IST 659 Database Administration & Database Management Concepts

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Section 402 Tuesdays 7:00 p.m.-8:30 p.m.

Project 1 Deliverable

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**Summary**

A real estate developer has grown fast and needs help wrangling its far-flung projects into a cohesive data system, as opposed to a collection of spreadsheets, paper documents, accounting documents, tabbed folders and collections of emails, etc.

The developer builds “Communities”. Communities are collections of “Homes” located in the suburbs. Communities may have the attributes “Normal” or “Adult Active”. Each Home is located on a Street and is designated by a Number that is distinct for that Street; Street is unique but Number is not (there could be a 100 Maple Drive and a 100 Meadow Lane); the combination of the two is unique and also forms the Street Address of the Home.

Homes come in an array of types based on the Number of Bedrooms, ranging from 1 to 5 Bedrooms. Normal Communities have Homes in the full range from 1 to 5 – Families are welcome! Adult Active Communities are for quasi-retirees 55+, with a restriction of no young children. Therefore, Homes in Adult Active Communities may only have 1 or 2 Bedrooms (enough for 1 guest – No Ruffians!)

Homes feature amenities such as car parking, swimming pool, access to fitness center, nearest school. Some features depend on the Community (for instance, Adult Active Communities are not near any schools by design). Homes will feature different car parking configurations as a function of number of bedrooms. 5 bedroom homes may have more than one kitchen.

Each community features a dedicated Sales Team. A Team must have at least one member or “Sales Agent” and may have more than one; also, a Sales Agent may be on more than one Sales Team and function as a Sales Agent for more than one Community. A member of the Sales Team will act as “Owner” in a Sale Transaction (as a representative of the developer). Each Sale Transaction will have a Buyer. The Sale Transaction will have information associated with it such as Asking Price, Days on Market, Offer Price, and Final Sale Price.

Stakeholders/Entity/Attribute List & Glossary

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| Stakeholders | Entities | Attributes |
| DEVELOPER  Creator of the Community/Homes, Original “Owner” | **COMMUNITIES**  Collection of Homes developed in tandem with one another. | Type:   * Adult Active * Normal |
| SALES TEAM  Agents employed by the Developer to Sell the Homes and act as Seller Agent in the Sale Transaction | **HOMES**  Individual units in Communities. Capable of being bought and sold. | Type   * 1, 2, 3, 4 or 5 Bedroom Units * Street * Number * Community Type * Amenities * Sold Status |
| SALES Transactions  Transfers of properties from Owner to Buyer via monetary purchase. | **Owner/Agent as Rep**  **Buyer**  **Home** | * Asking Price * Days on Market * Offer Price * Final Sale Price * Sale Date |
| OWNER  Individual in possession of a Home. |  | Name  Phone  Address |
| BUYER  Individual to whom the Home is sold. |  | Name  Phone  Address |
| AMENITIES  Series of features attributed to houses based on Community and Home Type. | Amenity List | Car Parking/# Cars  Nearest School  Swimming Pool  Additional Kitchen |

Data Questions

The Developer would like to be able to run analysis on:

1. Total Sales per Community: Sum of Dollar value, Amount per Unit, Averages, High/Low Prices.
2. Sales by Home Type (Normal vs. Adult Active); Total count, dollar value of sales
3. Sales by Unit Type (#Bedrooms) over portfolio and by Community
4. Proportion of each community currently sold vs. not sold.

Conceptual & Logical Data Models

ERD

Diagram

Description automatically generated

E-ERD

Diagram

Description automatically generated