# DAD 220 Cardinality and Targeted Data Template

1. A computer screen shot of a black screen

   Description automatically generated**Retrieve employee tuples and identify the number of employees** in San Francisco and New York.
2. A computer screen shot of a black screen

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

This represents a “one-to-many” in the relationship model because one order can be associated with multiple order details.

1. **Delete records** from the payments table where the customer number equals 103.

A screenshot of a computer program

Description automatically generatedThis picture shows both the before and after the records are deleted.

1. A screenshot of a computer

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

This represents “one-to-many” since Barry Jones is one sales rep for multiple customers/records.

1. A computer screen with white text

   Description automatically generated**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.

This represents “many-to-many” since there are multiple customers associated with multiple sales reps.

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 screenshot of a computer screen

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 is applied to the databases I have worked with by helping define the relationships between the tables in them. Different numbers of records returned from the different offices because each office has a different number of employees or customers which impacts the results when querying in the databases.
   2. **Compare and contrast** the different **queries** you ran and how cardinality applies to them.
      1. In a SELECT query for the employee table, cardinality applies because there is a one-to-many relationship between employees and customers where each employee may have multiple customers. As for a SELECT query, the customers table is a many-to-one, where each customer is associated with one employee. Understanding cardinality between the customer and employee tables is helpful for designing effective queries. It helps in determining how the tables relate and the structure of records being returned in the results.
   3. **Describe two** of the crucial **benefits** **of cardinality** in this type of database.
      1. The two main benefits of cardinality in this type of database are query optimization and design. Cardinality helps the database in generating efficient query plans, which leads to faster performance, reduced use of resources, and overall improved database efficiency. In design, cardinality helps by allowing developers to define the relationships between tables accurately. This creates a more clear representation of how data entities are related.