CS579 – Fall2023
Lab 3 (Project Part 3)

Due: 11/7

Create *HouseForSale* database on your MySQL using the attached relational database
schema diagram. Note that I added a few columns that were not in the conceptual model.
You may decide data types of all columns appropriately.

1. Create a database named *HouseForSale*.
2. Write a create table statement for each table and create all tables in the
   HouseForSale database.
3. In create table statements, for each foreign key, specify appropriate referential
   triggered action clause (e.g., on delete …, on update … ).
4. Write insert statements to populate all tables. You need to make up fictitious
   attribute values. Use the following guideline:

   - Insert at least 20 PROPERTY tuples.
   - Insert at least 5 BUYER tuples.
   - Insert at least 30 BID_HISTORY tuples.
   - Insert at least 5 REALTOR tuples.
   - Insert at least 5 SELLER tuples.

5. Write following queries in SQL and issue them to your database. Then, capture
   the screenshots the query results and include them in your submission. Make sure
   that each query returns at least one tuple (If necessary, you need to insert
   additional tuples).

   (a). Given the name of a city (of your choice), show the property ID and the
        seller's realtor name of every property in the city that has at least two
        bedrooms and two baths.
   (b). Given a property ID (of your choice), show the ID, the name, and the bid
        price of each buyer who submitted bid for the property.
   (c). Show the property ID, the realtor name, and their company of each property
        which was listed for longer than 15 days and not closed yet.
   (d). Show the list of properties which does not have any bid. For each property,
        show the property ID, the city, and the realtor name.
   (e). For all properties that have been closed, calculate and show the average
        listing time. The listing time of a closed property is the difference between
        close date and the list date.

Deliverables

1. Script files:
   - Create **a single text file** that includes all create table statements. Name this
     file *create_tables.sql*.

- Create **a single text file** that includes all insert statements. Name this file *populate_tables.sql.* If you bulk loaded all tuples, then you must provide your input files as well as bulk load script file.
- Create **a single text file** that includes above five sql queries  Name the file *queries.sql.*

All your SQL statements must be syntactically correct and executable on a MySQL database. The TA will execute all create table statements and all insert statements as a single script file (i.e., not individual statements). So, it is very important that you order all statements in your file in such a way that no referential integrity is violated. Don't forget to write your name at the head of each file as a comment.

2. Query result file: Capture the screenshots of the query results and include them in a file named *query_results.XXX*, where *XXX* is an appropriate file extension such as *docx* or *pdf*.

Combine all files into a single archive file and name it *LastName_FirstName_lab3.XXX*, where *XXX* is an appropriate archive file extension, such as *zip* or *rar*. Upload this file to Blackboard.

**PROPERTY**

| PID | City | Type | Room | Bath | SF | Allowance | ListDate | SID |
|-----|------|------|------|------|----|-----------|----------|-----|

**BUYER**

| BID | Preapproved | Name | Phone | RID |
|-----|-------------|------|-------|-----|

**BID_HISTORY**

| PID | BID | Date | Price | CloseDate | ClosePrice |
|-----|-----|------|-------|-----------|------------|

**REALTOR**

| RID | Name | Company | BuyerFee | SellerFee |
|-----|------|---------|----------|-----------|

**SELLER**

| SID | Motivated | Name | Phone | RID |
|-----|-----------|------|-------|-----|