Ontariobricks Database

CSD2204

Database Design and SQL

OVERVIEW

Ontario bricks is a common (web/app) platform for property lessor and lessee to locate properties of interest in Ontario for leasing with the following functionalities:

- The lessee/lessor can search for property filtering on the basis of locality, property type , price range and price range.
- They can view the amenities and images of a property, initiate a conversation with the owner of the property for negotiation and other details, rate the properties based on their experience.
- The lessee can participate in the bidding for a property in which he/she is interested, the lessor can view the bids and rent the facility as per the preferred bid price.
- The lessee/lessor can check for the availability and verified status of a property, true declaration of information of tenant and property.

DIFFICULTIES FACED

- Designing the entity- relationship diagram for more than 15 tables and establishing cardinality between them.
- Designing the requirements and functionalities.
- Creating appropriate columns in the tables to store data such that those functionalities can be implemented
- Loss of normalized form in cases having N:N cardinalty between tables.
- In joining different tables along with conditions to fetch the required result.

LESSONS LEARNT

- How to create ER diagrams using tool like lucidchart.com for decreasing time consumption.
- How to write query according to the requirements and functionality.
- Using the bridge table to resolve N:N cardinality and to reduce the tables into Normalised form.
- Using JOINS on more than 2 tables.
- Using sub queries along with JOINS to fetch the data from the database.

TOOLS

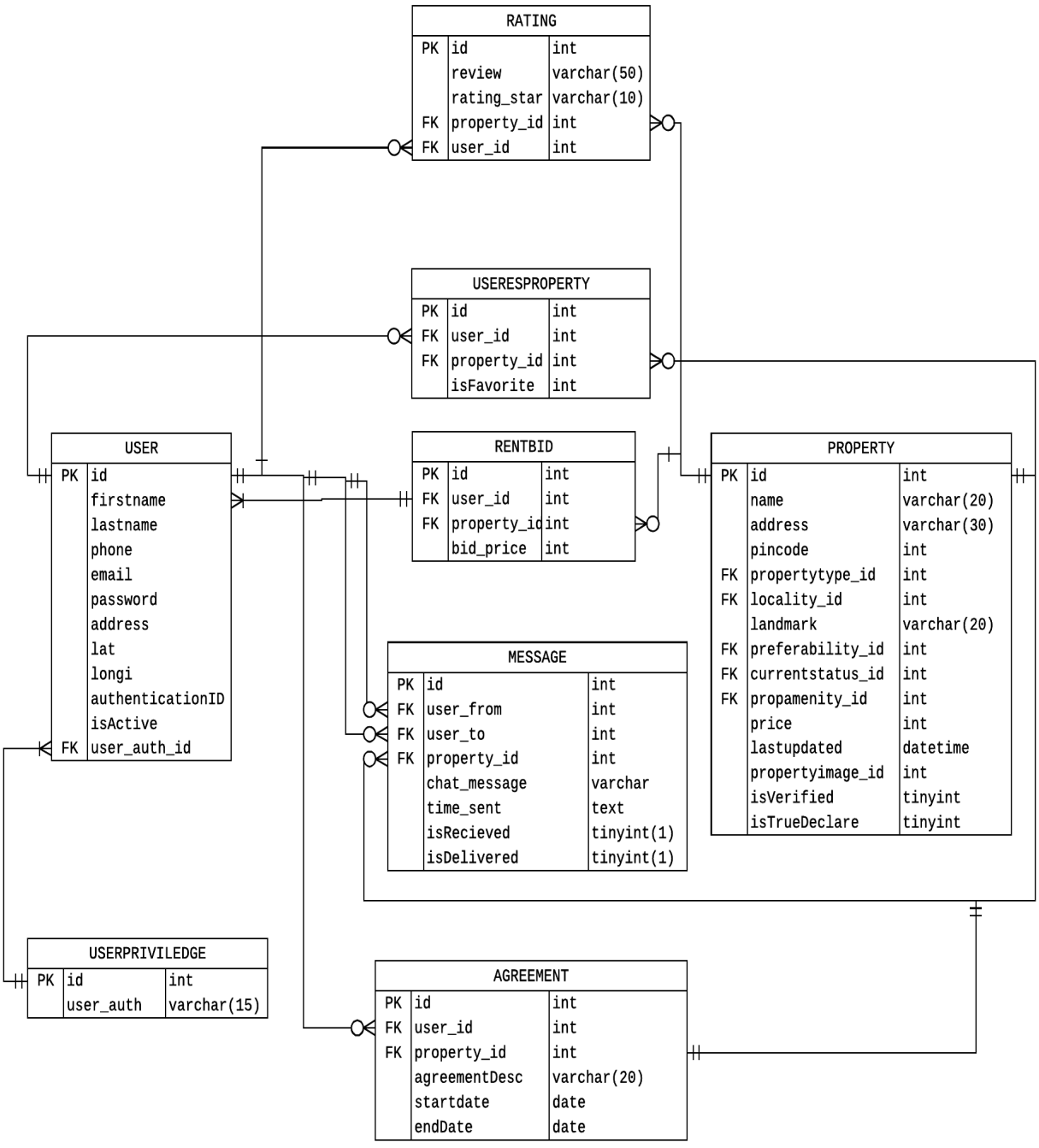
TOOL	PURPOSE
LUCIDCHART	ER DIAGRAM
XAMPP Control Panel	LAUNCHING MYSQL and APACHE
APACHE(localhost/phpmyadmin)	CREATING TABLES
MYSQL DATABASE	QUERY
MS WORD	DOCUMENTATION

ENTITY RELATIONSHIP DIAGRAM

ER (Entity Relationship) diagrams are a graphical representation of the entities, attributes and the relationship that exists between those entities in a database or information systems. These relationships can be one-to-one, one-to-many and many-to-many.

