

# Homeowners Association Project Case (Part 2)

Logical Data Modeling for Section 1.0 - Assets



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## Section 1.0 Components

- About the HOA
- Homeowner (HO) Registration
- Property Registration
- Resident ID Card
- HOA Officer Registration
- Assets



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## Section 1.0 Components

- ✓ About the HOA
- ✓ Homeowner (HO) Registration
- ✓ Property Registration
- ✓ Resident ID Card
- ✓ HOA Officer Registration
- Assets
  - Registration
  - Activities
  - Transfer
  - Rental
  - Donation



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Hands-on Exercise:  
Create Entities from Section 1.0

15 Minutes

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## Section 1.0 Tables for Asset Exercise

- hoa
- hoa\_officer
- payment



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## Section 1.0 Components

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**Assets (For Database Exercise)**

A subdivision owns assets and is managed by the HOA, some of these can be availed or rented by residents. These assets can be properties, equipment, furniture and fixtures, and other assets. Each asset has an asset ID. Property assets include basketball courts, swimming pools, clubhouse, meeting or conference rooms, and the like. Equipment assets include projectors, speakers, microphones, electric fans, aircons, and the like. Furniture includes tables, chairs, whiteboards, cabinets, paintings, decorations, among others. When registering assets, the following information are provided – (a) Asset Name, (b) Asset Description, (c) Acquisition Date, (d) For renting or not, (e) Asset Value, (f) Type of Asset – Property, Equipment, Furniture & Fixtures, Other Assets, (g) status of the asset (Working condition, Deteriorated, For Repair, For Disposal, Disposed, (g) current location of the asset (including its map location). Property Assets may contain other assets inside. For example a meeting room may have a projector, a whiteboard, cabinets, paintings, decorations, air-conditioning unit, electric fans, etc.

Managing the asset is keeping record of what is done with the asset. Some assets are repaired, cleaned, restored, among others. Except for asset rental and transfers, any activity done with the asset is recorded. The information about the activity includes (a) Date of the Activity, (b) Description of the Activity, (c) The officer authorizing the activity, (d) tentative schedule (start and end date) of the activity, (e) When the activity started, (f) When the activity ended, (g) cost of the activity, (h) Official Receipt representing payment for the activity, (i) status of the activity – Scheduled, Ongoing, Completed. Deleting an asset activity information is prohibited, and only allowed if there is an approval of the President. Activity information is technically not deleted but only its status is marked as deleted.

Asset transfers are also recorded. Information about Assets that are transferred from one location to another (except for rentals) includes (a) Scheduled Date of Transfer, (b) The officer authorizing the transfer, (c) actual date of transfer, (d) Location it came from, (e) location it was transferred to, (f) cost of the transfer, (g) Official Receipt of transfer spending, (h) status of the transfer – Scheduled, Ongoing, Completed, (i) Complete name of the person that made the transfer, (j) mobile number of the person that made the transfer. Deleting a transfer information is prohibited, and only allowed if there is an approval of the President. Transfer information is technically not deleted but only its status is marked as deleted.

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The screenshot shows the MySQL Workbench interface with the 'asset' table selected. The table definition is as follows:

```

CREATE TABLE `asset` (
    `assetid` INT,
    `name` VARCHAR(45),
    `description` VARCHAR(100),
    `acq_date` DATE,
    `forrent` BOOLEAN,
    `value` FLOAT,
    `type` ENUM('P', 'E', 'F', 'O'),
    `status` ENUM('W', 'DE', 'FR', 'FD', 'DI'),
    `location` VARCHAR(45),
    `location_mapx` VARCHAR(45),
    `location_mapy` VARCHAR(45)
);
  
```

Indexes:

- PRIMARY KEY (assetid)

Definitions for type and status:

**type – ENUM(...)**

- P: Property
- E: Equipment
- F: Furniture & Fixtures
- O: Other Assets

**status – ENUM(...)**

- W: Working
- DE: Deteriorated
- FR: For Repair
- FD: For Disposal
- DI: Disposed

Table - Table

Column Name	Datatype	PK	NN	UQ	BIN	UN	ZF	AI	G
assetid	INT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
name	VARCHAR(45)		<input checked="" type="checkbox"/>						
description	VARCHAR(100)			<input checked="" type="checkbox"/>					
acq_date	DATE			<input checked="" type="checkbox"/>					
forrent	BOOLEAN			<input checked="" type="checkbox"/>					
value	FLOAT			<input checked="" type="checkbox"/>					
type	ENUM('P', 'E', 'F', 'O')			<input checked="" type="checkbox"/>					
status	ENUM('W', 'DE', 'FR', 'FD', 'DI')			<input checked="" type="checkbox"/>					
location	VARCHAR(45)			<input checked="" type="checkbox"/>					
location_mapx	VARCHAR(45)			<input checked="" type="checkbox"/>					
location_mapy	VARCHAR(45)			<input checked="" type="checkbox"/>					

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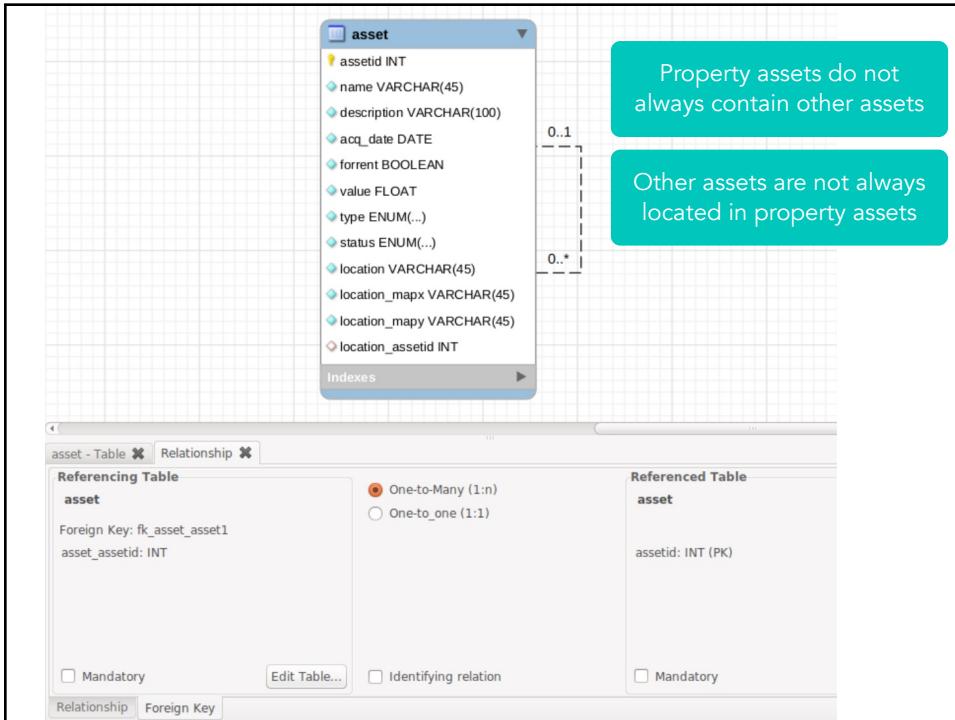
The screenshot shows a database schema editor interface. At the top, there is a tree view of relationships between tables. Below it, a central window displays the 'asset' table definition:

```
asset
assetid INT
name VARCHAR(45)
description VARCHAR(100)
acq_date DATE
forrent BOOLEAN
value FLOAT
type ENUM('P', 'E', 'F', 'O')
status ENUM('W', 'DE', 'FR', 'FD', 'D')
location VARCHAR(45)
location_mapx VARCHAR(45)
location_mapy VARCHAR(45)
```

