# DAD 220 Cardinality and Targeted Data

Bryan Pirrone

DAD 220

Professor Chin

3/26/2023

Replace the bracketed text in this template with your screenshots and responses. Then submit it to the Module Four Lab for submission, grading, and feedback. Screenshots should be sized to approximately one quarter of a page. Written responses should be in complete sentences. Rename this document by adding your last name to the file name before you submit.

1. **Retrieve employee tuples and identify the number of employees** in San Francisco and New York.
   1. Text

      Description automatically generated
2. **Retrieve order details** for orderNumber 10330, 10338, and 10194 and **identify** what **type of cardinality** this represents in the entity relationship model.
   1. Text

      Description automatically generated with low confidence
   2. There are several factors that go into this part of the analysis. A customer can have multiple orders, one order, or no orders. The definition of cardinality regarding sql, the maxima or minima of relationships and attributes, the above example demonstrates high cardinality with a one to zero minima.
3. **Delete records** from the payments table where the customer number equals 103.
   1. A computer screen capture

      Description automatically generated with medium confidence
   2. A computer screen capture

      Description automatically generated with low confidence
4. **Retrieve customer records** for sales representative Barry Jones and **identify** if the **relationships** are one-to-one or one-to-many**.**

Text

Description automatically generated

Text

Description automatically generated

Text

Description automatically generated

Text

Description automatically generated

Text

Description automatically generated

* 1. This example demonstrates how the relationship is one-to-many because a sales representative can have multiple customers, but the number of sales representatives is limited.

1. **Retrieve records** for customers who reside in Massachusetts and **identify** **their sales rep and the relationship of entities**. Identify if these entities demonstrate one-to-one or many-to-many relationships.

Text

Description automatically generated

Text

Description automatically generated

* 1. By entering the above code, we can see which customers live in Massachusetts and who their associated sales representative is. This shows us a one-to-many relationship because each individual sales representative can have multiple customers.

1. **Add one customer record** with your last name using an INSERT statement. You may use the name of a celebrity or fictional character if you don’t use your own name.

A picture containing text

Description automatically generated

1. **Reflection**
   1. **Define how cardinality is applied** to the databases you’ve been working with and why different numbers of records returned from the different offices.
      1. Cardinality allows us to determine different instances of a query in a particular database by comparing rows between tables. If only one instance existed between two tables in the query, then the relationship would be one-to-one. This would be seen by searching for a single customer to an individual’s particular order number. If multiple instances were shared between tables in the query, then the relationship would be one-to-many. This could be seen by seeing how many orders a particular customer has or when seeing how many customers work with a particular sales representative.
   2. **Compare and contrast** the different **queries** you ran and how cardinality applies to them.
      1. In the first step, we were identifying how many employees resided or serviced a particular state. This relationship in this instance was one-to-many because each individual employee in each state could have multiple customers. When determining the relationships between orders, order details, and products, the relationship varies. It could be one-to-many because a product could appear on multiple orders. If we changed the query to see products and orders, then it changed the relationship. In summary, I could connect different tables with a related attribute to display the requested information in a single table.
   3. **Describe two** of the crucial **benefits** **of cardinality** in this type of database.
      1. The immediate and most significant benefit of cardinality is its ability to link tables with common attributes. This allows for greater data acquisition, and identification of relationships, and allows for increased efficiency. This allows users to have a quick snapshot of the data their database holds and can discover relationships key to a business’s success. This logic would also apply to schools, such as GPAs, scholarships, and fees.
      2. Another benefit of cardinality is the ability to have multiple data tables instead of one larger data table. This increases the organization of data and makes it more readable and accessible to the end user.