Let us have a look at the entity-relationship diagram of Ontariobricks Database and how the different entities relate to each other:

ER DIAGRAM PART-1



ER DIAGRAM PART - 2

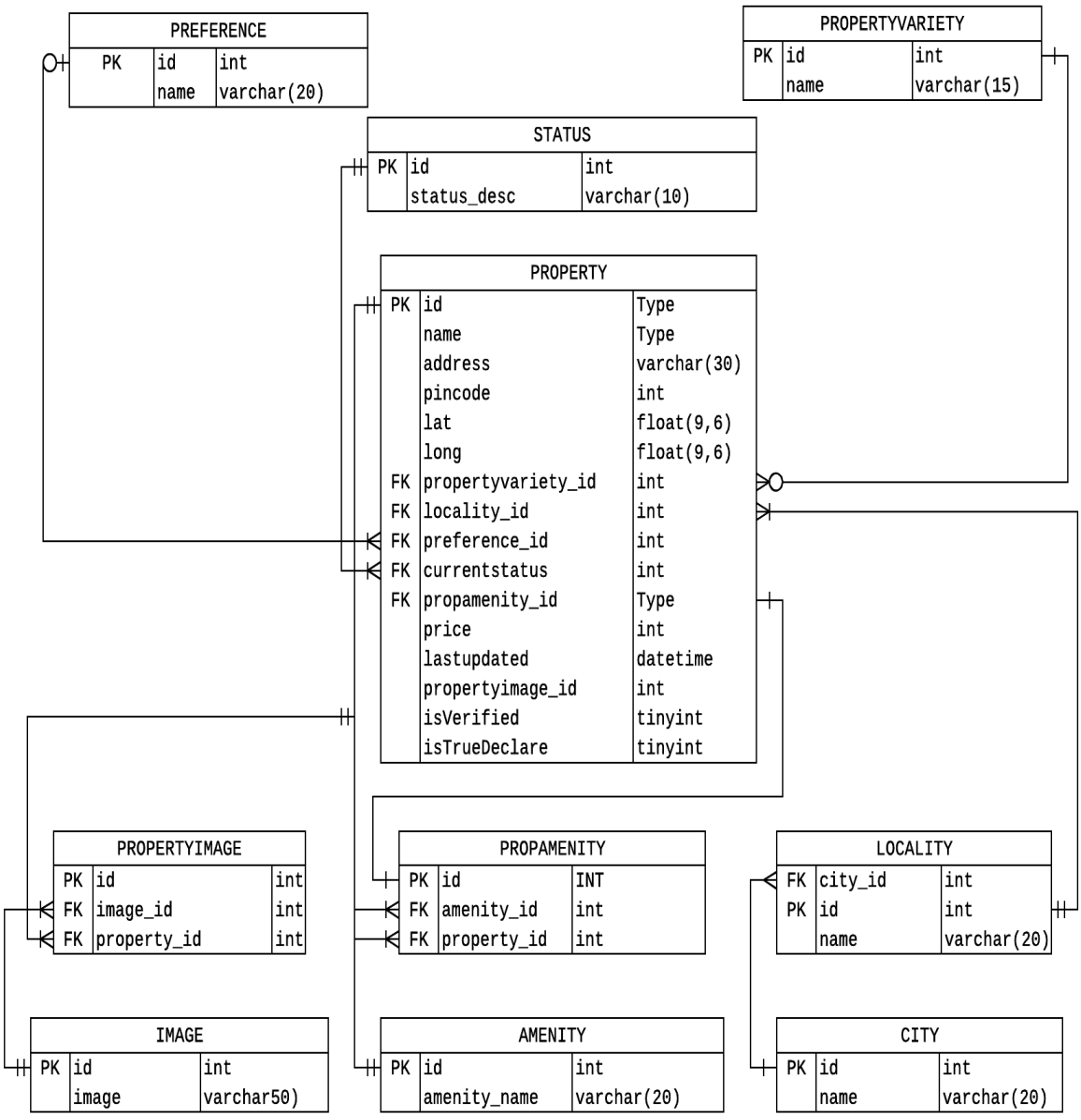


TABLE LIST

CITY table

Field name	Datatype	Constraint
Id	Integer	PRIMARY KEY
Name	varchar	NOT NULL

IMAGE table

Field name	Datatype	Constraint
Id	Integer	PRIMARY KEY
Image	varchar	NOT NULL

Rentbid table

Field name	Datatype	Constraint
Id	Integer	PRIMARY KEY
Property_id	Integer	FOREIGN KEY
User_id	Integer	FOREIGN KEY
Bid_price	Decimal	NOT NULL

STATUS table

Field name	Datatype	Constraint
Id	Integer	PRIMARY KEY
Status_desc	varchar	NOT NULL

LOCALITY table

Field name	Datatype	Constraint
Id	Integer	PRIMARY KEY
City_id	Integer	FOREIGN KEY

Name	Varchar	NOT NULL

AMENITY table

Field name	Datatype	Constraint
Id	Integer	PRIMARY KEY
Amenity_name	varchar	NOT NULL

