

Fall 2021 DA 542 Project

Due Date: Thursday 12/16/2021

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Course: DA 542

Data Modeling Environment Name: Rental Property Management

Brief description of proposed environment:

This project is aimed at designing a database system to manage rental properties. This system comprises of five entities: Owner, Tenant, Property, Unit and Contract. I assume that different owners can own different properties, but each property is owned by a single owner. Each property may have more than one unit (apartments). Every tenant is required to sign unique contract which describes rental properties (contract term, contract start date, contract end date, monthly rent).

Data Retrieval Requirements -

- 1) **Input:** Tenant ID -----> **Output:** Tenant Name, Tenant email, contract term, contract end date, monthly rent.

View name = "TENANT_INFO"

```
CREATE VIEW TENANT_INFO AS
```

```
SELECT t.TENANT_ID, t.TENANT_FNAME, t.TENANT_LNAME, t.TENANT_EMAIL,  
c.CONTRACT_DATE, c.VALID_UNTIL, c.RENT_AMOUNT
```

```
FROM TENANT t
```

```
JOIN CONTRACT c
```

```
ON t.TENANT_ID=c.TENANT_ID;
```

- 2) **Input: Contract ID** -----→ **Output:** Contract end date, Monthly rent, Property Address, Unit Number, Floor Area
View name = "CONTRACT_INFO"

```
CREATE VIEW CONTRACT_INFO AS
SELECT c.CONTRACT_ID, c.VALID_UNTIL, c.RENT_AMOUNT, p.PROPERTY_ADDRESS,
u.UNIT_NUM, u.FLOOR_AREA
FROM CONTRACT c
INNER JOIN PROPERTY p
ON c.PROPERTY_ID=p.PROPERTY_ID
INNER JOIN UNIT u
ON c.UNIT_ID=u.UNIT_ID;
```

- 3) **Input:** Unit ID -----→ **Output:** Property Address, Owner Name, Owner Phone, Contract End date.

View name= "PROPERTY_OWNER_INFO"

```
CREATE VIEW PROPERTY_OWNER_INFO AS
SELECT u.UNIT_ID, p.PROPERTY_ADDRESS, o.OWNER_FNAME, o.OWNER_LNAME,
o.OWNER_PHONE, c.VALID_UNTIL
FROM CONTRACT c
INNER JOIN UNIT u
ON c.UNIT_ID=u.UNIT_ID
INNER JOIN PROPERTY p
ON c.PROPERTY_ID=p.PROPERTY_ID
INNER JOIN OWNER o
ON o.OWNER_ID=p.OWNER_ID;
```

The ER diagram is shown in the next page.

Rental Property Management ERD