Below the table definition, there is a section titled 'Indexes' which is currently empty. At the bottom, there is a detailed table showing the properties of each column:

Column Name	Datatype	PK	NN	UQ	BIN	UN	ZF	AI	G
assetid	INT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
name	VARCHAR(45)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
description	VARCHAR(100)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
acq_date	DATE	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
forrent	BOOLEAN	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
value	FLOAT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
type	ENUM('P', 'E', 'F', 'O')	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
status	ENUM('W', 'DE', 'FR', 'FD', 'D')	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
location	VARCHAR(45)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
location_mapx	VARCHAR(45)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
location_mapy	VARCHAR(45)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					

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**Assets (For Database Exercise)**

A subdivision owns assets and is managed by the HOA, some of these can be availed or rented by residents. These assets can be properties, equipment, furniture and fixtures, and other assets. Each asset has an asset ID. Property assets include basketball courts, swimming pools, clubhouse, meeting or conference rooms, and the like. Equipment assets include projectors, speakers, microphones, electric fans, aircons, and the like. Furniture includes tables, chairs, whiteboards, cabinets, paintings, decorations, among others. When registering assets, the following information are provided – (a) Asset Name, (b) Asset Description, (c) Acquisition Date, (d) For renting or not, (e) Asset Value, (f) Type of Asset – Property, Equipment, Furniture and Fixtures, Other Assets, (g) status of the asset (Working condition, Detenorated, For Repair, For Disposal, Disposed, (g) current location of the asset (including its map location). Property Assets may contain other assets inside. For example a meeting room may have a projector, a whiteboard, cabinets, paintings, decorations, air-conditioning unit, electric fans, etc.

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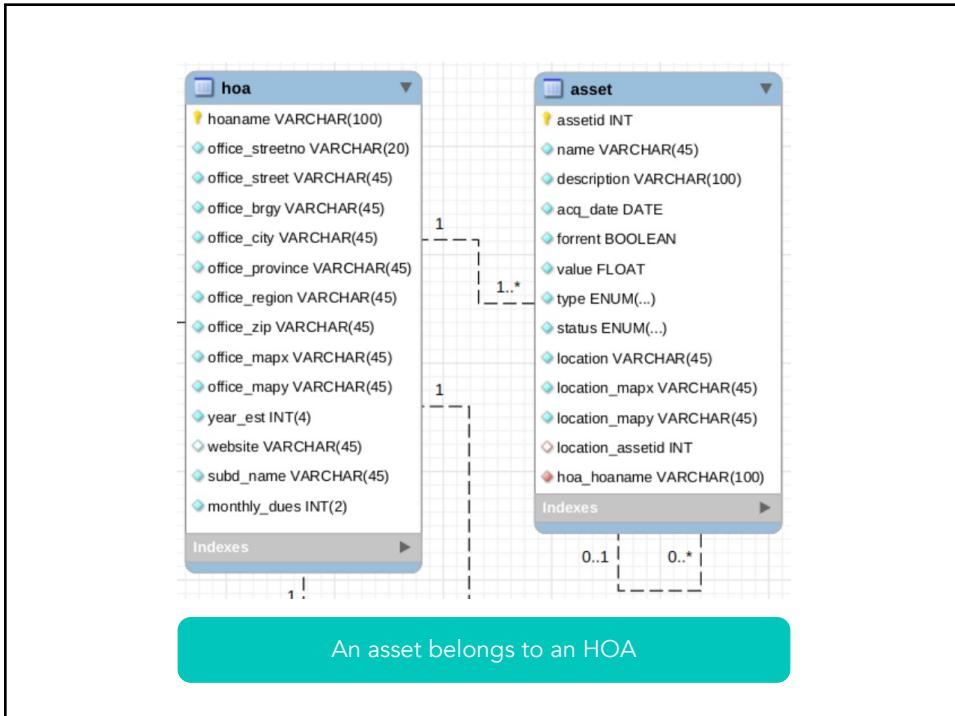
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Guide for classifying assets

Info can be placed as a tool tip on the app's UI

They don't need to be predefined in the DB

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The screenshot shows the MySQL Workbench interface with the 'asset\_activity' table selected. At the top, a tooltip displays the table's columns and their types:

- asset\_activityid INT
- description VARCHAR(100)
- hoa\_officer INT
- tent\_start DATETIME
- tent\_end DATETIME
- actual\_start DATETIME
- actual\_end DATETIME
- cost FLOAT
- orno INT
- status ENUM('S', 'O', 'C')

Below the tooltip, the 'Indexes' section is visible. Underneath, the table structure is shown with columns: asset\_activityid, description, hoa\_officer, tent\_start, tent\_end, actual\_start, actual\_end, cost, orno, and status. The 'Indexes' tab is selected, showing the primary key and other indexes defined for the table.

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Column Name	Datatype	PK	NN	UQ	BIN	UN	ZF	AI	G
asset_activityid	INT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
description	VARCHAR(100)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
hoa_officer	INT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
tent_start	DATETIME	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
tent_end	DATETIME	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
actual_start	DATETIME	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
actual_end	DATETIME	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
cost	FLOAT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
orno	INT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
status	ENUM('S', 'O', 'C', 'D')	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					

