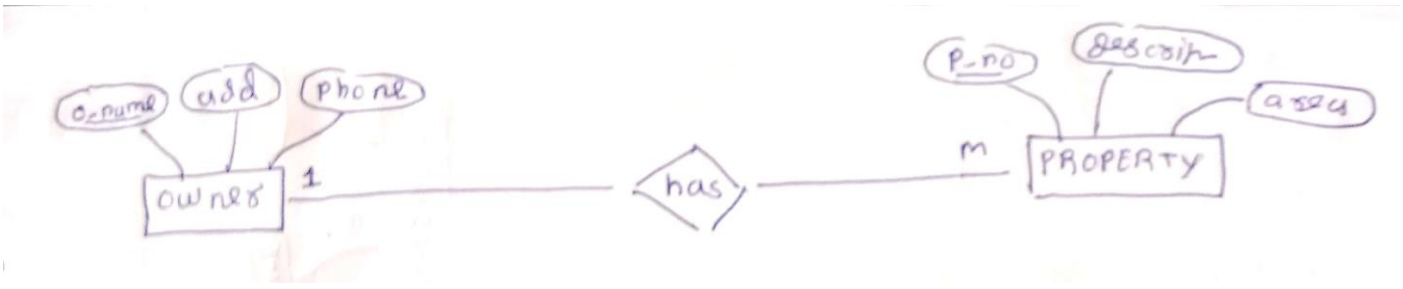
Q.1) Practical Questions on PostgresSQL Consider the following database

Property (pno, description, area)Owner
(oname, address, phone)

An owner can have one or more properties, but a property belongs to exactly one owner. Create the relations accordingly, so that the relationship is handled properly and the relations is handledproperly and the relations are in normalized form (3NF).

a) Draw the ER diagram for above relational schema and normalize it in 3NF.



b) Create the above database in 3NF form in PostgresSQL using constraints.

```
CREATE TABLE Owner (oname VARCHAR(50) PRIMARY KEY, address VARCHAR(255) NOT NULL, phone VARCHAR(20));

CREATE TABLE Property (pno INT PRIMARY KEY, description VARCHAR(255), area VARCHAR(50) NOT NULL, oname VARCHAR(50) NOT NULL, FOREIGN KEY (oname) REFERENCES Owner(oname));

INSERT INTO Owner (oname, address, phone) VALUES ('Mr. Kadam', '123 Main St, Pune', '1234567890'), ('Ms. Patel', '456 Hill Rd, Mumbai', '9876543210'), ('Mr. Patil', '789 Park Ave, Delhi', '0123456789');

INSERT INTO Property (pno, description, area, oname) VALUES (101, 'Spacious apartment', 'Moshi', 'Mr. Kadam'), (102, 'Cozy bungalow', 'Hinjewadi', 'Mr. Kadam'), (103, 'Modern studio', 'Bandra', 'Ms. Patel'), (104, 'Luxurious villa', 'Juhu', 'Ms. Patel');
```

Q2.) Using above database, solve the following queries:

a) List details of property where area is ‘Moshi’

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SELECT * FROM Property WHERE area = 'Moshi';
```

b) List area wise owner property details.

```
SELECT P.area, O.oname, O.address, O.phone, P.description, P.pno FROM Property P INNER JOIN Owner O ON P.oname = O.oname ORDER BY P.area;
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c) List property details owned by ‘Mr. Kadam’

```
SELECT * FROM Property P INNER JOIN Owner O ON P.oname = O.oname WHERE O.oname = 'Mr. Kadam';
```

d) Update phone no of ‘Mr. Patil’ to 987842621

```
SELECT * FROM Property P INNER JOIN Owner O ON P.oname = O.oname WHERE O.oname = 'Mr. Kadam';
UPDATE Owner SET phone = '987842621' WHERE oname = 'Mr. Patil';
```