Database Design
Property Management System

Abstract

Property Management system will help to keep track of the properties and associated attributes like customer information, maintenance information , property type, pricing, quality, etc. Our aim is to provide customer hassle free experience as this database will allow us to provide on spot information from any location. It will also provide the most accurate information available from a vast database.

Business Rules/ Ideas

Our project deals with information about the property and its associated stakeholders. An identifier is also suggested for each entity, together with selected important attributes:

- Property Manager : Property manager will keep track of all the properties like maintenance activities, tenant information, rent, etc. The property manager table will have Prop_Mgr_ID, Name, Contact, Email, Office_Location as attributes with Prop_Mgr_ID as primary key.
- Tenant : Tenant will have information regarding the existing tenants and past tenants. It has attribute like Tenant_ID, Tenant_Name, Contact, Email_Address, Prop_ID, Deposit. Tenant_ID is the primary key and Prop_ID is the foreign key.
- Property : This will have information about all the available and alloted properties. Attributes will be Prop_ID, Prop_Mgr_ID, Prop_Name, Address1, Address2, City, State and Pin. Primary will be Prop_ID. Prop_Mgr_ID is the foreign key.
- Property Unit : This will contain information about multiple units in a property. The attributes for this table will be Unit_ID, Tenant_ID, Area, Level, Unit_Type_ID, Bedroom,Price. Unit_ID will be the primary key and Tenant_ID will be the foreign key.
- Payment : Payment table will contain all the information regarding the transactions between tenants, vendors and property managers. Attributes for these table are Payment_ID, Tenant_ID, Payment_Date, Amount, Mode of Transfer. Payment_ID is the primary key and Tenant_ID is the foreign key.
- Maintenance : Contains all the information regarding all the maintenance records for given properties. Attributes are Maintenance_type and Maintenance_ID which is the primary key.
- Maintenance Cost : This is an associative entity of maintenance and vendor entity which will be used to calculate the cost of maintenance activity. Maintenance_ID, Vendor_ID and CostPerHour.
- Vendors : Will contain information regarding the vendors who will provide the maintenance at various properties and facilities. Vendor_ID, Vendor_Name, Vendor_Contact,Vendor_Address1, Vendor_Address2, Vendor_City and Vendor_State,Vendor_Pin. Vendor_ID will be the primary key.
- Unit Type : This will classify the unit type the property entices. Its attributes are Unit_type_ID and Unit_type_Desc. Unit_type_ID is the primary key.
- Facilities : This table contains all the information available facilities to score the property upon this like laundry, ATM, market, Station, School and Hospital. Attributes are Facility_ID and Facility_Name. Facility_ID is the primary key.

- Distance : Distance table contains the distance of facilities from the property unit. Its attributes are Distance_ID and Distance_Desc. Primary key is Distance_ID.
- Unit Score : Its is an associative entity of facility and distance entities which will calculate the overall property score. Its attributes are Facility_ID, Distance_ID and Unit_ID.
- Customer : This gives us the information regarding our potential customer/tenant. Its attributes are Customer_ID, Customer_Name, Customer_Contact, Customer_Email, Preferred_Location, Preferred_Price, Preferred_Unit_Type and Credit_History.

ER Diagram-