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Redundant

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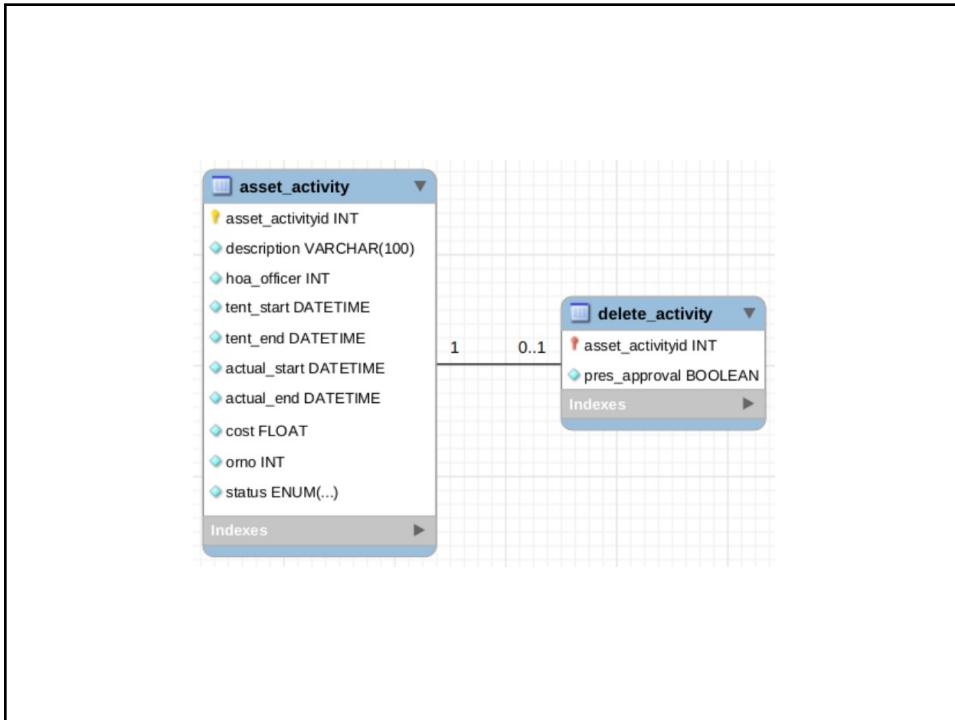
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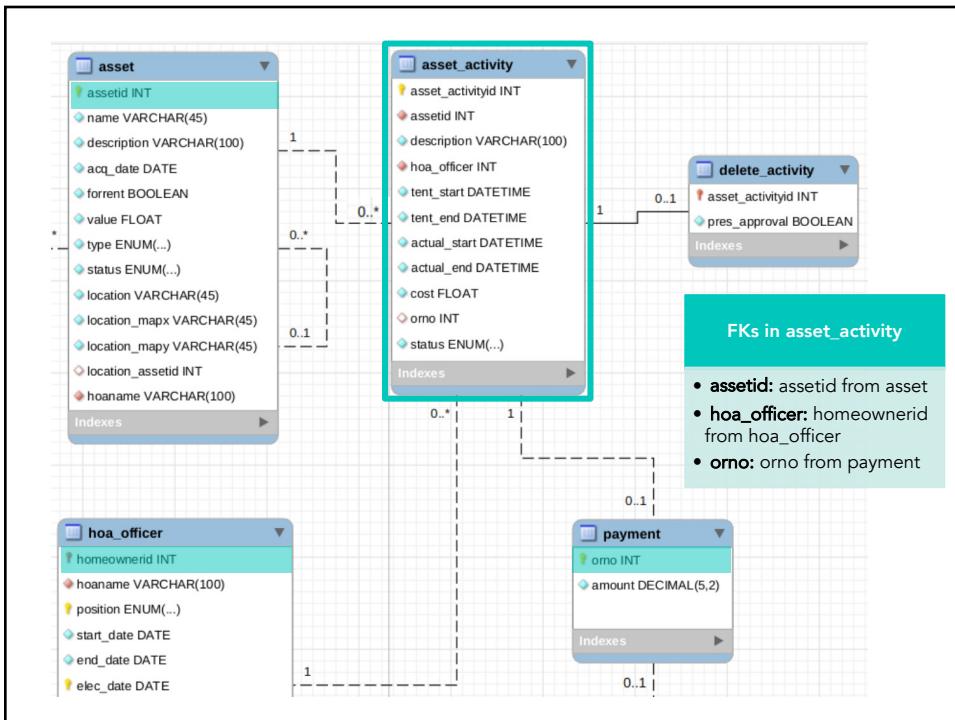
Optional; Not always provided

Store in a separate entity

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## Section 1.0 Components

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### Assets (For Database Exercise)

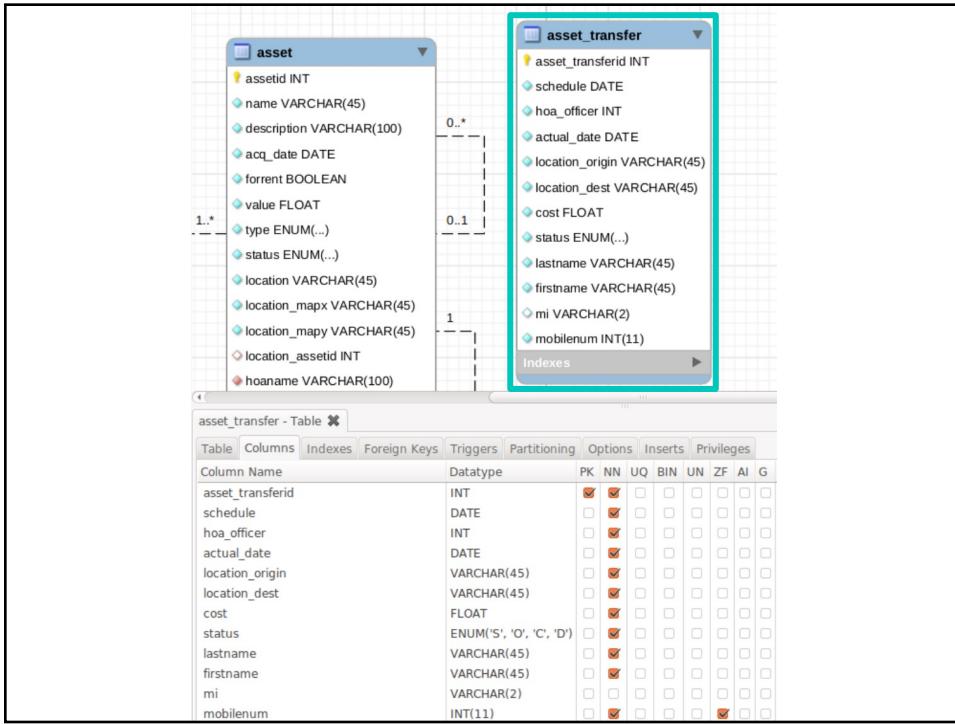
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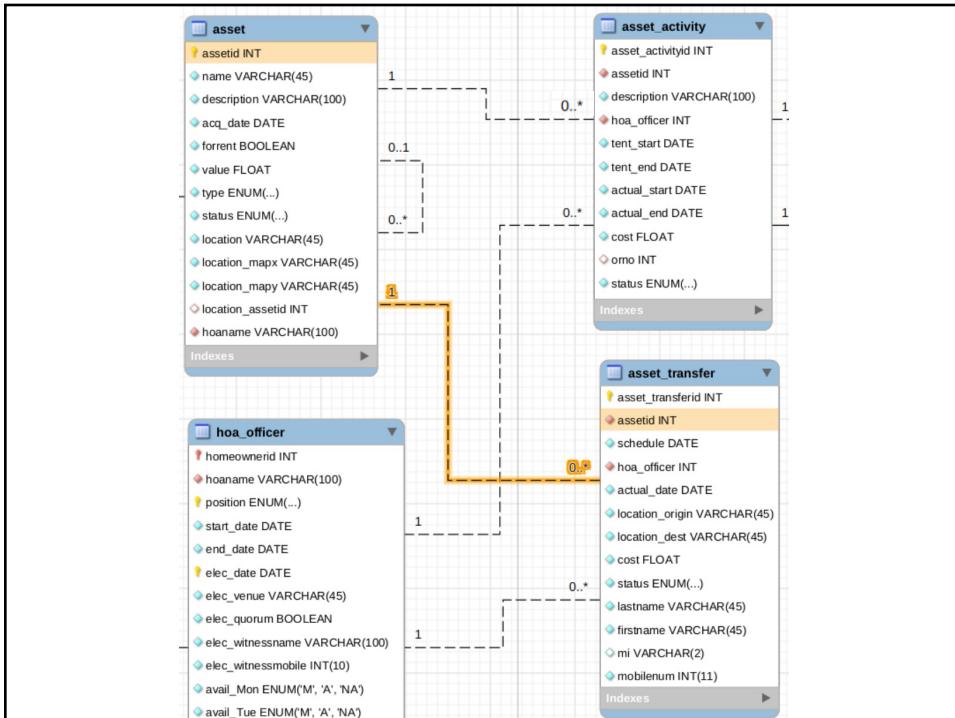
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24

