

Person

ID
Name
 First_name
 last_name
Address
 City
 Street
 State
 Zipcode
 Unit_#
Telephone
 work_no
 home_no
 cell_no
{Email}

Client

Preferences
Max_rent

Owner

Corp_name

Employee

hired_date

MANAGES

Owns

Associate

Assigned

Property

Number
Address
 City
 Street
 State
 Zipcode
 Unit_#
Ask_rent
Fee
Has_Ad?

Represents

Partner

Rents

Views

Lease

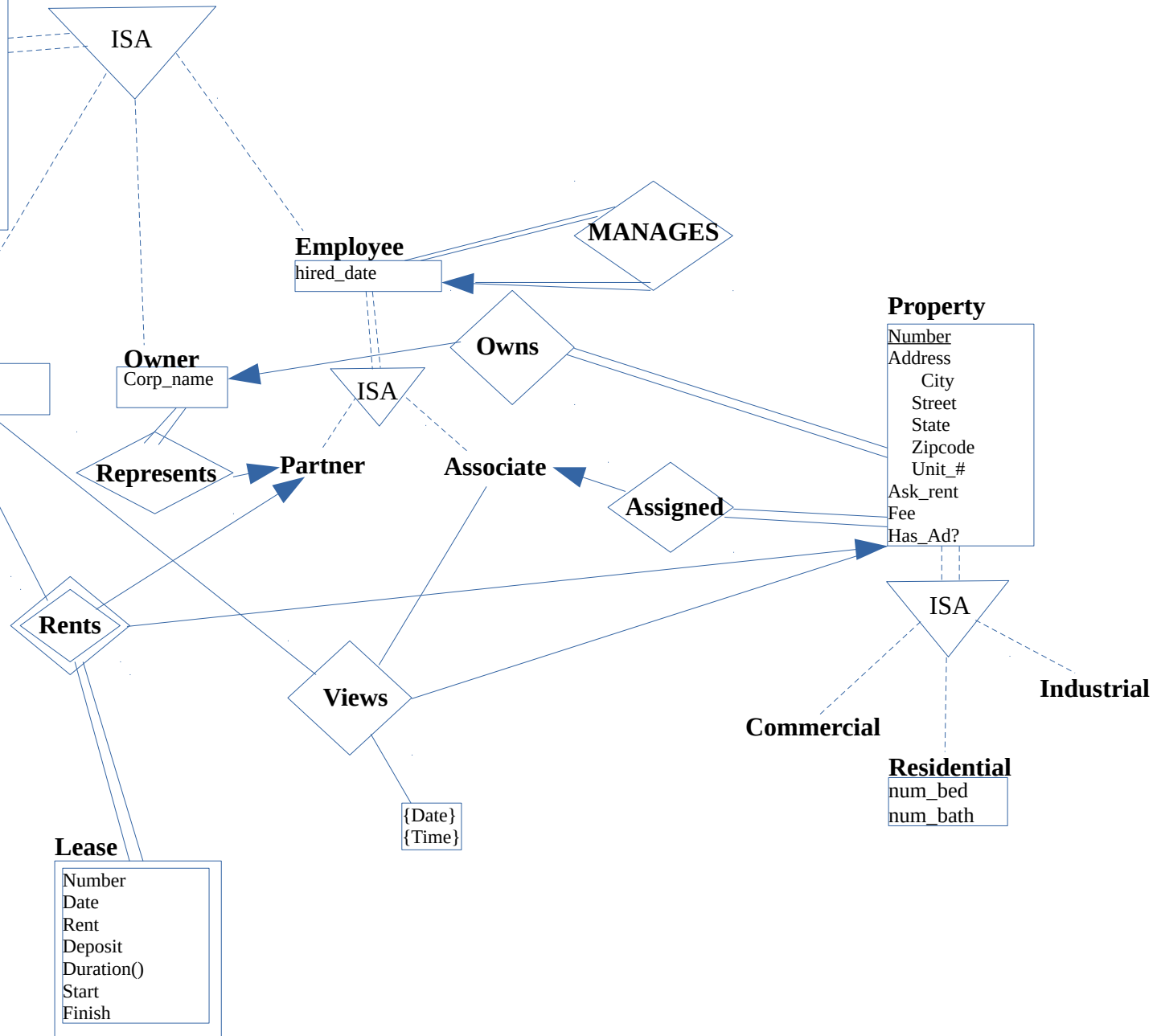
Number
Date
Rent
Deposit
Duration()
Start
Finish

Industrial

Commercial

Residential

num_bed
num_bath



Here is the updated Entity-Relationship model for the prospective database. Underlined items represent the primary key of the particular entity.

Foreign Key Constraints:

- Leases has FKRC to Property Number, Partner ID and Client ID, which form its primary key (Rents is its identifying relationship)
- Views has FKRC to Property Number, Associate ID and Client ID
- Owns has FKRC to Property Number, and Owner ID
- Assigned has FKRC to Property Number, and Associate ID
- Represents has FKRC to Owner's Employee ID
- Assigned has FKRC to Property Number
- Supervises has two FKRC, one to the Employee's Employee ID and the other to the Supervisor's Employee ID

Relationship Specifications: (In case they were not obvious from the diagram)

- Person specialization is disjoint and complete
- Property specialization is disjoint and complete

Other Attribute Constraints:

- As per the description of properties in this enterprise, only 12 tuples in the “assigned” relation can have a particular associate ID at one time
- As per description of viewings in this enterprise, a property may only appear once for each combination of date and client
- The Leases Duration attribute must be between 3 and 36 (inclusive)

On the Reduction to Relational Schema:

Relational schema was produced using standard reduction techniques. Relational model was made with MySQL (see file Project Part C Diagram). The only difference between that and the create/load table codes is the datatype of Has_Ad?. It should be a boolean, however the software prevented it for being set to boolean in the diagram. The scripts run with the correct datatype and values.

On the Design for the User Interface:

The user Interface for this application will be based from a Jupyter notebook – this will have fields for creating the database (via the scripts) that are meant to remain untouched. A field will be available for the user to write SQL queries. For the exporting of data, there will be an option to convert the result of a query into a Pandas DataFrame and export in a standard file type.