PREFERENCE table

Field name	Datatype	Constraint
Id	Integer	PRIMARY KEY
Name	varchar	NOT NULL

PROPERTY table

Field name	Datatype	Constraint
Id	Integer	PRIMARY KEY
Name	Varchar	DEFAULT NULL
Address	Varchar	NOT NULL
Lat	Float	NOT NULL
Long	Float	NOT NULL
Propertyvariety _id	Integer	FOREIGN KEY
Locality_id	Integer	FOREIGN KEY
Current_status	Varchar	FOREIGN KEY
Preference_id	Integer	FOREIGN KEY
Propertyamenity	Integer	FOREIGN KEY
Price	Decimal	NOT NULL
Lastupdated	Datetime	NOT NULL
Propertyimage_id	Integer	NOT NULL
Isvarified	Integer	NOT NULL
Istruedeclare	Integer	NOT NULL

USER table

Field name	Datatype	Constraint
Id	Integer	PRIMARY KEY
Firstname	Varchar	DEFAULT NULL
Lastname	Varchar	NOT NULL

Phone	Varchar	NOT NULL
Email	Varchar	NOT NULL
Password	Varchar	NOT NULL
address	Varchar	NOT NULL
authenticationID	Varchar	NOT NULL
isactive	Integer	NOT NULL
User_auth_id	Integer	NOT NULL

MESSAGE table

Field name	Datatype	Constraint
Id	Integer	PRIMARY KEY
User_to	Integer	FOREIGN KEY
User_from	Integer	FOREIGN KEY
Property_id	Integer	FOREIGN KEY
Chat_message	Text	NOT NULL
Time_sent	Timestamp	NOT NULL
Isdelivered	Integer	NOT NULL
Isrecevied	Integer	NOT NULL

AGREEMENT table

Field name	Datatype	Constraint
Id	Integer	PRIMARY KEY
Property_id	Integer	FOREIGN KEY
User_id	Integer	FOREIGN KEY
agreementdesc	Text	NOT NULL
Startdate	Date	NOT NULL
Enddate	Date	NOT NULL

PROPERTYAMENITY table

Field name	Datatype	Constraint
Id	Integer	PRIMARY KEY
Property_id	Integer	FOREIGN KEY
Amenity_id	Integer	FOREIGN KEY

PROPETYIMAGE table

Field name	Datatype	Constraint
Id	Integer	PRIMARY KEY
Image_id	Integer	FOREIGN KEY
Property_id	Integer	FOREIGN KEY

PROPERTYVARIETY table

Field name	Datatype	Constraint
Id	Integer	PRIMARY KEY
Name	varchar	NOT NULL

RATING table

Field name	Datatype	Constraint
Id	Integer	PRIMARY KEY
Rating_star	Varchar	NOT NULL
Review	Varchar	NOT NULL
User_id	Integer	FOREIGN KEY
Property_id	Integer	FOREIGN KEY

USERPRIVILEGE table

Field name	Datatype	Constraint
Id	Integer	PRIMARY KEY
User_auth	Varchar	NOT NULL

USERSPROPERTY table

Field name	Datatype	Constraint
Id	Interger	PRIMARY KEY
Property_id	Integer	NOT NULL
User_id	Integer	NOT NULL
isFavorite	Integer	DEFAULT NULL

INSERTING VALUES IN TABLES

INSERTING IN CITY TABLE

INSERT INTO `city(name) VALUES ('Toronto');

```
MariaDB [airbnb]> SELECT * FROM city;
+----+-----------+
| id | name      |
+----+-----------+
|  1 | Toronto   |
|  2 | Brampton  |
|  3 | Hamilton  |
|  4 | Cambridge |
|  5 | Vaughan   |
+----+-----------+
5 rows in set (0.00 sec)

MariaDB [airbnb]>
```

INSERTING INTO PREFERENCE TABLE

INSERT INTO preference(name) VALUES ('bachelors');

```
MariaDB [airbnb]> SELECT * FROM preference;
+----+-----------+
| id | name      |
+----+-----------+
|  1 | Bachelors |
|  2 | Couple    |
|  3 | Family    |
|  4 | Student   |
+----+-----------+
4 rows in set (0.00 sec)

MariaDB [airbnb]>
```

INSERING INTO USERPRIVILEDGE

INSERT INTO userpriviledge(user_auth) VALUES ('Tenant');

```
MariaDB [ontariobricks]> SELECT * FROM userpriviledge;
+----+-----------+
| id | user_auth |
+----+-----------+
|  1 | Tenant    |
|  2 | Owner     |
|  3 | Both      |
+----+-----------+
3 rows in set (0.00 sec)

MariaDB [ontariobricks]>
```

INSERTING IN USER

INSERT INTO user(firstname, lastname,phone, email, address , authenticationID, isActive, user_auth_id) VALUES('Shubham Chauhan', 2899808562,'shubhamchauhan44@yahoo.com','1234','10 Grenoble Drive','Driving License',1,1,43.221905,-79,223223);

```
MariaDB [airbnb]> SELECT * FROM user;
+----+-----------+----------+------------+-----------------------------+----------
----------------------+------------------+----------+---------------+
| id | firstname | lastname | phone      | email                       | address
                     | authenticationID | isActive | user_auth_id |
+----+-----------+----------+------------+-----------------------------+----------
----------------------+------------------+----------+---------------+
|  3 | Shubham   | Chauhan  | 2899806782 | shubhamchauhan4@yahoo.com | 10 Grenob
le Drive North York   | Driving License  |        1 |             1 |
|  4 | Jaspreet  | Kaur     | 4167890985 | jaspreetkk@gmail.com        | 86 PILKEY
 Crescent mississauga | CollegeID        |        1 |             1 |
|  5 | Jaskeerat | Bhatia   | 416768876  | jaskeerat.rsb@yahoo.com   | 12 Lawren
ce Drive East York    | Passport         |        1 |             1 |
+----+-----------+----------+------------+-----------------------------+----------
----------------------+------------------+----------+---------------+
3 rows in set (0.00 sec)

MariaDB [airbnb]>
```