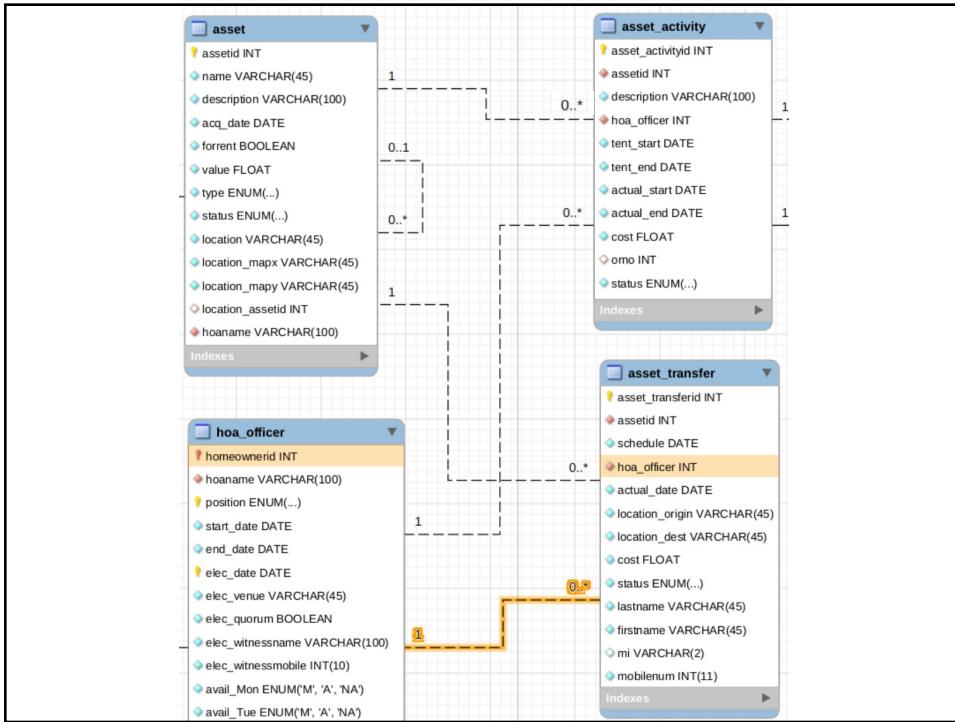
12



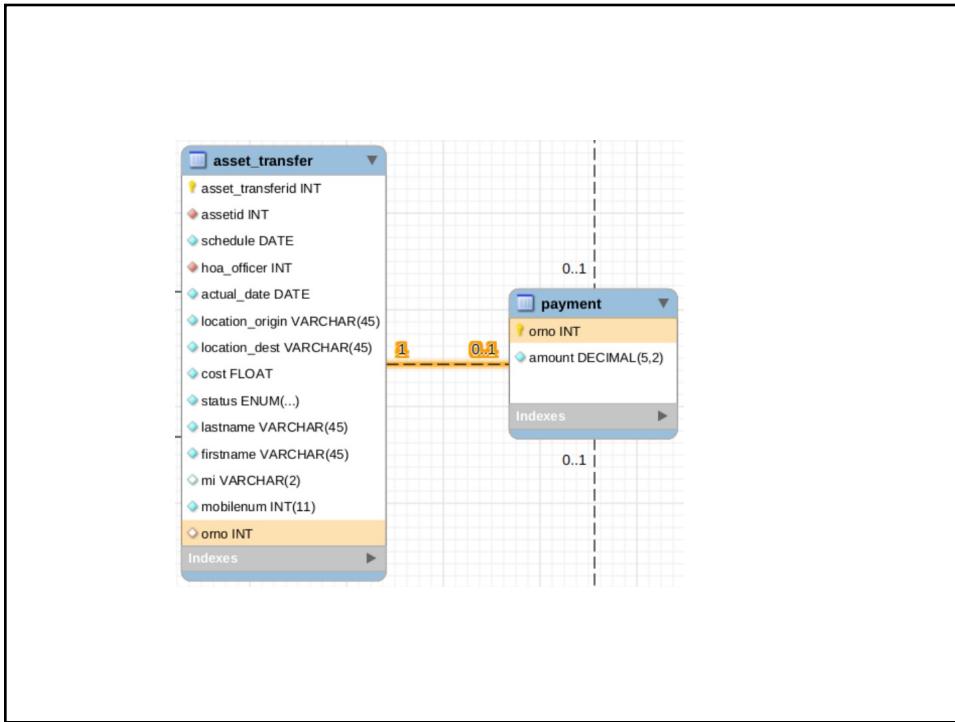
25



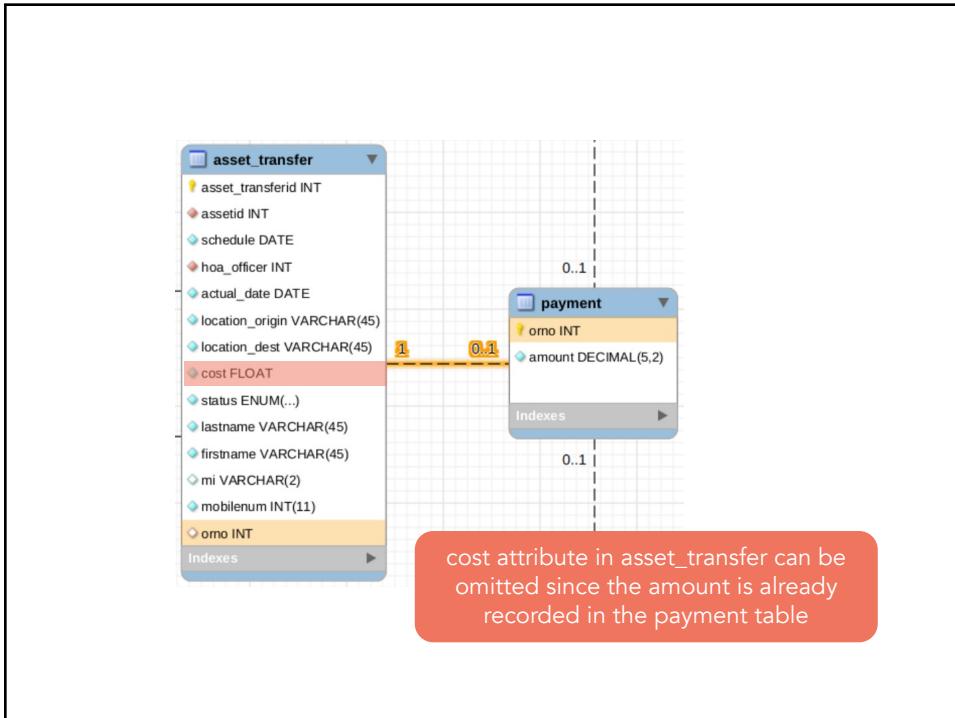
26



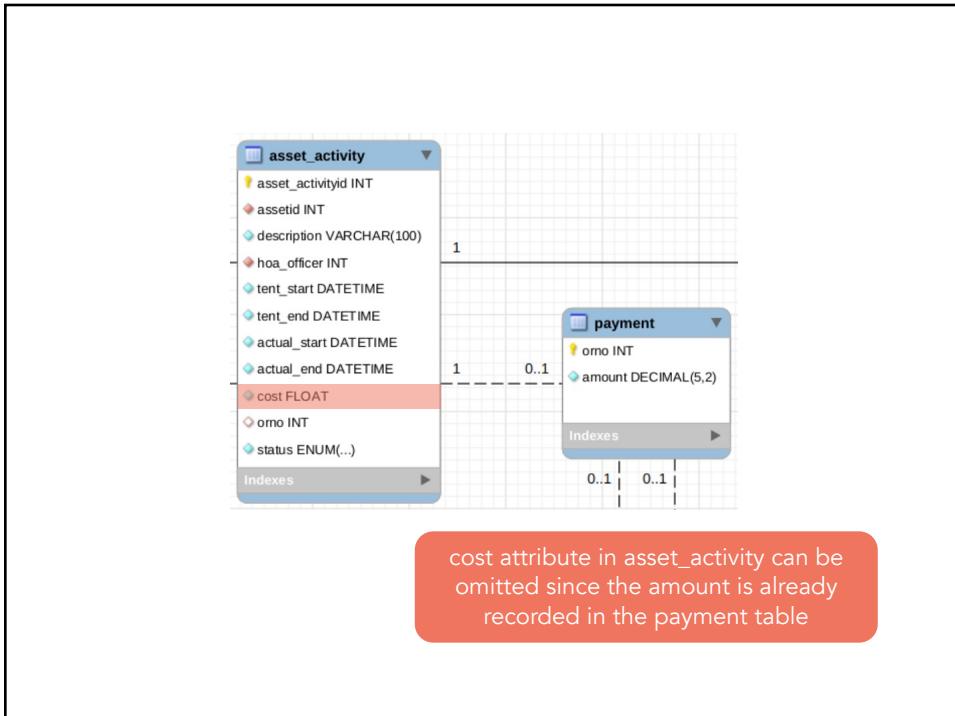
27



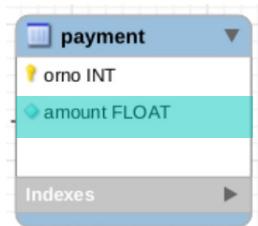
28



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Change the data type of amount in the payment table to cover higher values

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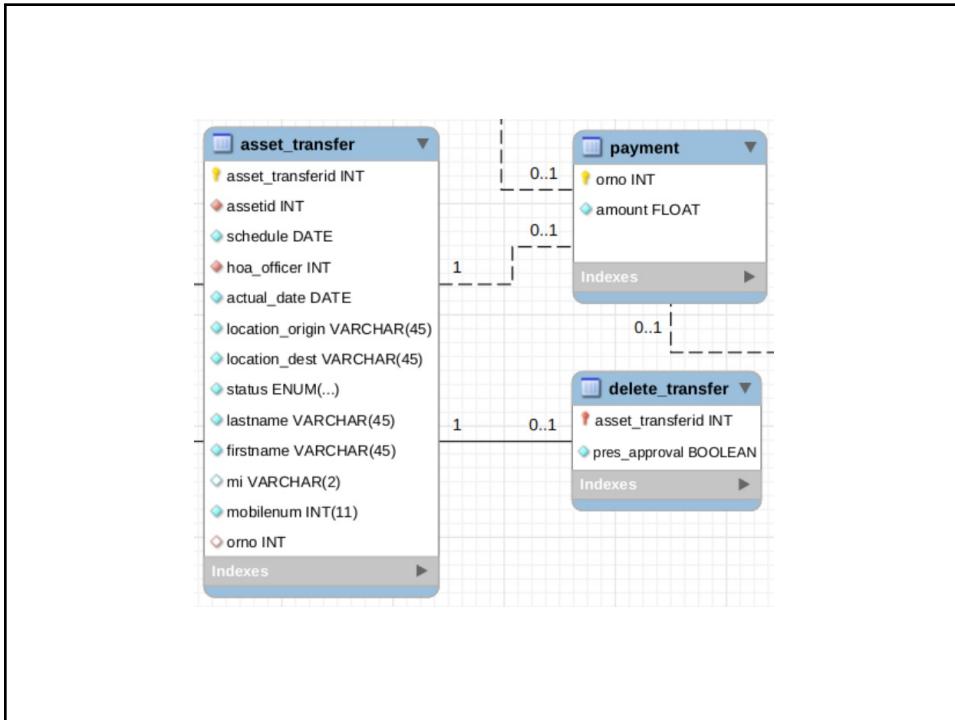
#### Assets (For Database Exercise)

A subdivision owns assets and is managed by the HOA, some of these can be availed or rented by residents. These assets can be properties, equipment, furniture and fixtures, and other assets. Each asset has an asset ID. Property assets include basketball courts, swimming pools, clubhouse, meeting or conference rooms, and the like. Equipment assets include projectors, speakers, microphones, electric fans, aircons, and the like. Furniture includes tables, chairs, whiteboards, cabinets, paintings, decorations, among others. When registering assets, the following information are provided – (a) Asset Name, (b) Asset Description, (c) Acquisition Date, (d) For renting or not, (e) Asset Value, (f) Type of Asset – Property, Equipment, Furniture and