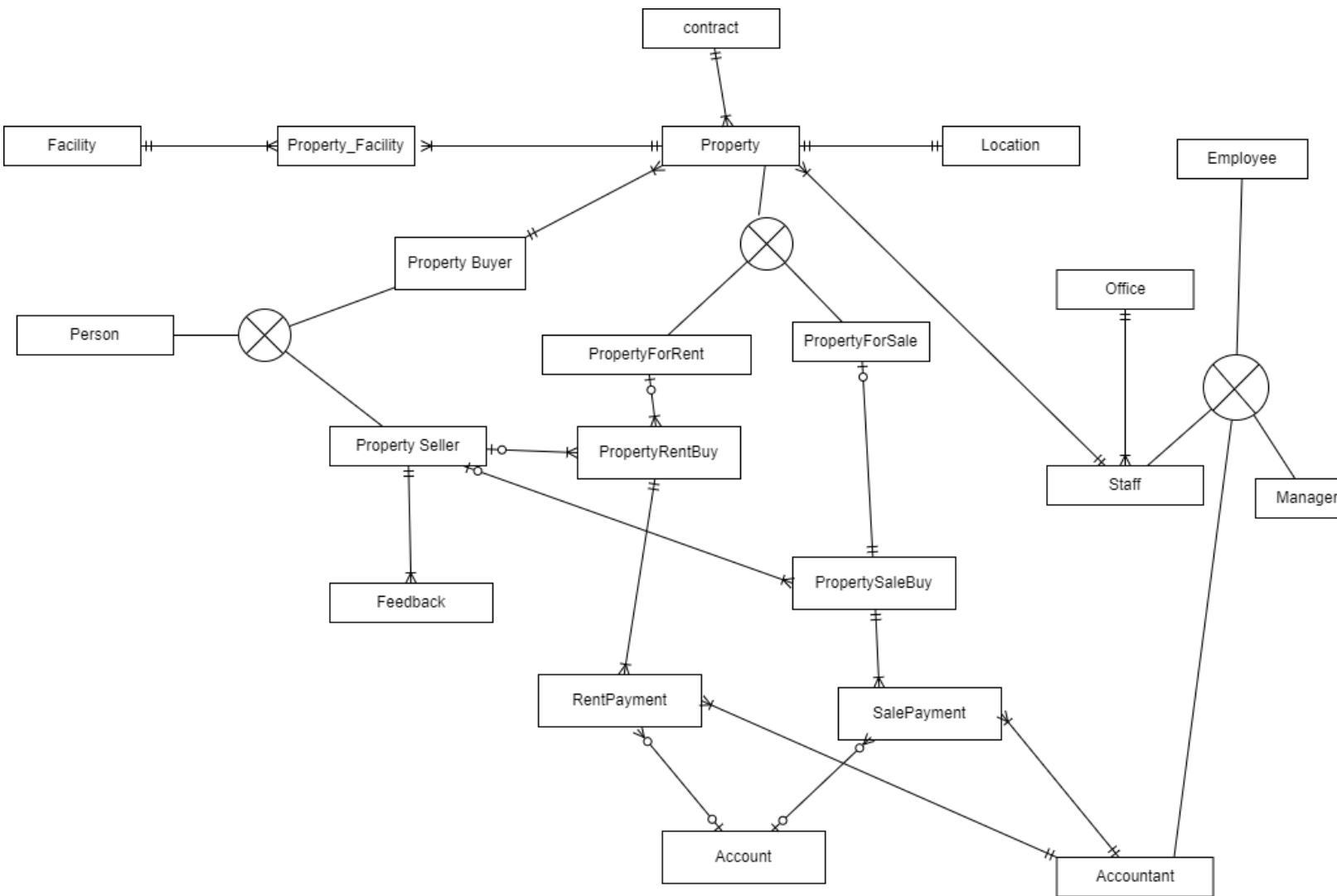


ABC Property Management has large amount of data which are related to property data, sales data, buyer data and seller data.