INSERTING IN STATUS

INSERT INTO status(status_desc) VALUES ('Available');

```
MariaDB [airbnb]> SELECT * FROM status;
+----+-------------+
| id | status_desc |
+----+-------------+
|  1 | Available   |
|  2 | Reserved    |
|  3 | Leased      |
+----+-------------+
3 rows in set (0.00 sec)

MariaDB [airbnb]>
```

INSERTING IN PROPERTYVARIETY

INSERT INTO `propertyvariety`(`name`) VALUES ('Condo');

```
MariaDB [airbnb]> SELECT * FROM propertyvariety;
+----+-----------+
| id | name      |
+----+-----------+
|  8 | Condo     |
|  9 | Apartment |
| 10 | Basement  |
| 11 | Townhouse |
| 12 | Penthouse |
| 13 | Parking   |
+----+-----------+
6 rows in set (0.29 sec)

MariaDB [airbnb]>
```

INSERTING IN IMAGE

INSERT INTO `image`(`image`) VALUES('img.jpeg');

```
MariaDB [airbnb]> SELECT * FROM image;
+----+----------------+
| id | image          |
+----+----------------+
|  1 | img.jpeg       |
|  2 | eula.png       |
|  3 | vcred.jpeg     |
|  4 | glob.jpeg      |
|  5 | div.png        |
|  6 | screen.jpeg    |
|  7 | recent.png     |
|  8 | tracking.png   |
|  9 | zilla.png      |
| 10 | ease.jpeg      |
| 11 | bootstrap.jpeg |
| 12 | wordpress.jpeg |
+----+----------------+
12 rows in set (0.00 sec)
```

INSERTING IN AMENITY

INSERT INTO `amenity`(`amenity_name`) VALUES ('banks');

```
MariaDB [airbnb]> SELECT * FROM amenity;
+----+--------------+
| id | amenity_name |
+----+--------------+
|  1 | wi-fi        |
|  2 | garage       |
|  3 | guest room   |
|  4 | subway       |
|  5 | banks        |
|  6 | supermarket  |
+----+--------------+
6 rows in set (0.00 sec)
```

INSERTING IN PROPERTY

INSERT INTO `property`(`name`, `address`, `pincode`, `lat`, `long`, `propertyvariety_id`, `locality_id`, `current_status`, `preference_id`, `propertyamenity_id`, `price`, `lastupdated`, `propertyimage_id`, `isVerified`, `isTrueDeclared`) VALUES ('sam','99 cresent drive','on c6r 8g6','43.220001','-79.223122','9','3','2','4','3','9628','','6','1','0');

```
MariaDB [ontariobricks]> SELECT * FROM property;
+----+--------------+--------------------+---------+----------+-----------+------------------+-------------+----------------+---------------+--------------------+-------+---------------------+------------------+------------+-----------------+
| id | name         | address            | pincode | lat      | long      | propertyvariety_id | locality_id | current_status | preference_id | propertyamenity_id | price | lastupdated         | propertyimage_id | isVerified | isTrueDeclared |
+----+--------------+--------------------+---------+----------+-----------+------------------+-------------+----------------+---------------+--------------------+-------+---------------------+------------------+------------+-----------------+
|  1 | Victoria Park | 4200 Sheppard Avenue | M3C1C6  | 43.220001 | -79.120003 |                8 |           1 | 1              |             1 |                  1 |  2000 | 2017-09-20 17:01:12 |                1 |          1 |               1 |
|  2 | Gibson Square | 99 Cresent Drive     | M4C1C6  | 43.223110 | -79.239845 |                9 |           3 | 2              |             4 |                  3 |  2000 | 2017-09-20 17:00:53 |                6 |          1 |               0 |
|  3 | Marine Suites | 67 Marine blvd       | M3C4C9  | 43.233459 | -79.239845 |                4 |           4 | 3              |             2 |                  6 |  2570 | 2017-09-20 17:00:31 |                5 |          0 |               0 |
|  4 | Legacy Park   | 146 Dufferin St      | M3C1C3  | 43.223148 | -79.239853 |               13 |           3 | 3              |             2 |                  5 |  7410 | 2017-09-20 17:00:10 |               10 |          1 |               1 |
|  5 | Homewood INN  | 789 kingston street  | M3C1C8  | 43.221233 | -79.239334 |                9 |           7 | 1              |             4 |                  2 |  6200 | 2017-09-20 16:59:36 |                4 |          1 |               1 |
+----+--------------+--------------------+---------+----------+-----------+------------------+-------------+----------------+---------------+--------------------+-------+---------------------+------------------+------------+-----------------+
```

INSERTING INTO PROPERTYAMENITY

INSERT INTO `propertyamenity`(`property_id`, `amenity_id`) VALUES ('2','2');

```
MariaDB [airbnb]> select * from propertyamenity;
+----+-------------+------------+
| id | property_id | amenity_id |
+----+-------------+------------+
|  1 |           1 |          2 |
|  2 |           2 |          2 |
|  3 |           3 |          6 |
|  4 |           4 |          4 |
|  5 |           5 |          3 |
|  6 |           3 |          5 |
+----+-------------+------------+
6 rows in set (0.00 sec)
```

