Data Science On-Ramp Course: SQL

Assignment 3: ER model to tables

Problem: Consider the scenario from Problem 2 of Assignment 1, where you designed an ER diagram for a company database. Write SQL statements to create the corresponding relations and capture as many of the constraints as possible.

Problem: Consider the scenario from slide 15 of Day 2, where you designed an ER diagram for a university library. Write SQL statements to create the corresponding relations and capture as many of the constraints as possible.

Problem: Although you always wanted to be an artist, you ended up being an expert on databases because you love to cook data and you somehow confused *database* with *data baste*. Your old love is still there, however, so you set up a database company, ArtBase that builds a product for art galleries. The core of this product is a database with a schema that captures all the information that galleries need to maintain.

Galleries keep information about artists, their names (which are unique), birthplaces, age, and style of art. For each piece of artwork, the artist, the year it was made, its unique title, its type of art (e.g., painting, lithograph, sculpture, photograph), and its price must be stored. Pieces of artwork are also classified into groups of various kinds, for example, portraits, still lives, works by Picasso, or works of the 19th century; a given piece may belong to more than one group. Each group is identified by a name (like those just given) that describes the group. Finally, galleries keep information about customers. For each customer, galleries keep that person's unique name, address, total amount of dollars spent in the gallery (very important!), and the artists and groups of art that the customer tends to like.

Draw an ER diagram for the database. Write SQL statements to create the corresponding relations and capture as many of the constraints as possible.