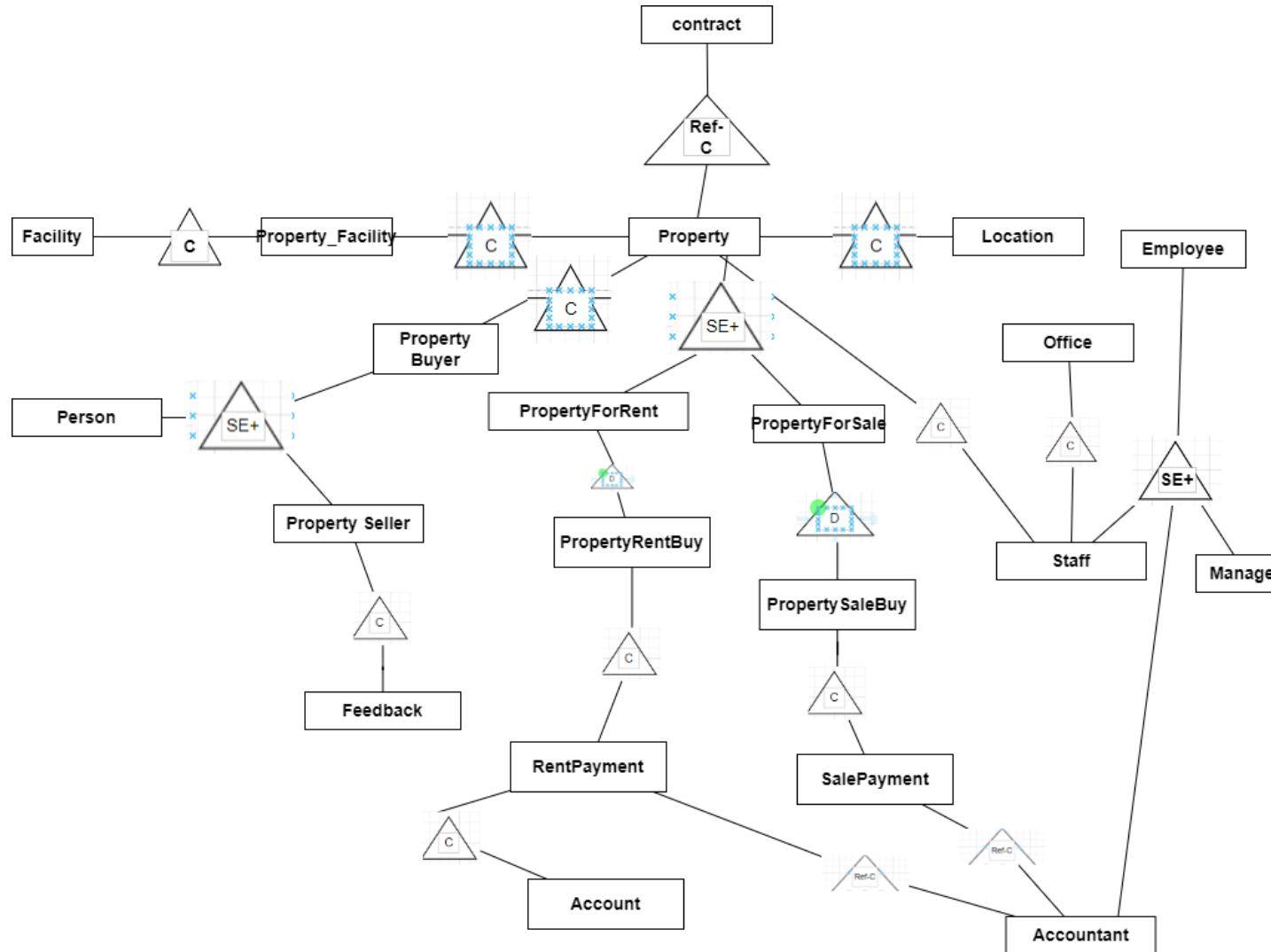
# HIGH-LEVEL DATA MODEL FORM PROPERTY MANAGEMENT



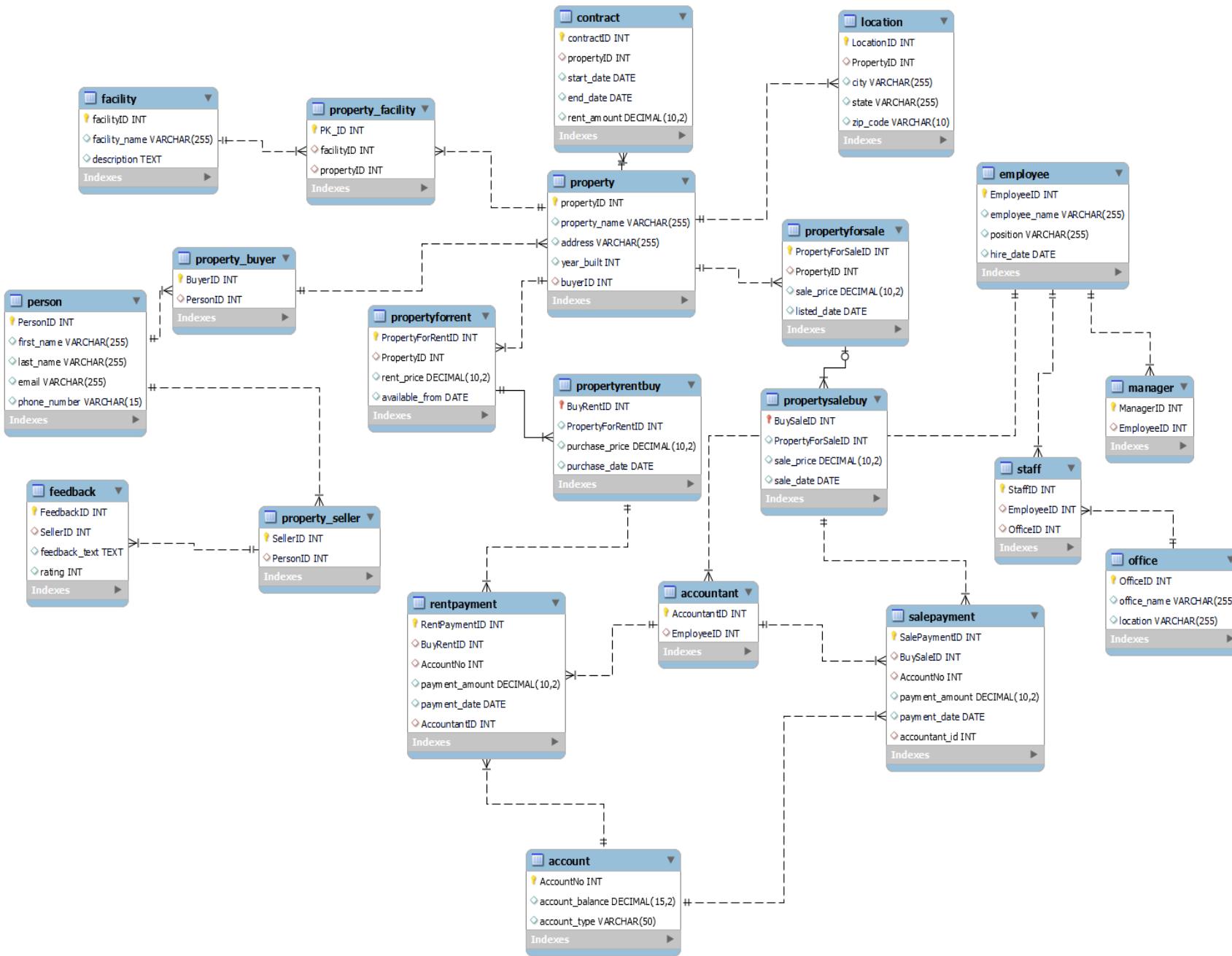
# CONSOLIDATED ENTITY-RELATIONSHIP MODEL FOR PROPERTY MANAGEMENT



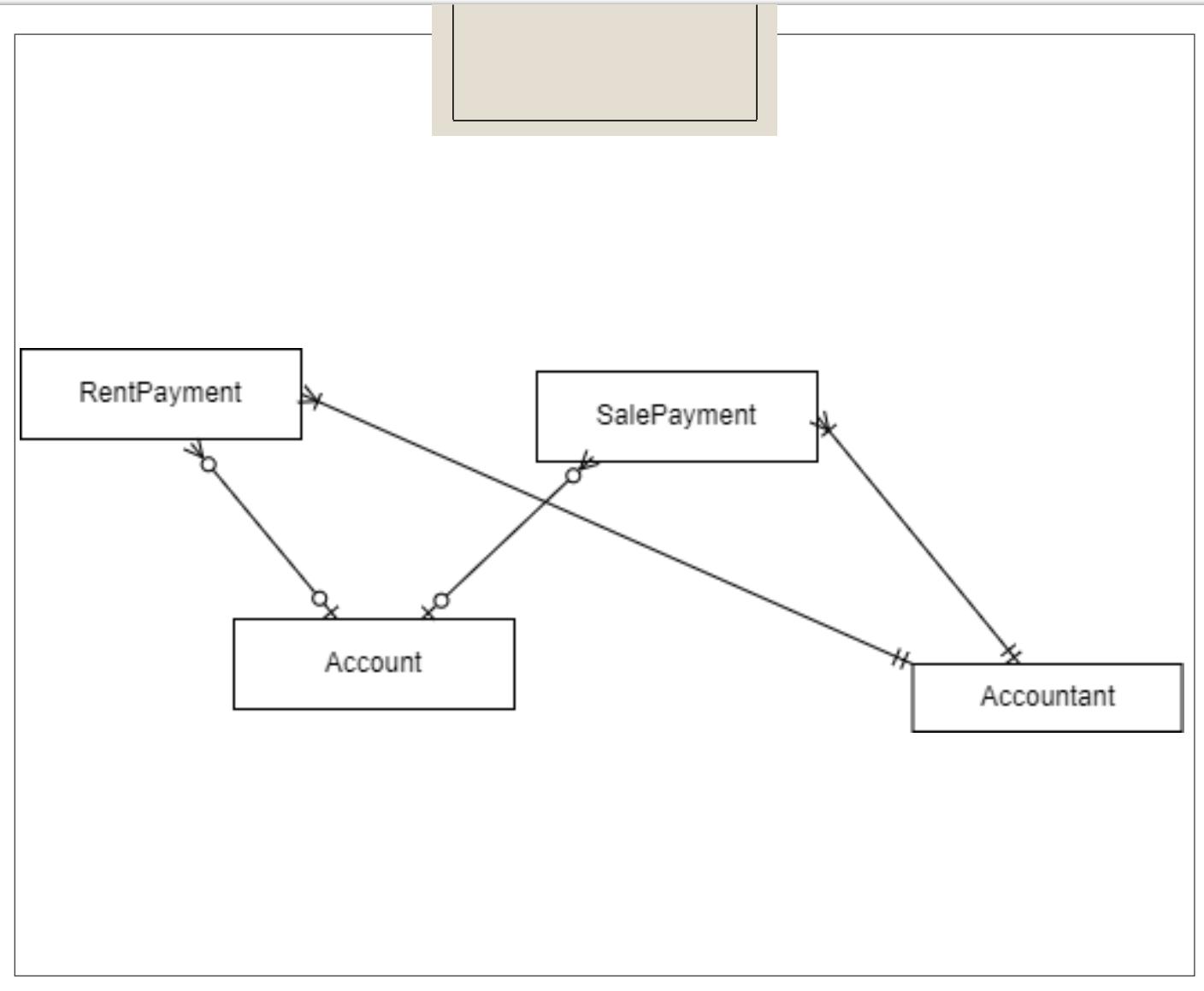
# INFORMATION MODELLING FOR PROPERTY MANAGEMENT



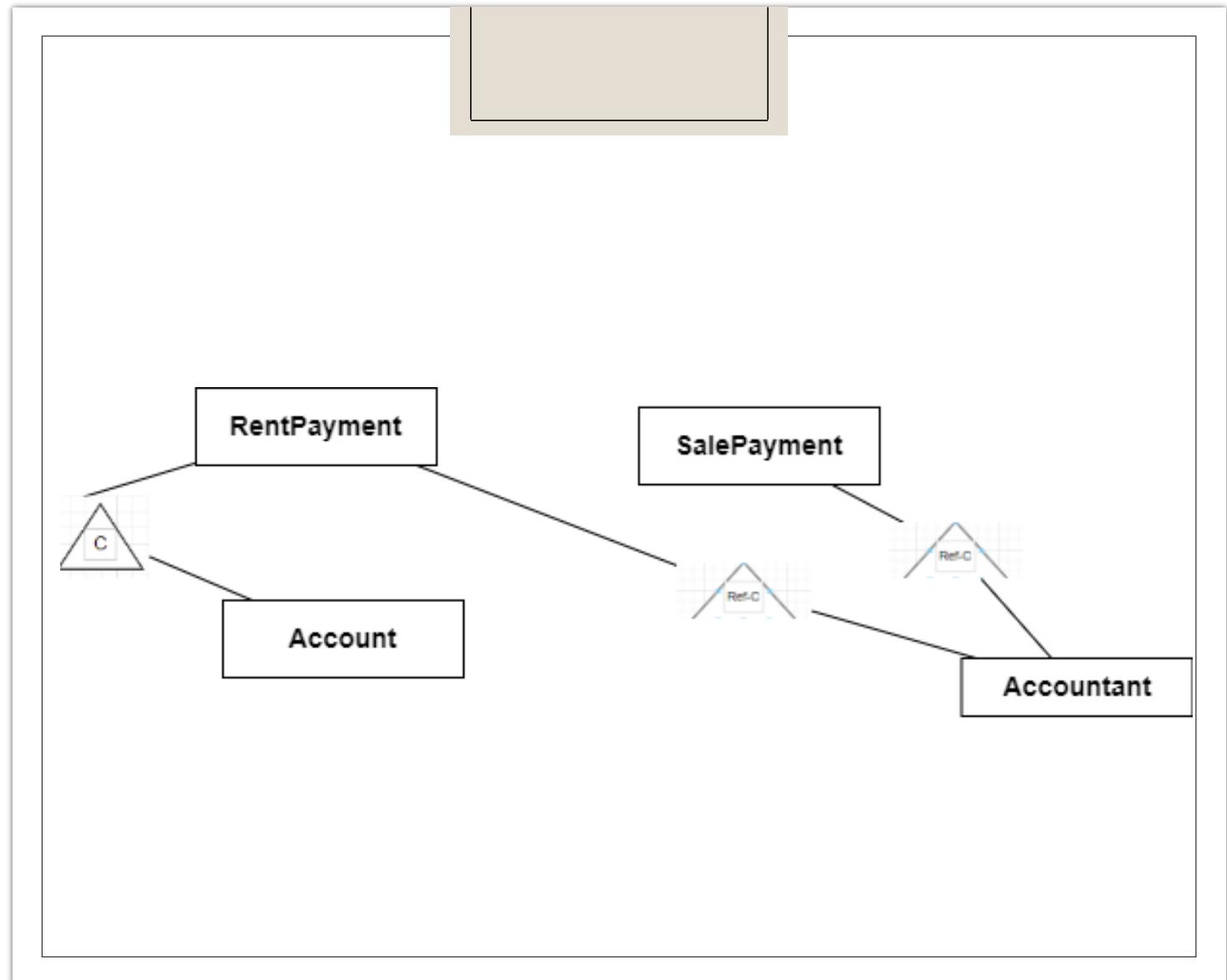
