Northeastern University **DAMG6210** - Data Management and Database Design

MEMBERS:

Name	NUID
Sri Vaishnavi Aekkati	002760439
Akshita Pathania	002728833
Amrutha Sai Edara	002776773
Sampada Kasture	002743809

PROJECT TOPIC:

Property Rental Management System

PROBLEM STATEMENT:

- 1. Delay in solving maintenance issues or any other complaints.
- 2. Data in the database is prone to privilege abuse, injection attacks, and malware threats.
- 3. Difficult to access and control the data due to the high number of properties.

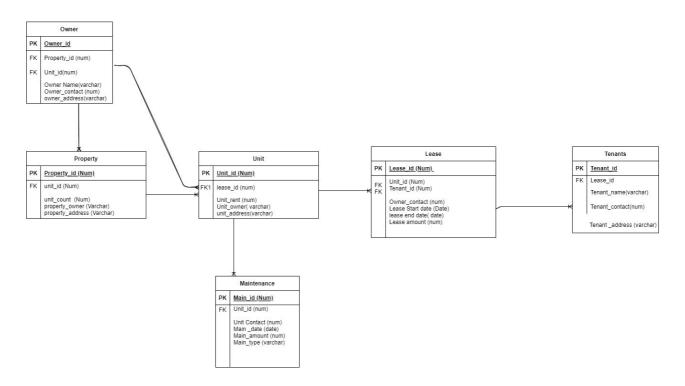
OBJECTIVES:

- 1. To efficiently manage the details of the Owners and their respective Tenants.
- 2. To create a well-organized management system for tracking maintenance issues regularly.
- 3. To provide a structured system of maintaining financial transaction-related matters.

PROPOSED SOLUTION:

- 1. A different entity will be made to look after the problems of the tenants in different property locations.
- 2. Monitoring of the database activity with the usage patterns will be done on regular bases.
- 3. User access rights and privileges will be managed and will not be given to the users or the property managers.
- 4. A well-designed property system will be created that will be storing all the data in one place and have full control over it making the data transparent and easy to find.

E-R DIAGRAM



ENTITIES & ATTRIBUTES

Property

ATTRIBUTES	DATATYPE	COMMENTS
property_ ^{id}	NUMBER	PRIMARY KEY, AUTO GENERATED
Unit_Count	NUMBER	NOT NULL
Property_Owner	VARCHAR (20)	
Property_address	VARCHAR (20)	NOT NULL
Unit_id	NUMBER	FOREIGN KEY, NOT NULL

Unit

ATTRIBUTES	DATATYPE	COMMENTS
_{unit} _id	NUMBER	PRIMARY KEY, AUTO GENERATED
Unit_Rent	NUMBER	NOT NULL
Unit_Owner	VARCHAR (20)	
Unit_address	VARCHAR (20)	NOT NULL
property_id	NUMBER	FOREIGN KEY, NOT NULL

Maintenance

ATTRIBUTES	DATATYPE	COMMENTS
_{main} id	NUMBER	PRIMARY KEY, AUTO GENERATED
Main_Amount	NUMBER	NOT NULL
Unit_id	NUMBER	FOREIGN KEY, NOT NULL
Unit_contact	VARCHAR (10)	NOT NULL
Main_Start_Date	DATE	NOT NULL
Main_End_Date	DATE	NOT NULL
Main_type	VARCHAR (100)	NOT NULL

Lease

ATTRIBUTES	DATATYPE	COMMENTS
Lease_id	NUMBER	PRIMARY KEY, AUTO GENERATED
Lease_Amount	NUMBER	NOT NULL
Unit_id	NUMBER	FOREIGN KEY, NOT NULL
Owner_contact	VARCHAR (20)	NOT NULL
Lease_Start_Date	DATE	NOT NULL
Lease_End_Date	DATE	NOT NULL
Tenant_id	NUMBER	FOREIGN KEY, NOT NULL

Tenant

ATTRIBUTES	DATATYPE	COMMENTS
Tenant_id	NUMBER	PRIMARY KEY, AUTO GENERATED
Tenant_Name	VARCHAR (20)	NOT NULL
Lease_id	NUMBER	FOREIGN KEY, NOT NULL
Tenant_contact	NUMBER	NOT NULL
Tenant_address	VARCHAR (20)	NOT NULL
Unit_id	NUMBER	FOREIGN KEY, NOT NULL

Owner

ATTRIBUTES	DATATYPE	COMMENTS
Owner_id	NUMBER	PRIMARY KEY, AUTO GENERATED
Lease_id	VARCHAR (20)	NOT NULL
property_id	NUMBER	FOREIGN KEY, NOT NULL
Unit_id	NUMBER	FOREIGN KEY, NOT NULL
Owner_name	VARCHAR (20)	NOT NULL
Owner_Contact	VARCHAR (20)	
Owner_address	VARCHAR (20)	NOT NULL