Fixtures, Other Assets, (g) status of the asset (Working condition, Deteriorated, For Repair, For Disposal, Disposed, (g) current location of the asset (including its map location). Property Assets may contain other assets inside. For example a meeting room may have a projector, a whiteboard, cabinets, paintings, decorations, air-conditioning unit, electric fans, etc.

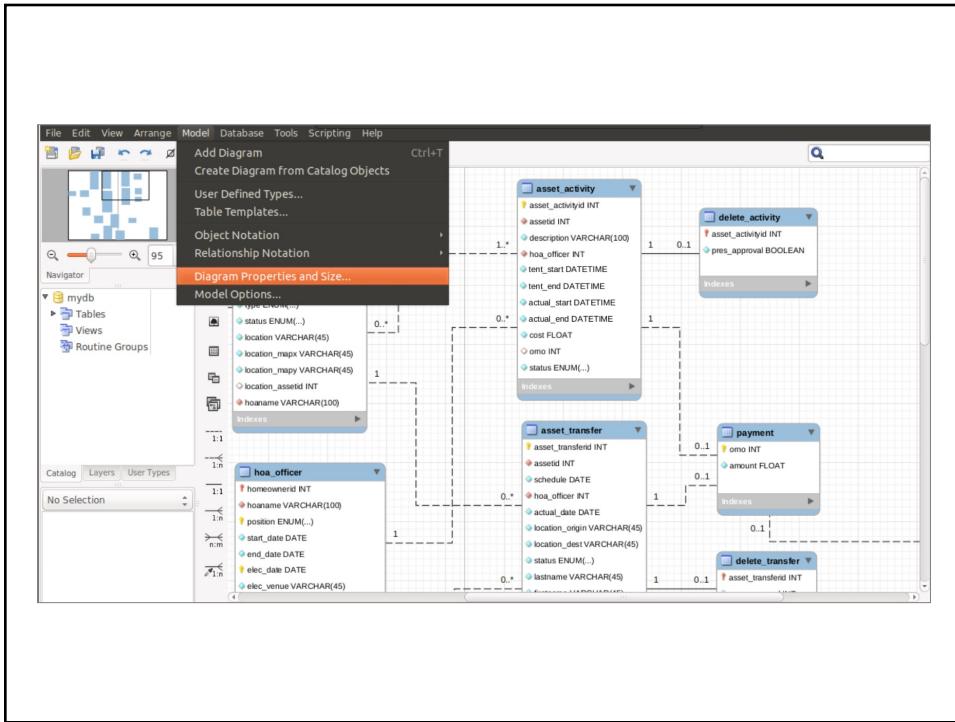
Managing the asset is keeping record of what is done with the asset. Some assets are repaired, cleaned, restored, among others. Except for asset rental and transfers, any activity done with the asset is recorded. The information about the activity includes (a) Date of the Activity, (b) Description of the Activity, (c) The officer authorizing the activity, (d) tentative schedule (start and end date) of the activity, (e) When the activity started, (f) When the activity ended, (g) cost of the activity, (h) Official Receipt representing payment for the activity, (i) status of the activity – Scheduled, Ongoing, Completed. Deleting an asset activity information is prohibited, and only allowed if there is an approval of the President. Activity information is technically not deleted but only its status is marked as deleted.