# CONSOLIDATED FULLY ATTRIBUTE MODEL FOR IT DEPARTMENT



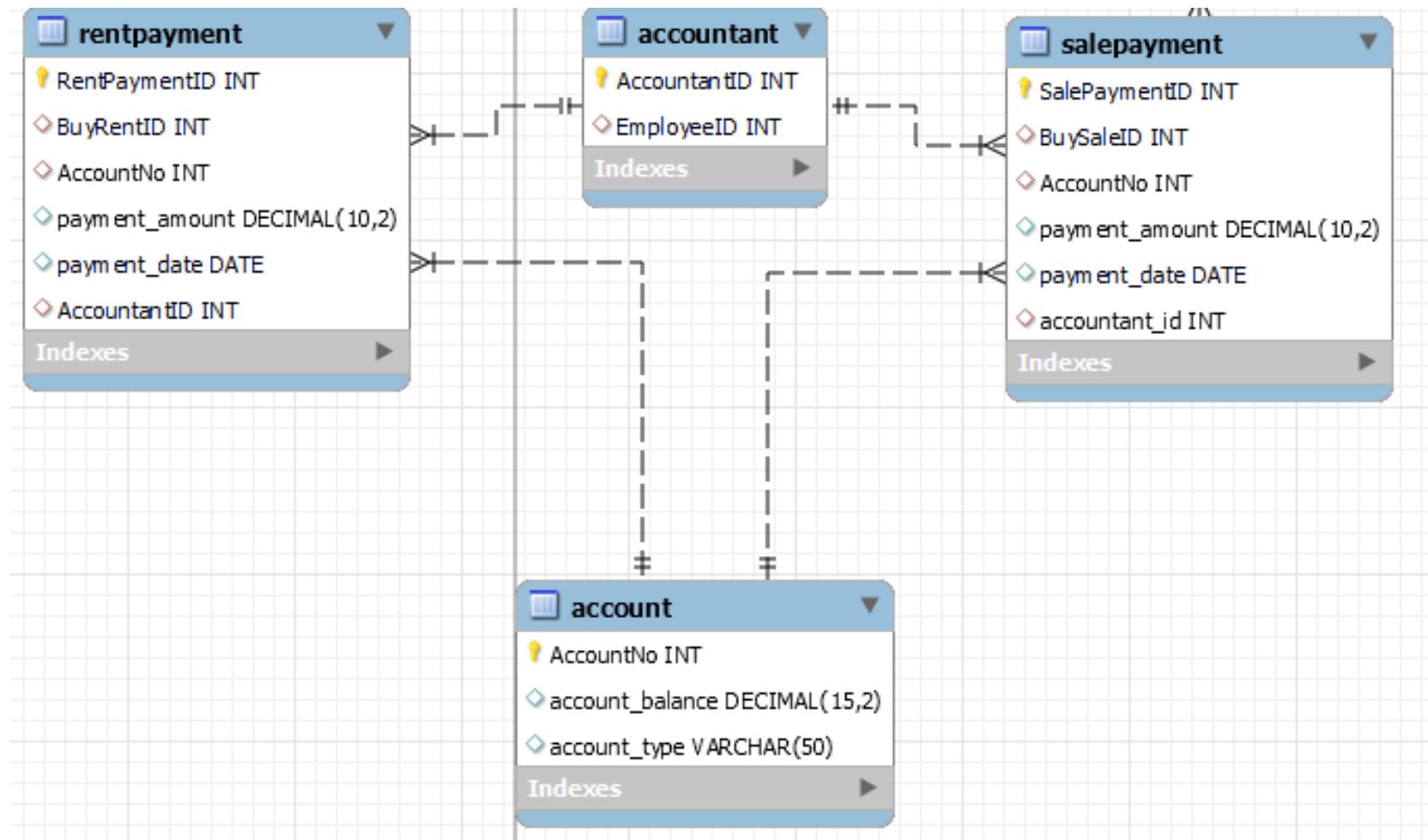
# ER FOR PROPERTY PAYMENT MANAGEMENT



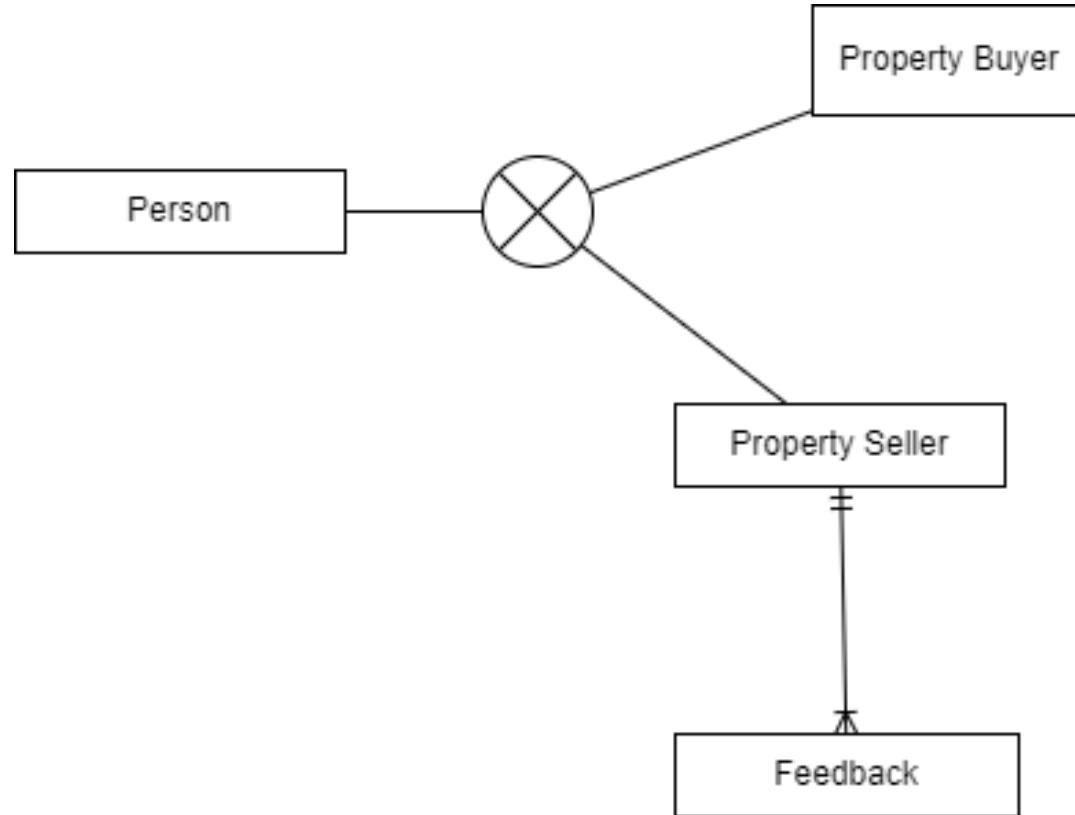
# INFORMATION MODEL FOR PROPERTY PAYMENT MANAGEMENT



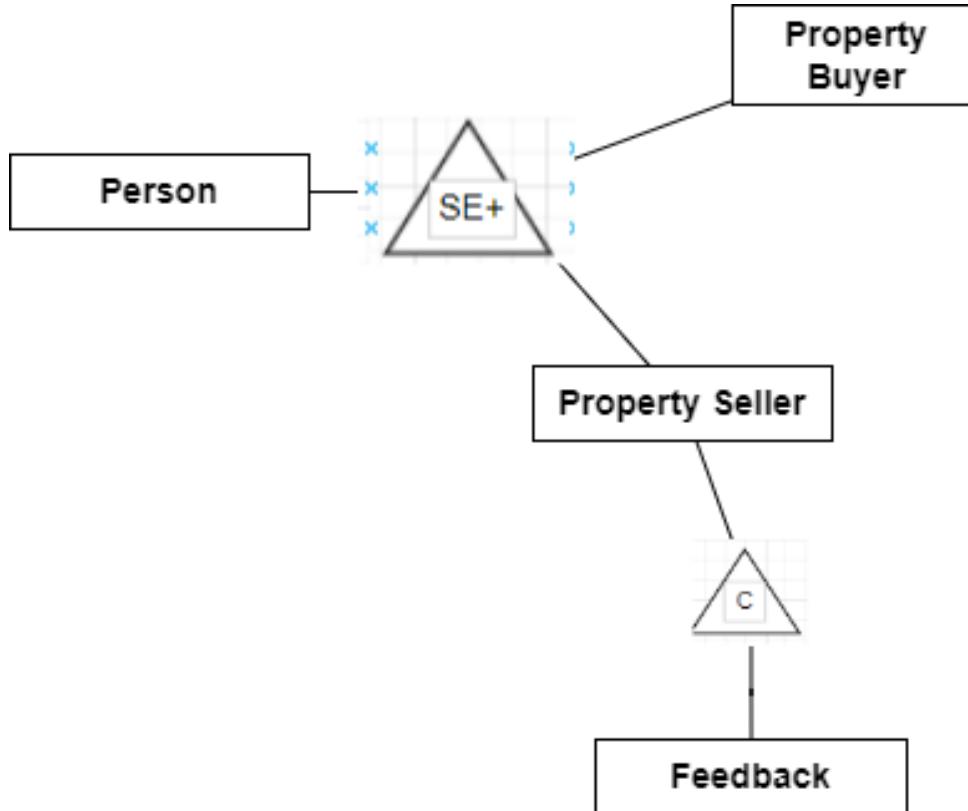
# FULLY ATTRIBUTE MODEL FOR PAYMENT MANAGEMENT



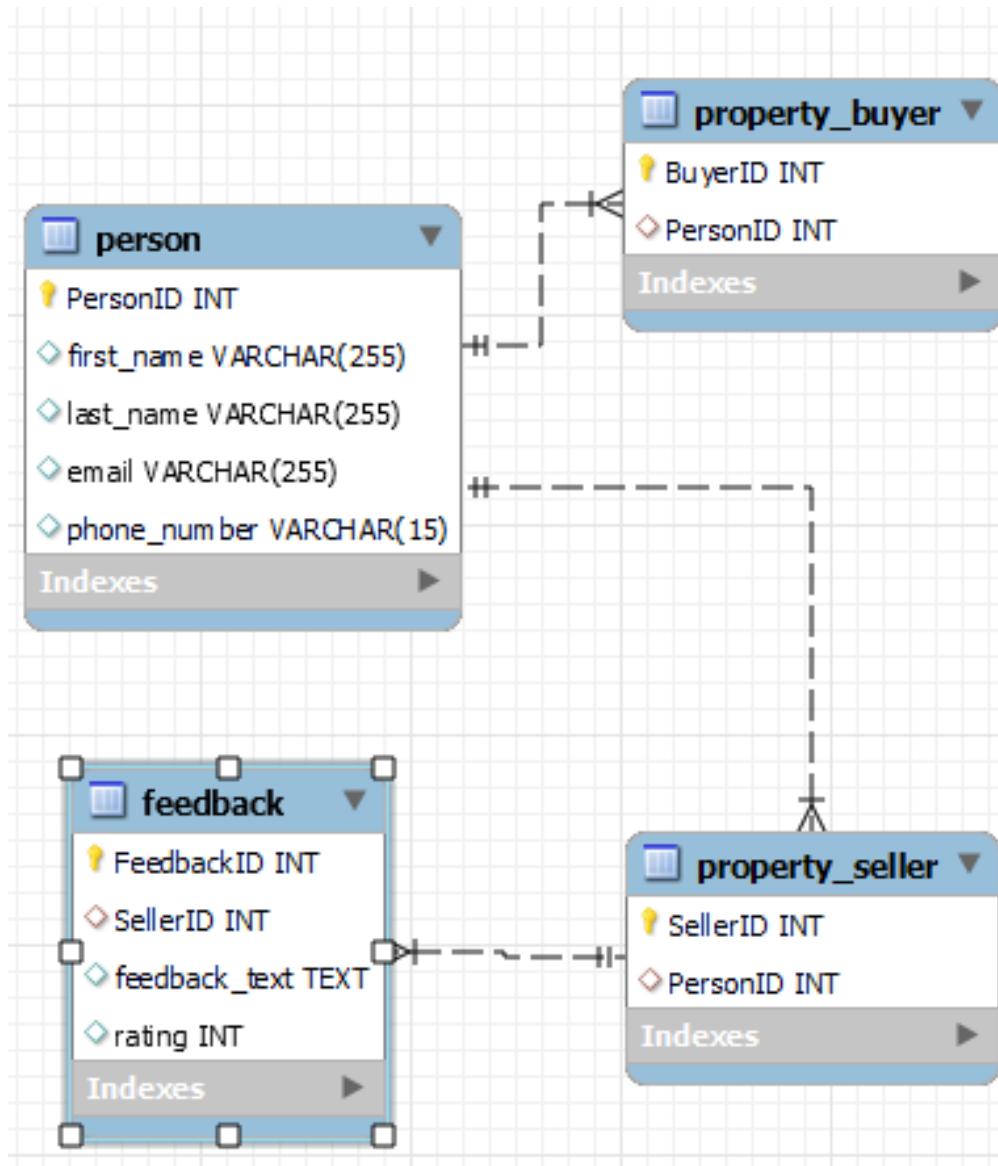
# ER FOR PROPERTY BUYER AND SELLER MANAGEMENT



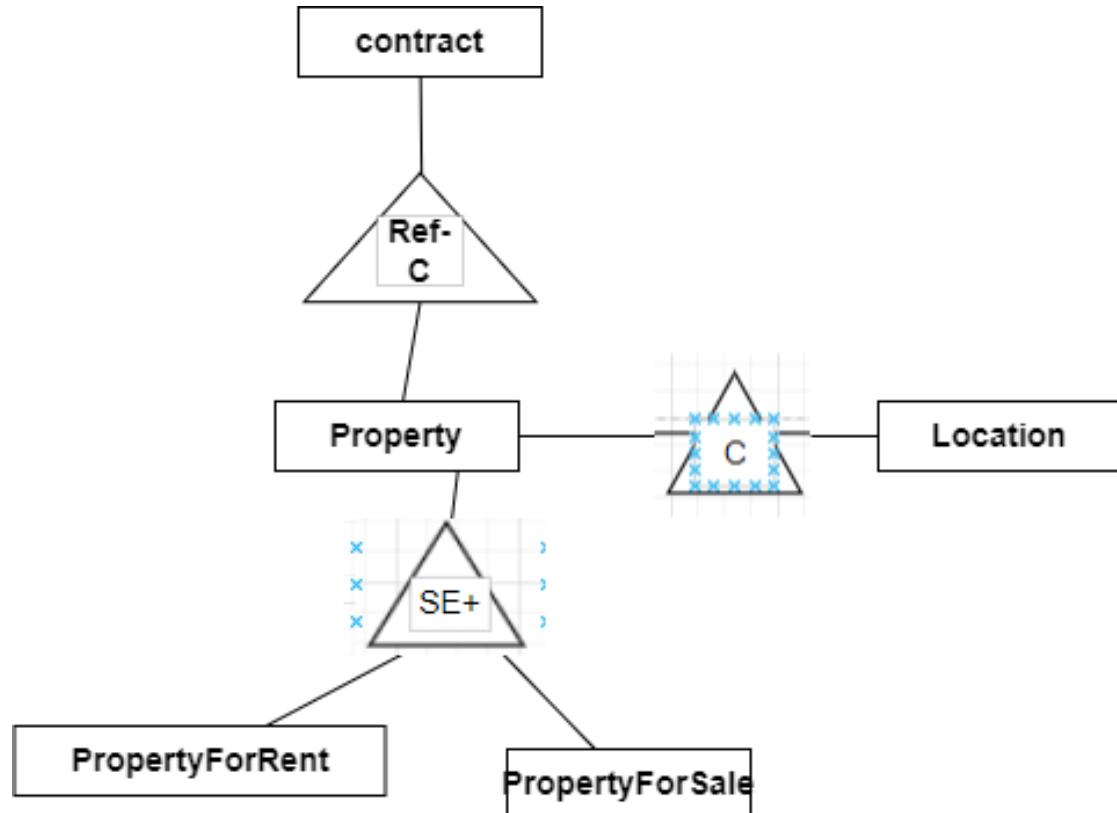
