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CSI-300: Database Management Systems
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Due March 8th, 2024

Project Goals:

The purpose of this project is to analyze Burlington housing information, find five interesting questions, and then find ways to query for that information from a MySQL database. Additionally, we were tasked with reverse engineering the Entity Relationship Diagram (ERD).

Question 1:

What percentage of total value of a property comes from its land, based on the land use of the property?

Results 1:

Land Use	Percentage of Value from Land
Commercial Condo	9.187
Residential Condo	23.443
RESIDENTAL APT CONDO	24.993
3 Family	39.370
Industrial	40.926
Single Family	42.783
Apartments 5+Units	43.704
Farm	44.330
2 Family	45.577
Utility Electric	49.008
Commercial	49.812
Commercial and Residential	50.164
4 Family	56.820
Commercial/Residential Condo	56.980
Exempt Utility	63.600
Mobile Home w/Land	67.791
Utility Other	73.480
Partial Exempt	82.622
Industrial Land	93.017
Seasonal home	93.734
Commercial Land	97.936
Res. Vacant Land	99.274
Farmland	100.000

23 rows returned.

As we can see, condos seem to have the highest average return whereas farmland returns the lowest -not having any buildings on the property.

It should be noted that for this query, we decided to exclude any properties with “exempt land” or “exempt” because they do not fit the normal pattern for developing properties. Additionally, we excluded anything that does not have a land value (things like mobile homes) because their total values and land values are independent.

Question 2:

What streets have the smallest average acreage?/ The most?

Results 2:

Smallest

House Count	Street Name	Average Acreage
10	POPLAR ST	0.065

1 row returned

Largest

House Count	Street Name	Average Acreage
5	INSTITUTE RD	46.827

1 row returned

Selecting for the smallest average acreage and the largest, we receive these results across 2 tables.

For this selection, I made sure to discount any streets that only have a single property. This decision was made due to the specific result coming from the largest table. The largest average street property results in being the singular university green, not a set of buildings. For this reason, I consider the data to me more meaningful when testing multi-property streets.

Question 3:

When and where was the last “Colonial” Type house built in Burlington?

Results 3:

Year Built	Street Number	Street Name
2015	91	STANIFORD FARMS RD

1 row returned

A relatively simple query. All that needs to be asked for is the address information on the building, the time of the building’s construction, and order by time descending. Since we only care about the most recent, we can further limit our results to 1.

Question 4:

What street has the highest number of “Tudor” style homes?

Results 4:

Tudor Houses	Street Name
8	ROBINSON PW

1 row returned.

In this query, we are looking for the street with the highest number of “Tudor” style houses. This is a relatively simple query: Select only for “Tudor” style houses, grouping houses on the street, and outputting the count for each street. In this instance, we are only interested in the street with the highest number of “Tudor” houses so we can limit our results to 1.

Question 5:

On what streets can we find properties over 5 acres? How many per street?

Results 5:

House Count	Street Name
1	CENTENNIAL CT
1	SHELBURNE ST
1	RIVERSIDE AV
1	DERWAY DR
1	KING ST
1	MANSFIELD AV
2	LAKESIDE AV
2	PINE ST
3	GROVE ST
4	INDUSTRIAL PW
4	INTERVALE RD
4	FLYNN AV
4	SOUTH PROSPECT ST
8	NORTH AV

14 rows returned.

In this query, we are looking for the streets with the properties over 5 acres. We can do this by selecting for all properties over 5 acres, grouping by the street name, and counting them up. We are not looking specifically for the street with the most or least, so we take all results without limiting any further.