Rental Apartment Database

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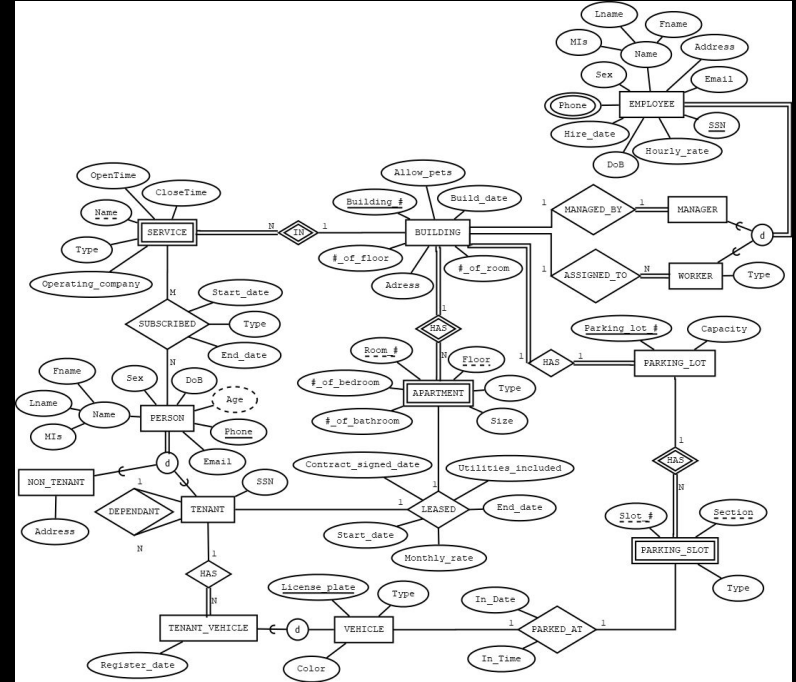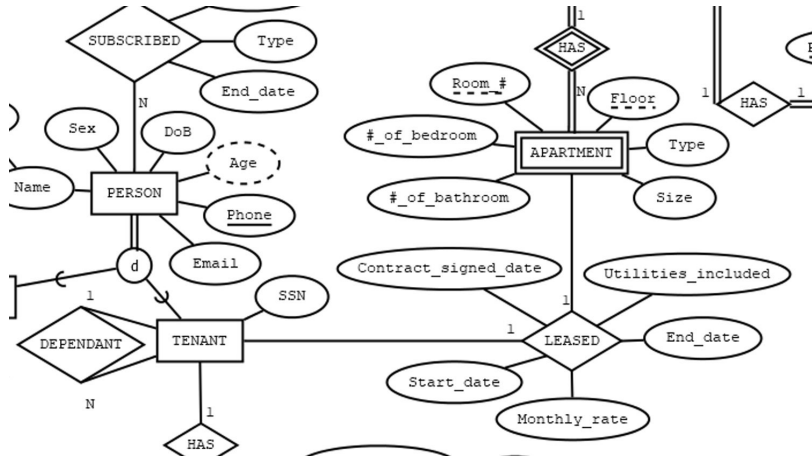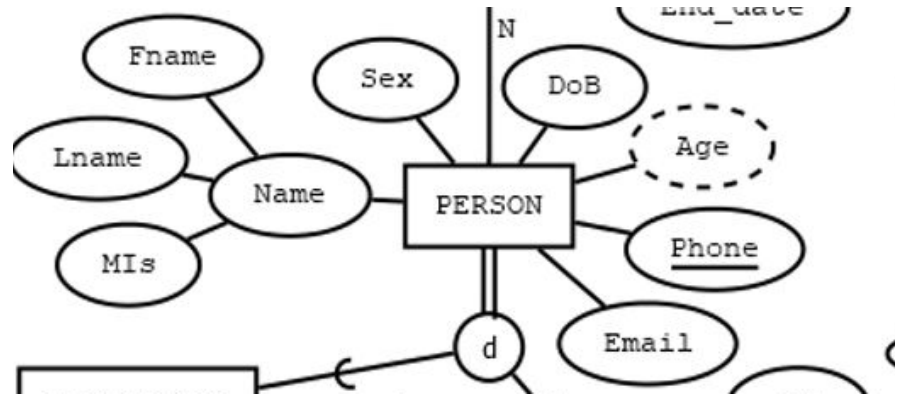
Tenants and their dependents

- Dependants are also tenants.

