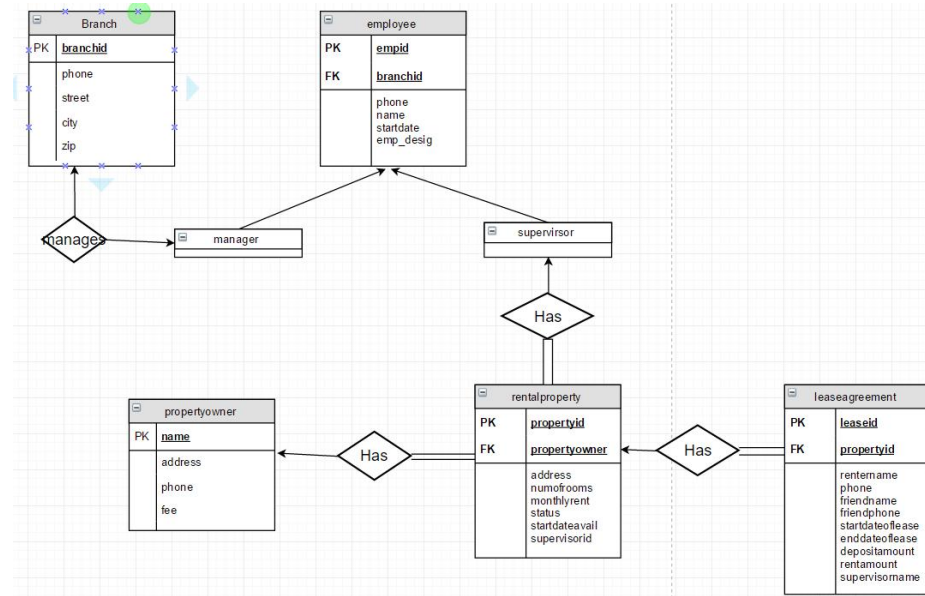


COEN 178 Project Final Deliverable

Brief Description:



- A branch has its branchid as a primary key, along with phone, street, city, zip as attributes
- An employee has its empid as primary key and branchid as foreign key referencing branch. An employee can be either a manager or a supervisor, but there is only one manager per branch. Supervisors supervise 0 or several rentalproperties.
- A rentalproperty has its propertyid as primary key and propertyowner referencing the name of propertyowner
- When a property is rented, a leaseagreement is created along with leaseid as PK and propertyid as FK.

Function Dependencies:

- empid -> employ.phone, emp_desig, branchid, phone, name, startdate
- propertyid -> propertyowner, address, numofrooms, monthlyrent, status, startdateavail, supervisorid
- leaseid -> propertyid
- propertyowner.name -> propertyowner.address, phone, fee

Normalization process applied: BCNF

```
create table branch(
  branchid char(10) primary key,
  phone char(10),
  street char(20),
  city char(20),
  zip char(10)
);
```

```
create table employee(
  empid char(10) primary key,
  phone char(10),
  name char(10),
  startdate date,
  emp_desig char(10),
  check(emp_desig in ('manager','supervisor')),
  branchid char(10),
  foreign key(branchid) references branch(branchid)
);
```

```
create table propertyowner(
  name char(10),
  address char(20),
  phone char(10),
  fee number(10),
  primary key(name)
);
```

```
create table rentalproperty(
  propertyid char(10) primary key,
  propertyowner char(10),
  address char(20),
  numofrooms char(20),
  monthlyrent number(10),
  status char(20),
  startdateavail date,
  supervisorid char(10),
  check(status in ('available','leased')),
  foreign key(propertyowner) references propertyowner(name)
);
```

```
create table leaseagreement(
  leaseid char(10) primary key,
  propertyid char(10),
  rentername char(10),
  phone char(10),
  friendname char(20),
  friendphone char(20),
  startdateoflease date,
  enddateoflease date,
  depositamount char(10),
  rentamount number(10),
  supervisorname char(10),
  foreign key(propertyid) references rentalproperty(propertyid)
);
```

Assumptions:

For constraints in 1.2:

- Trigger: There is only one manager per branch.
- Trigger: A lease agreement should be for a minimum of six months and a maximum of one year. The rent for an exact six-month lease is 10% more than the regular rent for that property. In other word, an 10% increase is added on the rent amount.
- Trigger: When a lease agreement is created, the status for the property should be changed to leased.
- Trigger: Make sure rentalproperty.supervisorid is valid by checking its existence in employee table when inserting a new row in rentalproperty. Since there exists no tables or tables on supervisor's list, we can easily join the rentalproperty table and employee table to see supervisors' names and their property supervised.
- Trigger: With every new lease, a 10% increase in rent should be added to the rent from the previous lease.