INSERTING INTO PROPERTYIMAGE

INSERT INTO `propertyimage`(`image_id`, `property_id`) VALUES ('1','2');

```
MariaDB [airbnb]> select * from propertyimage;
+----+----------+-------------+
| id | image_id | property_id |
+----+----------+-------------+
|  1 |        1 |           2 |
|  2 |        5 |           2 |
|  3 |        4 |           3 |
|  4 |        8 |           3 |
|  5 |        9 |           5 |
|  6 |        7 |           5 |
|  7 |       11 |           4 |
|  8 |       12 |           4 |
|  9 |       10 |           2 |
| 10 |        2 |           5 |
+----+----------+-------------+
10 rows in set (0.00 sec)
```

INSERTING INTO RENTBID

INSERT INTO `rentbid  (`property_id`, `user_id`, `bid_price`) VALUES ('1','3','5293');

```
MariaDB [ontariobricks]> SELECT * FROM rentbid;
+----+-------------+---------+-----------+
| id | property_id | user_id | bid_price |
+----+-------------+---------+-----------+
|  1 |           1 |       3 |      2200 |
|  2 |           2 |       4 |      1900 |
|  3 |           3 |       4 |      3789 |
|  4 |           4 |       5 |      2850 |
|  5 |           2 |       5 |      1500 |
|  6 |           1 |       4 |      2500 |
|  7 |           1 |       5 |      2000 |
|  8 |           5 |       8 |      1700 |
+----+-------------+---------+-----------+
8 rows in set (0.05 sec)
```

QUERIES

1. **Create Table User**

```
CREATE TABLE user(
id INT(2) NOT NULL AUTO_INCREMENT,
firstname VARCHAR(20) NOT NULL,
lastname VARCHAR(20) NOT NULL,
phone INT(10) NOT NULL,
email VARCHAR(20) NOT NULL,
password VARCAHR(10) NOT NULL,
address VARCHAR(40) NOT NULL,
authenticationID VARCHAR(20) NOT NULL,
isActive TINYINT(1) NOT NULL,
user_auth_id INT(2) NOT NULL,
lat FLOAT(9,6) NOT NULL,
longi FLOAT(9,6) NOT NULL,
PRIMARY KEY (id),
FOREIGN KEY (user_auth_id) REFERENCES userpriviledge(id));
```

```
MariaDB [ontariobricks]> DESC user;
+------------------+-------------+------+-----+---------+----------------+
| Field            | Type        | Null | Key | Default | Extra          |
+------------------+-------------+------+-----+---------+----------------+
| id               | int(11)     | NO   | PRI | NULL    | auto_increment |
| firstname        | varchar(20) | NO   |     | NULL    |                |
| lastname         | varchar(20) | NO   |     | NULL    |                |
| phone            | varchar(10) | NO   |     | NULL    |                |
| email            | varchar(30) | NO   |     | NULL    |                |
| password         | varchar(10) | NO   |     | NULL    |                |
| address          | varchar(100)| NO   |     | NULL    |                |
| authenticationID | varchar(30) | NO   |     | NULL    |                |
| isActive         | tinyint(1)  | NO   |     | NULL    |                |
| user_auth_id     | int(11)     | NO   | MUL | NULL    |                |
| lat              | float(9,6)  | NO   |     | NULL    |                |
| longi            | float(9,6)  | NO   |     | NULL    |                |
+------------------+-------------+------+-----+---------+----------------+
12 rows in set (0.01 sec)
```

2. **INSERT QUERY**

```
INSERT INTO `propertyvariety`(`name`) VALUES ('Condo');
```

```
MariaDB [airbnb]> SELECT * FROM propertyvariety;
+----+------------+
| id | name       |
+----+------------+
|  8 | Condo      |
|  9 | Apartment  |
| 10 | Basement   |
| 11 | Townhouse  |
| 12 | Penthouse  |
| 13 | Parking    |
+----+------------+
6 rows in set (0.29 sec)

MariaDB [airbnb]>
```

3. **ALTER COMMAND: THE PROPERTY TABLE SHOULD REFELECT THE TIMESTAMP IN 'LASTUPDATED' WHENEVER A CHANGE IN THE TABLE IS MADE**

   ALTER TABLE property
   MODIFY lastupdated TIMESTAMP DEFAULT CURRENT TIMESTAMP ON UPDATE CURRENT TIMESTAMP;

```
MariaDB [ontariobricks]> DESC property;
+--------------------+---------------+------+-----+--------------------+-----------------------------+
| Field              | Type          | Null | Key | Default            | Extra                       |
+--------------------+---------------+------+-----+--------------------+-----------------------------+
| id                 | int(2)        | NO   | PRI | NULL               | auto_increment              |
| name               | varchar(20)   | YES  |     | NULL               |                             |
| address            | varchar(30)   | NO   |     | NULL               |                             |
| pincode            | varchar(6)    | NO   |     | NULL               |                             |
| lat                | float(9,6)    | NO   |     | NULL               |                             |
| long               | float(9,6)    | NO   |     | NULL               |                             |
| propertyvariety_id | int(1)        | NO   |     | NULL               |                             |
| locality_id        | int(20)       | NO   |     | NULL               |                             |
| current_status     | varchar(20)   | NO   |     | NULL               |                             |
| preference_id      | int(20)       | NO   |     | NULL               |                             |
| propertyamenity_id | int(2)        | NO   |     | NULL               |                             |
| price              | decimal(10,0) | NO   |     | NULL               |                             |
| lastupdated        | timestamp     | NO   |     | CURRENT_TIMESTAMP  | on update CURRENT_TIMESTAMP |
| propertyimage_id   | int(2)        | NO   |     | NULL               |                             |
| isVerified         | tinyint(1)    | NO   |     | NULL               |                             |
| isTrueDeclared     | tinyint(1)    | NO   |     | NULL               |                             |
+--------------------+---------------+------+-----+--------------------+-----------------------------+
16 rows in set (0.01 sec)
```