- Only one tenant can lease the apartment, others living in that apartment are his/her dependents.

Person and Employee

- Use SSN for employee

- Can not use SSN for customers (PERSON) - security reason.

- Use phone to substitute.

Updated EMPLOYEE_PHONE's keys

- (phone, employee_ssn) vs.
- (phone)

Decompose APARTMENT relational schema

- APARTMENT(*Building #*, Floor, Room #, #_of_bedroom, #_of_bathroom, Type, Size, Lease_start_date, Lease_end_date, Lease_signed_date, Utilities_included, Monthly_rate, *Lease_tenant_phone*)
- APARTMENT(*Building #*, Floor, Room #, #_of_bedroom, #_of_bathroom, Type, Size)
- RENTED_APARTMENT(*Building #, Floor, Room #*, Lease_start_date, Lease_end_date, Lease_signed_date, Utilities_included, Monthly_rate, *Lease_tenant_phone*)

3. List name of all tenants who are living in building 1.

SELECT DISTINCT p.fname, p.lname
FROM person AS p, tenant AS t, rented_apartment as r
WHERE p.phone = r.lease_tenant_phone AND
      r.building_no = 1 AND p.phone = t.person_phone
UNION
SELECT p.fname, p.lname
FROM person AS p, tenant AS t, rented_apartment AS r, tenant AS t2
WHERE t.person_phone = t2.depended_tenant_phone AND
         t.person_phone = r.lease_tenant_phone AND
         r.building_no = 1 AND
         p.phone = t2.person_phone;

```
+---------+----------+
| fname   | lname    |
+---------+----------+
| Shanon  | Workman  |
| Roberta | Workman  |
| Jon     | Workman  |
| Michael | Workman  |
| Hart    | Workman  |
+---------+----------+
```

PERSON(Phone, Fname, Lname, MIs, Sex, DoB, Email)

TENANT(*Person_phone*, SSN, *Depended_tenant_phone*)

RENTED_APARTMENT(*Building #, Floor, Room #*, Lease_start_date,

Lease_end_date, Lease_signed_date, Utilities_included, Monthly_rate,

Lease_tenant_phone)

4. List the annual income and building number of all buildings.

```
SELECT  b.building_no, COALESCE(SUM(r.monthly_rate), 0) * 12 AS annual_income
FROM building AS b LEFT JOIN rented_apartment AS r ON b.building_no = r.building_no
GROUP BY b.building_no
ORDER BY annual_income DESC;
```

building_no	annual_income
2	36060
3	21000
1	9600
4	0
5	0

5. List the building number of buildings that have not been rented.

```
SELECT b.building_no AS building_not_rented
FROM building AS b LEFT JOIN rented_apartment AS r ON b.building_no = r.building_no
WHERE r.monthly_rate IS NULL;
```

building_not_rented
4
5

6. List all Union students' name, their building and room number of whom are leasing. (using @union.edu email)

SELECT p.fname, p.lname, r.building_no, r.room_no
FROM person AS p, rented_apartment AS r
WHERE r.lease_tenant_phone = p.phone AND
        p.email LIKE '%@union.edu';

```
+-------+-------+-------------+-------+---------+
| fname | lname | building_no | floor | room_no |
+-------+-------+-------------+-------+---------+
| John  | Cena  |           3 |     1 |       2 |
+-------+-------+-------------+-------+---------+
```