# INFORMATION MODEL FOR PROPERTY BUYER AND SELLER MANAGEMENT



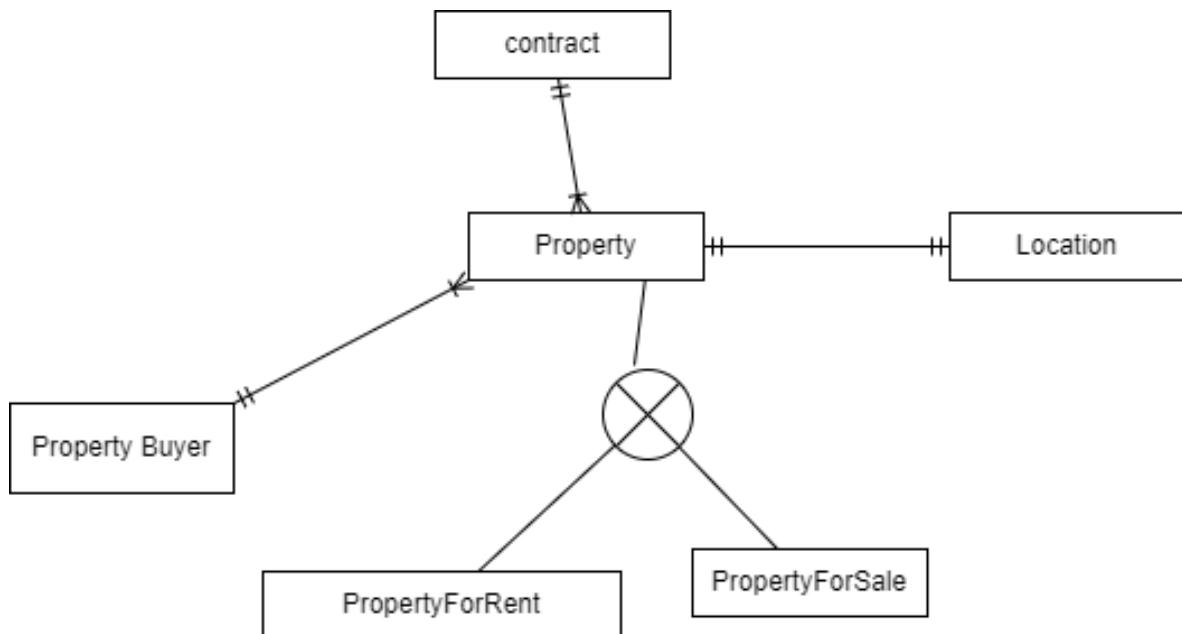
# FULLY ATTRIBUTE MODEL FOR PROPERTY BUYER AND SELLER MANAGEMENT



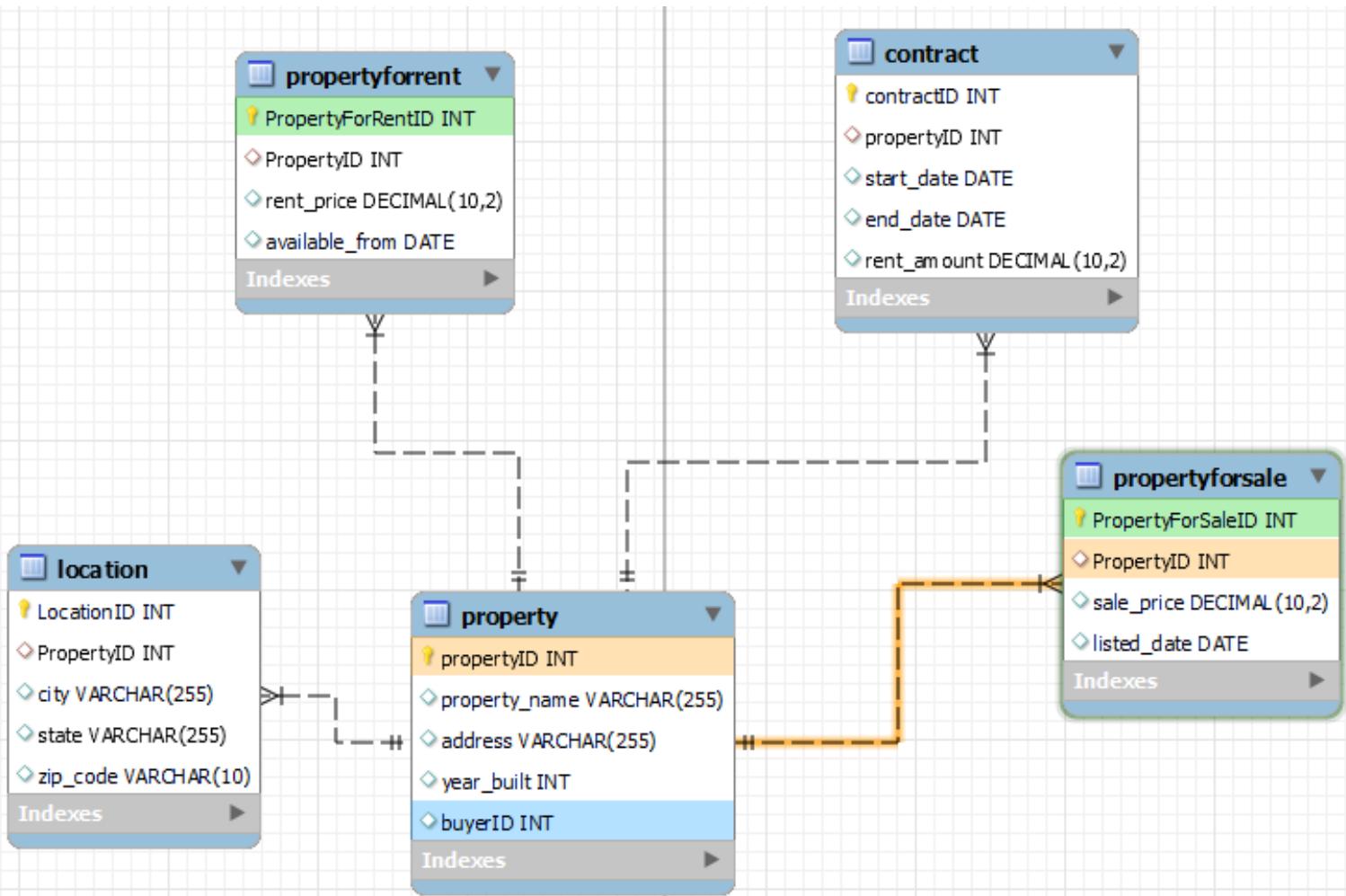
# INFORMATION MODEL FOR PROPERTY MANAGEMENT



# ER FOR PROPERTY MANAGEMENT



# FULLY ATTRIBUTED MODEL FOR PROPERTY MANAGEMENT



# Business rules

- A property cannot have overlapping contracts. The end date of a contract must be after the start date.
- Each property can have many facilities, and each facility can be available in multiple properties.
- Locations has details like the city, state, and a valid zip code.
- Rent prices should be in a valid decimal format.

# Contract for selected Behavior Specification of property management

- **Invariant:**

- The end date of a property's contract must be greater than or equal to the start date.

- **Precondition:**

- Creating a property for rent or sale purpose.

- **Postcondition:**

- The contract is valid based on the certain duration.
- The property is available for rent or sale.

# **Contract for selected Behavior**

## **Specification of property buyer and seller management**

- **Invariant:**

- Each person must have a unique email address.
- A person must be eligible to become a property buyer.

- **Precondition:**

- Creating or updating the person's data.
- Creating a property buyer data.

- **Postcondition:**

- The person is eligible and becomes a property buyer.

# Contract for selected Behavior Specification of Payment management

- **Invariant:**

- Payment amounts must be positive.
- Rent payments must be initiated for the valid property rent transactions.

- **Precondition:**

- Creating or updating the payment entry.
- Initiating a rent payment.

- **Postcondition:**

- The payment amount is positive.
- The rent payment is recorded and used with the appropriate transaction.

THANK YOU !!!