4. **UPDATE QUERY**

   UPDATE rentbid SET property_id = '5', user_id = '8'
   WHERE rentbid.`id` = 8;

```
MariaDB [ontariobricks]> UPDATE rentbid SET property_id = '5', user_id = '8' WHERE rentbid.`id` = 8;
Query OK, 1 row affected (0.09 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [ontariobricks]> SELECT * FROM rentbid;
+----+-------------+---------+-----------+
| id | property_id | user_id | bid_price |
+----+-------------+---------+-----------+
|  1 |           1 |       3 |      2200 |
|  2 |           2 |       4 |      1900 |
|  3 |           3 |       4 |      3789 |
|  4 |           4 |       5 |      2850 |
|  5 |           2 |       5 |      1500 |
|  6 |           1 |       4 |      2500 |
|  7 |           1 |       5 |      2000 |
|  8 |           5 |       8 |      1700 |
+----+-------------+---------+-----------+
8 rows in set (0.00 sec)
```

5. **DELETE QUERY(DELETING ALL AGREEMENT WHICH HAVE MATURITY OF 5YRS)**

```
DELETE FROM agreement
WHERE TIMESTAMPDIFF(year, startDate, endDate) >=  5;
```

```
MariaDB [ontariobricks]> DELETE FROM agreement WHERE TIMESTAMPDIFF(year, startDate, endDa
te) >=  5;
Query OK, 1 row affected (0.10 sec)

MariaDB [ontariobricks]>
```

Queries on Functionalities

1. **User Sign_up**

```
INSERT INTO user(firstname, lastname,phone, email, password, address , authenticationID,
isActive, user_auth_id,lat,longi)
VALUES('Shubham Chauhan', 2899808562,'shubhamchauhan44@yahoo.com','1234','10
Grenoble Drive','Driving License',1,1,43.221905,-79,223223);
```

```
Select XAMPP for Windows - mysql  -u root mysql
| testdb             |
+--------------------+
8 rows in set (0.03 sec)

MariaDB [mysql]> use rentaldb;
Database changed
MariaDB [rentaldb]> SELECT * FROM user;
+----+-----------+----------+------------+--------------------------+----------+-------------------------------------+-----------------+----------+-------------
+-----------+------------+
| id | firstname | lastname | phone      | email                    | password | address                             | authenticationID | isActive | user_auth_id
| lat       | longi      |
+----+-----------+----------+------------+--------------------------+----------+-------------------------------------+-----------------+----------+-------------
+-----------+------------+
|  3 | Shubham   | Chauhan  | 2899806782 | shubhamchauhan4@yahoo.com | 1234     | 10 Grenoble Drive North York        | Driving License  |        1 |           1
| 43.221325 | -79.223396 |
|  4 | Jaspreet  | Kaur     | 4167890985 | jaspreetkk@gmail.com      | asdf     | 86 PILKEY Crescent mississauga      | CollegeID        |        1 |           1
| 43.223042 | -79.234451 |
|  5 | Jaskeerat | Bhatia   | 416768876  | jaskeerat.rsb@yahoo.com   | qwerty   | 12 Lawrence Drive East York         | Passport         |        1 |           1
| 43.234123 | -79.224541 |
|  6 | Simon     | Clarke   | 416908878  | simon_clarke@gmail.com    | zxcv     | 2040 Don Mills Road North York Toronto | DL            |        1 |           2
| 43.229897 | -79.223221 |
|  7 | Ken       | Xihou    | 289908878  | ken_xihou@gmail.com       | 5678     | 204 Bathurst Road York Dale Vaughan | Passport         |        0 |           2
| 43.234409 | -79.223892 |
|  8 | Benjamin  | Frank    | 289974227  | benj@gmail.com            | qazw     | Wildfield AV                        | PR               |        1 |           2
| 43.229843 | -79.223457 |
+----+-----------+----------+------------+--------------------------+----------+-------------------------------------+-----------------+----------+-------------
+-----------+------------+
6 rows in set (0.05 sec)

MariaDB [rentaldb]>
```

2. **FILTER THE PROPERTY BASED ON LOCALITY**

```
SELECT a.* FROM property AS a
INNER JOIN locality AS b ON a.locality_id = b.id
WHERE b.name = 'NORTH YORK';
```

```
MariaDB [ontariobricks]> SELECT a.* FROM property AS a INNER JOIN locality AS b ON a.locality_id = b.id WHERE b.name = 'NORTH YORK';
+----+--------------+--------------------+---------+----------+-----------+--------------------+------------+---------------+--------------+-------------------+
| id | name         | address            | pincode | lat      | long      | propertyvariety_id | locality_id | current_status | preference_id | propertyamenity_id |
| price | lastupdated         | propertyimage_id | isVerified | isTrueDeclared |
+----+--------------+--------------------+---------+----------+-----------+--------------------+------------+---------------+--------------+-------------------+
+------+---------------------+------------------+------------+----------------+
|  1 | Victoria Park | 4200 Sheppard Avenue | M3C1C6  | 43.220001 | -79.120003 |                  8 |          1 | 1             |            1 |                 1 |
|  2000 | 2017-09-20 17:01:12 |                1 |          1 |              1 |
+----+--------------+--------------------+---------+----------+-----------+--------------------+------------+---------------+--------------+-------------------+
+------+---------------------+------------------+------------+----------------+
1 row in set (0.07 sec)
```