Asset transfers are also recorded. Information about Assets that are transferred from one location to another (except for rentals) includes (a) Scheduled Date of Transfer, (b) The officer authorizing the transfer, (c) actual date of transfer, (d) Location it came from, (e) location it was transferred to, (f) cost of the transfer, (g) Official Receipt of transfer spending, (h) status of the transfer – Scheduled, Ongoing, Completed, (i) Complete name of the person that made the transfer , (j) mobile number of the person that made the transfer. Deleting a transfer information is prohibited, and only allowed if there is an approval of the President. Transfer information is technically not deleted but only its status is marked as deleted.

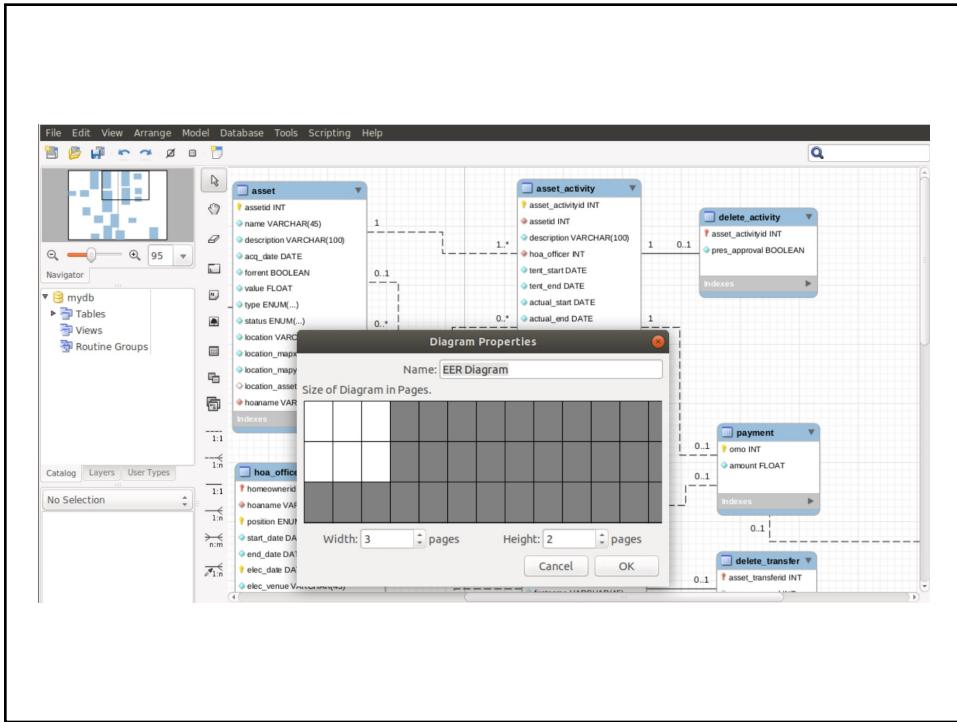
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## Hands-on Exercise: Asset Rental & Donation

20 Minutes

36

## Section 1.0 Tables for Asset Exercise

- hoa
- hoa\_officer
- payment
- resident



Information Technology  
Department

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Some assets are tagged to be available for renting, and can be rented by any resident. When an asset is rented, the following information is being recorded. (a) Reservation Date, (b) Rental Date, (c) Resident that rented the asset, (d) Officer that authorized the rental, (e) Rental amount, (f) Discount provided, (g) Status of the Rental – Reserved, Cancelled, On Rent, Returned, (h) Official Receipt of the rental, (g) Inspection details when the asset was returned, (h) accepting officer of the return, (i) Assessed value to pay for assets returned not in the condition it was rented. When an asset with assets are rented, all the inclusion assets are automatically rented as well. When the asset with assets are returned, then all the inclusion assets are automatically returned as well, although some of the information upon returning needs to be encoded manually by the accepting officer. Deleting a rental information is prohibited, and only allowed if there is an approval of the President. Rental information is technically not deleted but only its status is marked as deleted.

Some assets are donated. When assets are donated, donation information needs to be recorded. These information includes (a) Donor's Complete Name, (b) Donor's Address, (c) Item/s donated, (d) Amount of each item donated, (e) Accepting Officer of the Donation, (f) Pictures of the donation event (if it exists), (g) Donation Form officiating the donation, (h) Date of Donation. These information is being publicly shared to all homeowners. Deleting donation information is prohibited, and only allowed if there is an approval of the President. Donation information is technically not deleted but only its status is marked as deleted.

