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CS 435

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Write Up

Entities:

1. Artist
2. Art Object
3. Painting
4. Sculpture
5. Statue
6. Other
7. Permanent Collection
8. Borrowed
9. Exhibition
10. Collection

Relationships:

1. Creates
   1. Artist -> Art Object
2. Part Of
   1. Art Object -> Collection
3. Borrowed From
   1. Borrowed -> Collection
4. Displayed In
   1. Art Object -> Exhibition

Attributes:

1. Artist
   1. Name (key)
   2. Country of origin
   3. Main style
   4. Date died
   5. Date born
   6. Epoch
   7. Description
2. Art Object
   1. ID
   2. Year created
   3. Artist name
   4. Title
   5. Description
   6. Origin
   7. Epoch
3. Painting
   1. Material
   2. Style
   3. Paint type
4. Sculpture
   1. Height
   2. Weight
   3. Style
   4. Material
5. Statue
   1. Height
   2. Weight
   3. Style
   4. Material
6. Other
   1. Type
   2. Style
7. Permanent Collection
   1. Date Acquired
   2. Status
   3. Cost
8. Borrowed
   1. Collection name
   2. Date borrowed
   3. Date returned
9. Collection
   1. Name
   2. Type
   3. Description
   4. Address
   5. Phone Number
   6. Contact person name
10. Exhibition
    1. Name
    2. Start date
    3. End date

Problem Description:

For this problem, we were required to create a database system for an art museum. The art museum can have several different kinds of art object in which identify as a certain category. Additionally, each art category holds an ownership, whether it is a borrowed piece or it is part of a permanent collection. Lastly, the art object is held within an exhibition to show off during the museum, and is owned as part of a collection. Artist information is held on each art object if it is available.

Design Approach:

My design approach for this assignment primarily focused on the structure of the art objects. Currently, I have art object being able to take the part of 1 of 4 categories: painting, statue, sculpture, or other. Since this hierarchy is disjoint, an art object can’t take more than one of the categories per art object. Each category has additional attributes to its type, and each is its own entity since it takes the key “ID” from the art object parent. An art object also takes 1 of 2 ownership types: permanent collection or borrowed. Similar to the categories, this hierarchy is also disjoint which means an art object can only have 1 ownership type. Each ownership type can take on further attributes and is its own entity as well.

A collection is a group of art objects that are part of the same group. I made it so that an art object has a relationship to a Collection so that upon instantiation of an art object, you can select what collection it is part of. In addition to a collection relationship, there is an exhibition relationship because each art object is part of the museum and is going to be on display at some point, thus upon creation of the art object you can specify the name of the exhibition it is part of. Lastly, there is an Artist entity which is directly attached to an art object by its name. An artist has many details, but an art object does not have to have an artist as part of its attributes because the artist may be unknown. Regardless, there is a relationship between an artist and an art object because the artist has the opportunity to create an art object.