Assignment #3 (100pts)

Prepare a pdf document for the assignment submission. Name the file with the assignment number and your last name (e.g., Assignment3_Jabr).

Submit by the due date listed on Canvas. A late assignment is accepted until 24 hours after the due date with a 10% penalty. Assignment submission by email is not accepted.

You must complete the assignment independently and submit your original work. The use of generative tools such as ChatGPT, plagiarism or duplicate assignments violate Smeal honor code and will be given a grade of 'zero'. Further disciplinary action may also be considered.

ERD (10 pts)
Visit Yelp.com and explore the way the website hosts businesses and reviews. You may also want to do some external readings about Yelp to figure out this process. Once this is completed and you are familiar with the site's "business rules", draw a full ERD to represent the reviewing process. Include the needed entities, attributes and relationships that you deem representative. ***Note that the ERD must not be identical to the accompanying data files but is more elaborate with more tables than found in these files.***

Create and populate the database (5pts)
Download the three accompanying .sql files to your virtual machine. In Workbench, load the file "MySQL_Create_Yelp.sql" then run the entire code and ensure it ran successfully, i.e., that it produced green check signs in the output. Next, load the file "MySQL_Insert_Businesses.sql" then run the entire code and ensure it ran successfully. Lastly, load the file "MySQL_Insert_Reviews.sql" then run the entire code and ensure it ran successfully. You have now created and populated all the tables and are ready to complete your queries. ***Note that the step of inserting data to populate the tables may be time consuming and prone to errors. So, start early to avoid last minute hurdles.***

SQL queries (85 pts)
For each of the following questions, write the needed SQL statement(s). In your answers, report, as needed, ***a)*** typed text of the query/queries statement(s), ***b)*** snapshot from Workbench of your query/queries output, ***c)*** graphic illustrating the output, **and** ***d)*** a write up analyzing your findings. Make sure you provide **detailed** and **elaborate** answers.

- Write five nonidentical queries to explore the content of the database. (**5 pts**).
- There is a common claim that reviews are overly positive. Put together **several queries** to confirm or refute this claim. Present some of your results in three or more **graphics**. Write a **couple paragraphs** to explain the rationale for your queries and then to describe your findings including those in the graphic. (**20 pts**)
- Analyze the performance of the poorest performing business. Put together **several queries** to identify the poorest performing business and then to analyze its performance. Present some of your results in one or more **graphics**. Write a **couple paragraphs** to explain the rationale for your queries and then to describe your findings including those in the graphic. (**20 pts**)
- A friend is looking for a coffee shop recommendation in Austin. Based on your exploration of the database, suggest one coffee shop. Make sure that your decision is based on a **variety of metrics** (e.g., average rating, number of reviews, length of reviews and others). Present your queries and explain how you arrived at your recommendation. (**20 pts**)
- Based on the data at hand, develop an ***interesting*** and ***not-straightforward*** business question of your choosing that you can answer by querying this data. Write the needed queries to answer this question. Write a **couple paragraphs** to explain the rationale for your queries and then to describe your findings. (**20 pts**)