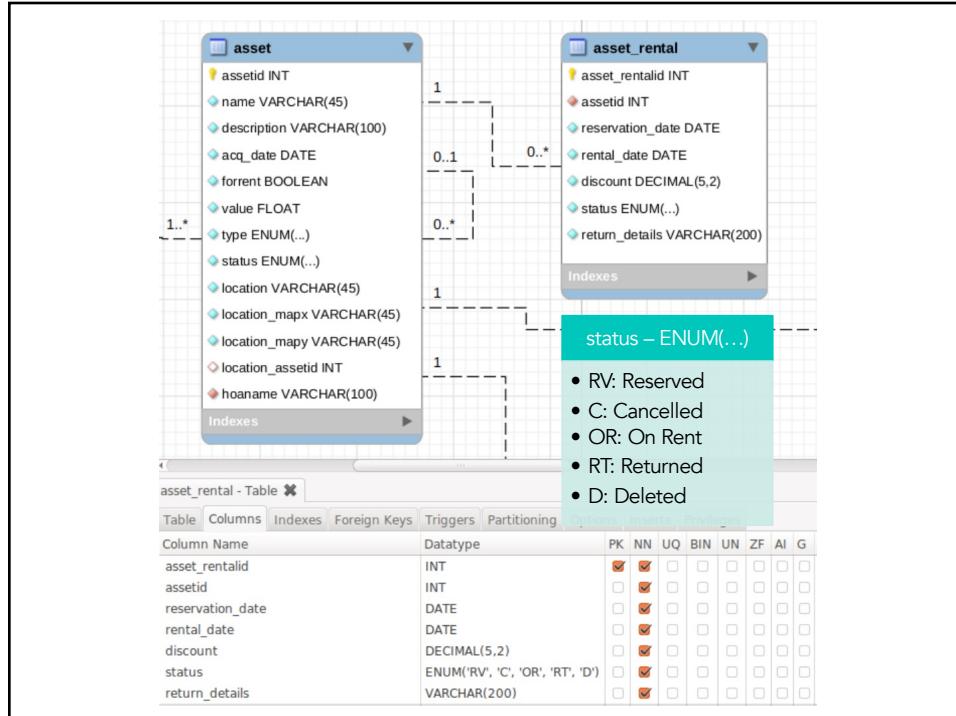
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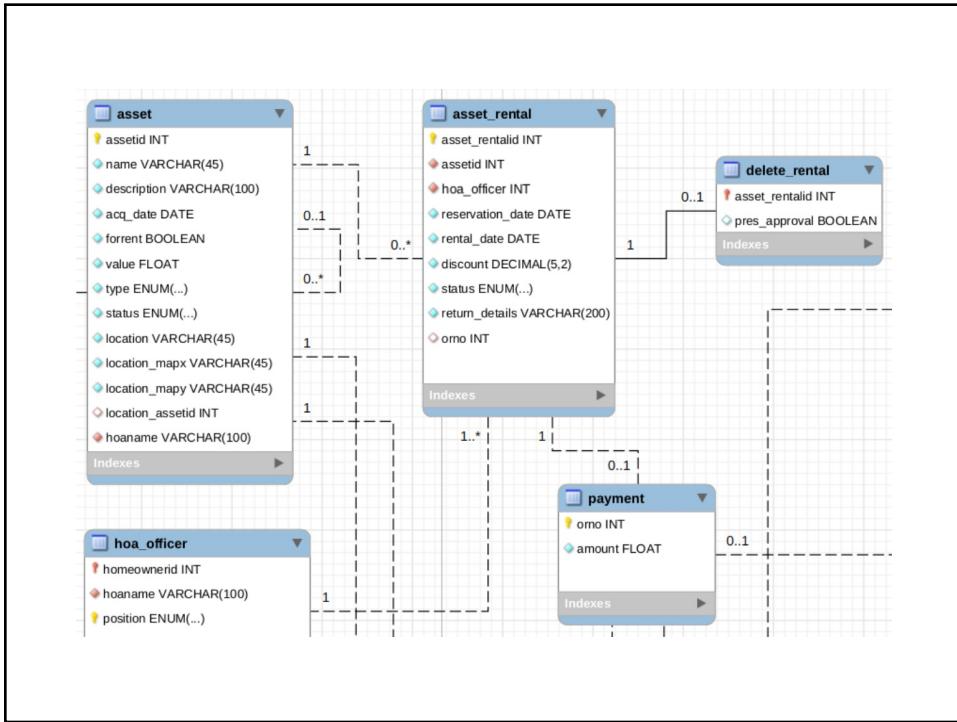
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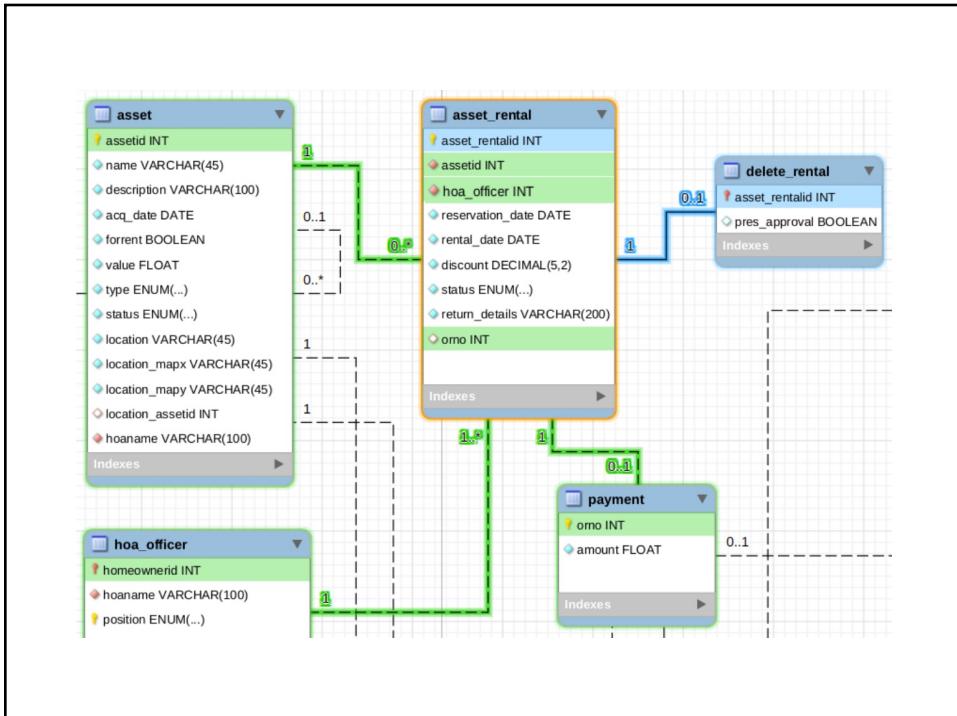
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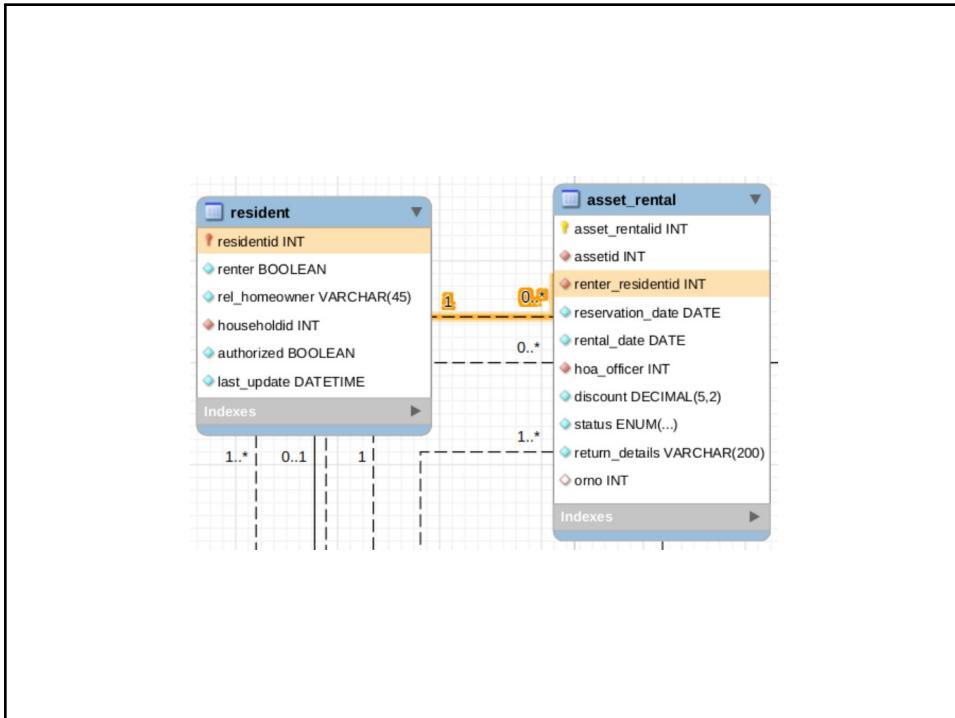
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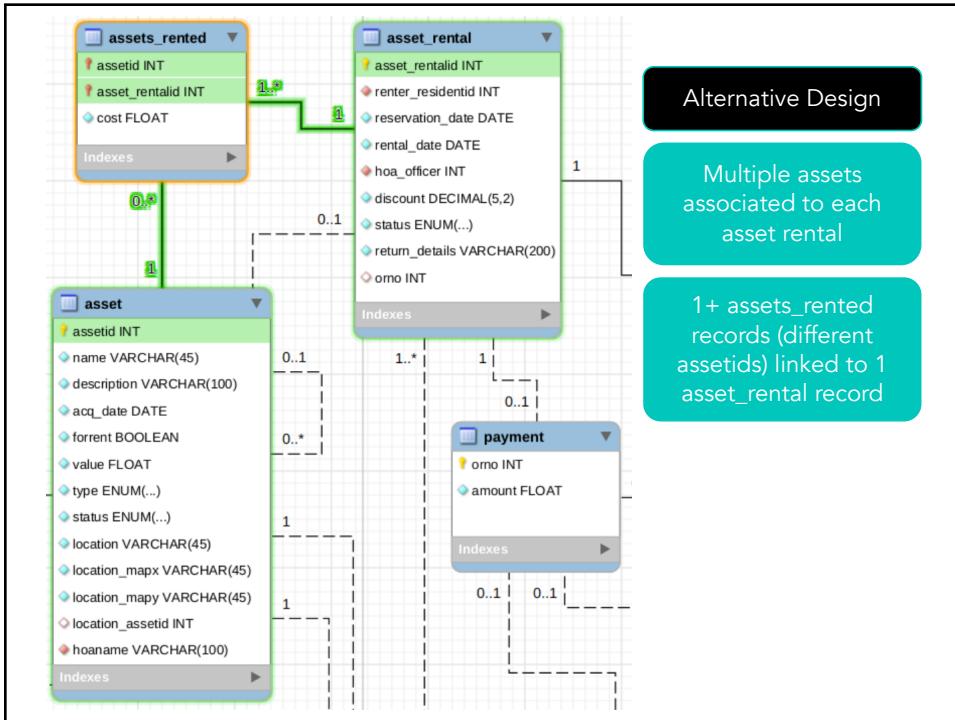
Requires multiple records to be created when property assets with other assets included are rented.