3. FILTER THE PROPERTY BASED ON PROPERTY TYPE

```
SELECT p.id, p.name, p.isVerified,p.lastupdated FROM property AS p
INNER JOIN propertyvariety AS q ON p.propertyvariety_id = q.id
WHERE q.name = 'Condo';
```

```
MariaDB [rentaldb]> SELECT p.id, p.name, p.isVerified,p.lastupdated FROM property AS p INNER JOIN propertyva
riety AS q ON p.propertyvariety_id = q.id where q.name = 'Condo';
+----+---------------+------------+---------------------+
| id | name          | isVerified | lastupdated         |
+----+---------------+------------+---------------------+
|  1 | Victoria Park |          1 | 2017-09-18 00:46:52 |
+----+---------------+------------+---------------------+
1 row in set (0.00 sec)
```

4. FILTER USING PRICE RANGE

```
SELECT p.id, p.name,p.lastupdated FROM property AS p
WHERE p.price BETWEEN 500 AND 2500
AND isTrueDeclared <> 1;
```

```
MariaDB [rentaldb]> SELECT p.id, p.name,p.lastupdated FROM property AS p WHERE p.price BETWEEN 500 AND 2500
AND isTrueDeclared <> 1;
+----+---------------+---------------------+
| id | name          | lastupdated         |
+----+---------------+---------------------+
|  2 | Gibson Square | 2017-09-18 01:00:40 |
+----+---------------+---------------------+
1 row in set (0.03 sec)
```

5. HOW MANY PROPERTIES HAVE PRICE > 2000 AND OR HAVE ‘PARK’ IN THEIR NAME

```
SELECT count(*) ASNO_of_propertyFROM property
WHERE price >2000
OR name LIKE '%park%';
```

```
MariaDB [ontariobricks]> Select count(*) as NO_of_property from property WHERE price >2000 OR name LIKE '%park%';

+----------------+
| NO_of_property |
+----------------+
|              4 |
+----------------+
1 row in set (0.00 sec)
```

6. **LIST PROPERTIES IN ASC ORDER OF THEIR PRICES AND WHICH PREFER ONLY COUPLES**

SELECT a.name,a.address,a.price,b.name FROM property AS a INNER JOIN preference AS b ON a.preference_id = b.id WHERE b.name = 'Couple' ORDER BY a.price ASC;

```
MariaDB [ontariobricks]> SELECT a.name,a.address,a.price,b.name FROM property AS a INNER JOIN preference AS b ON a.prefe
rence_id = b.id WHERE b.name = 'Couple' ORDER BY a.price ASC;
+---------------+-----------------+-------+--------+
| name          | address         | price | name   |
+---------------+-----------------+-------+--------+
| Marine Suites | 67 Marine blvd  |  2570 | Couple |
| Legacy Park   | 146 Dufferin St |  7410 | Couple |
+---------------+-----------------+-------+--------+
```

7. **SELECT THE LEGAL PROPERTY AGREEMENT FOR SHUBHAM**

SELECT agreementDesc FROM agreement
INNER JOIN user ON user.id = agreement.user_id
WHERE user.firstname = 'Shubham';

```
MariaDB [rentalDB]> SELECT agreementDesc FROM agreement INNER JOIN user ON user.id = agreement.user_id WHERE user.firstn
ame = 'Shubham';
+-------------------+
| agreementDesc     |
+-------------------+
| rentagreement.txt |
+-------------------+
1 row in set (0.00 sec)
```

8. **SELECT THE PROPERTIES WITH HIGHEST RATING**

SELECT name FROM property
WHERE id IN (SELECT id FROM rating WHERE rating_star = 'FIVE');

```
MariaDB [rentalDB]> SELECT name FROM property WHERE id IN (SELECT id FROM rating WHERE rating_star = 'FIVE');
+---------------+
| name          |
+---------------+
| Victoria Park |
| Homewood INN  |
+---------------+
```

9. **AVERAGE PROPERTY RENTS IN ALL LOCALITIES**

SELECT AVG(price), locality.name FROM property
INNER JOIN locality on property.locality_id= locality.id
GROUP BY locality.name;

```
MariaDB [rentalDB]> SELECT AVG(price), locality.name FROM property INNER JOIN locality on property.locality_id = localit
y.id GROUP BY locality.name;
+------------+--------------+
| AVG(price) | name         |
+------------+--------------+
|  2000.0000 | North York   |
|  2570.0000 | Tormore      |
|  6200.0000 | Wilson drive |
|  4705.0000 | York Dale    |
+------------+--------------+
4 rows in set (0.00 sec)
```

10. **PROPERTIES UPDATED RECENTLY(IN PAST 12 HR)**

SELECT p.name FROM property AS p
WHERE TIMESTAMPDIFF(hour, now(), lastupdated) <12;

```
MariaDB [rentalDB]> SELECT p.name FROM property AS p WHERE TIMESTAMPDIFF(hour, now(), lastupdated) <12;
+---------------+
| name          |
+---------------+
| Victoria Park |
| Gibson Square |
| Marine Suites |
+---------------+
3 rows in set (0.00 sec)
```