1 asset\_rental record for property asset

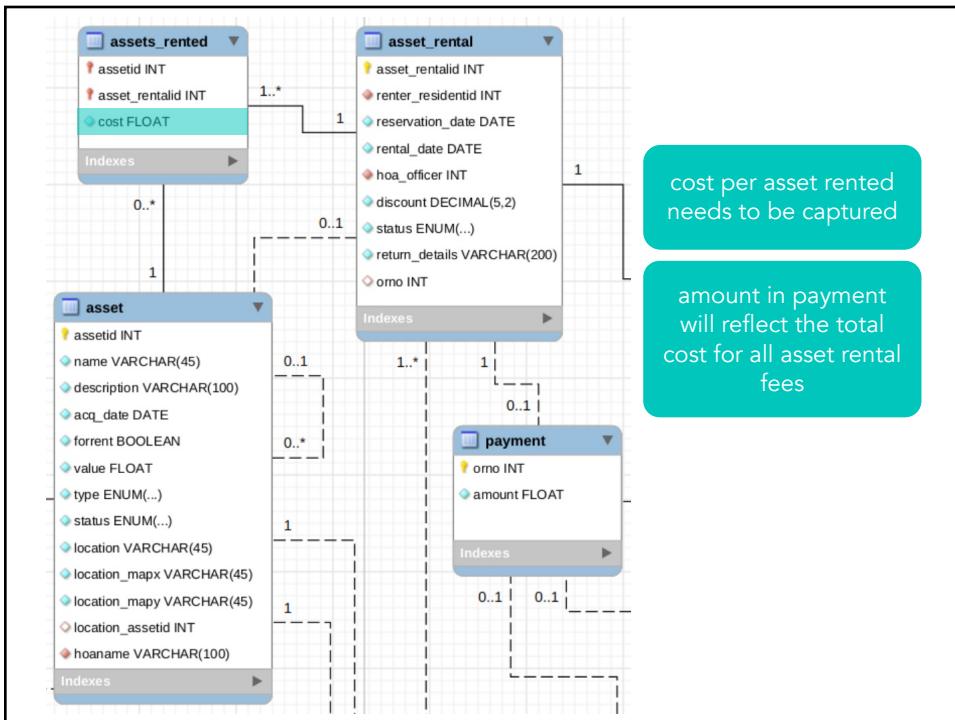
1+ asset\_rental record(s) for other assets included in the property

UI contains just a single form

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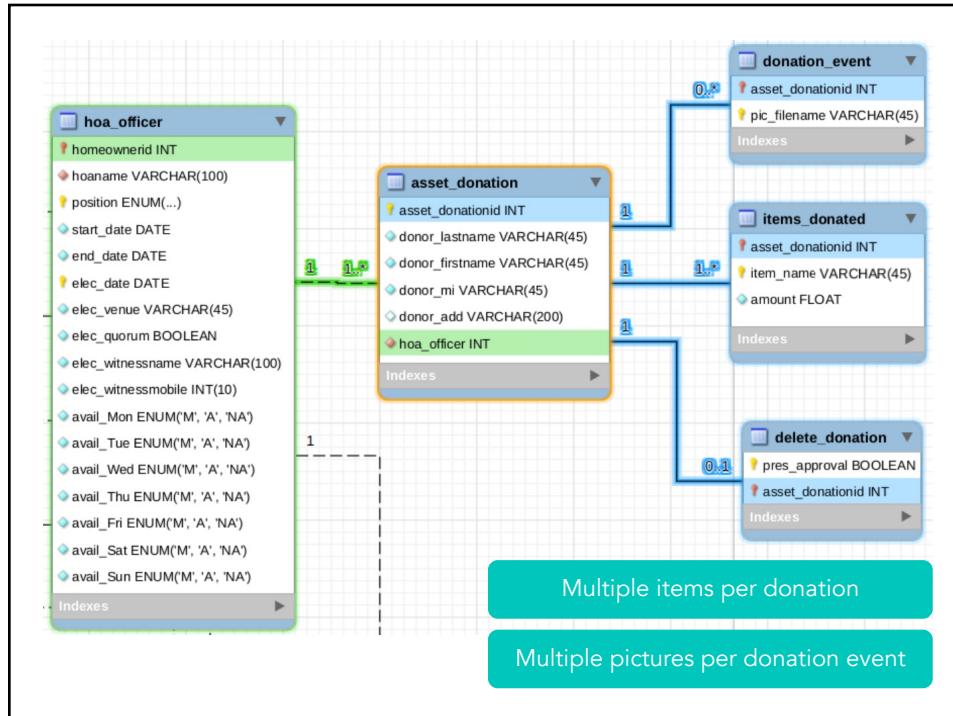


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Information can be displayed in the DB App

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Thank you!

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