HIGH LEVEL QUERIES

1. **ENLIST THE BIDS FOR VICTORIA PARK IN DSC ORDER**

SELECT bid_price FROM rentbid
WHERE property_id = (SELECT id FROM property WHERE name = 'VIctoria Park')
ORDER BY bid_price DESC;

```
MariaDB [rentalDB]> SELECT bid_price FROM rentbid WHERE property_id = (SELECT id FROM property WHERE name = 'VIctoria Pa
rk') ORDER BY bid_price DESC;
+-----------+
| bid_price |
+-----------+
|      2500 |
|      2200 |
|      2000 |
+-----------+
3 rows in set (0.00 sec)
```

2. **LIST ALL PROPERTIES WITH THIER AMENITIES**

SELECT p.name, q.amenity_name FROM property AS p
INNER JOIN propertyamenity AS r ON p.id = r.property_id
INNER JOIN amenity AS q ON r.amenity_id = q.id;

```
MariaDB [rentalDB]> SELECT p.name, q.amenity_name FROM property AS p INNER JOIN propertyamenity AS r ON p.id = r.propert
y_id INNER JOIN amenity AS q ON r.amenity_id = q.id;
+--------------+--------------+
| name         | amenity_name |
+--------------+--------------+
| Victoria Park | garage       |
| Victoria Park | guest room   |
| Gibson Square | garage       |
| Marine Suites | supermarket  |
| Marine Suites | banks        |
| Legacy Park   | subway       |
| Homewood INN  | guest room   |
+--------------+--------------+
7 rows in set (0.06 sec)

MariaDB [rentalDB]>
```

3. LIST THE IMAGES ASSOCIATED WITH ‘GIBSON SQUARE’

```
SELECT q.image FROM image AS q
INNER JOIN propertyimage AS r ON q.id = r.image_id
INNER JOIN property AS p ON p.id = r.property_id
WHERE p.name = 'Gibson Square';
```

```
MariaDB [rentalDB]> SELECT q.image FROM image AS q INNER JOIN propertyimage AS r ON q.id = r.image_id INNER JOIN propert
y AS p ON p.id = r.property_id WHERE p.name = 'Gibson Square';
+----------------+
| image          |
+----------------+
| img.jpeg       |
| room1.png      |
| storeroom.jpeg |
| garage.png     |
| frontView.png  |
| garden.jpeg    |
+----------------+
```

4. LIST THE FAVOURITES(SAVED) PROPERTY OF A PARTICULAR USER

```
SELECT a.name,a.address FROM property AS a
INNER JOIN usersproperty AS b ON a.id = b.property_id
INNER JOIN user AS c ON c.id = b.user_id
WHERE c.firstname = 'Shubham' AND b.isFavorite = 1;
```

```
MariaDB [ontariobricks]> SELECT a.name,a.address FROM property AS a INNER JOIN usersproperty as b ON a.id = b.property_i
d INNER JOIN user as c ON c.id = b.user_id WHERE c.firstname = 'Shubham' AND b.isFavorite = 1;
+--------------+----------------+
| name         | address        |
+--------------+----------------+
| Marine Suites | 67 Marine blvd |
+--------------+----------------+
1 row in set (0.00 sec)
```

5. SELECT USER WITH MAX(BID_PRICE) AND THE PERSON WHO PLACED IT IN A PARTICULAR PROPERTY IN A PARTICULAR LOCALITY

```
SELECT a.firstname, b.bid_price FROM user AS a
INNER JOIN rentbid AS b ON a.id = b.user_id
WHERE b.bid_price = (select max(c.bid_price) FROM rentbid AS c
INNER JOIN property AS d ON d.id = c.property_id
INNER JOIN locality AS e ON e.id = d.locality_id
WHERE e.name = 'North York' AND d.name = 'Victoria Park');
```

```
MariaDB [ontariobricks]> select a.firstname,b.bid_price from user as a inner join rentbid as b o
n a.id = b.user_id where b.bid_price = (select max(c.bid_price) from rentbid as c inner join pro
perty as d on d.id = c.property_id inner join locality as e on e.id = d.locality_id where e.name
 = 'North York' and d.name = 'Victoria Park');
+-----------+-----------+
| firstname | bid_price |
+-----------+-----------+
| Jaspreet  |      2500 |
+-----------+-----------+
1 row in set (0.00 sec)
```

6. PROPERTIES OF EACH USER(LEASED OR POSTED ONES)

```
SELECT p.name, q.firstname AS Tenant_Name FROM property AS p
INNER JOIN usersproperty AS r ON p.id = r.property_id
INNER JOIN user AS q ON r.user_id = q.id
WHERE user_id IN (SELECT l.id FROM user AS l
INNER JOIN userpriviledge AS m ON l.user_auth_id = m.id
WHERE m.user_auth = 'Tenant');
```

```
MariaDB [rentalDB]> SELECT p.name, q.firstname AS Tenant_Name FROM property AS p INNER JOIN usersproperty AS r ON p.id =
 r.property_id INNER JOIN user AS q ON r.user_id = q.id WHERE user_id IN (SELECT l.id FROM user AS l INNER JOIN userpriv
iledge AS m ON l.user_auth_id = m.id WHERE m.user_auth = 'Tenant');
+--------------+-------------+
| name         | Tenant_Name |
+--------------+-------------+
| Victoria Park | Shubham     |
| Gibson Square | Jaspreet    |
| Legacy Park   | Jaskeerat   |
| Marine Suites | Shubham     |
+--------------+-------------+
```

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