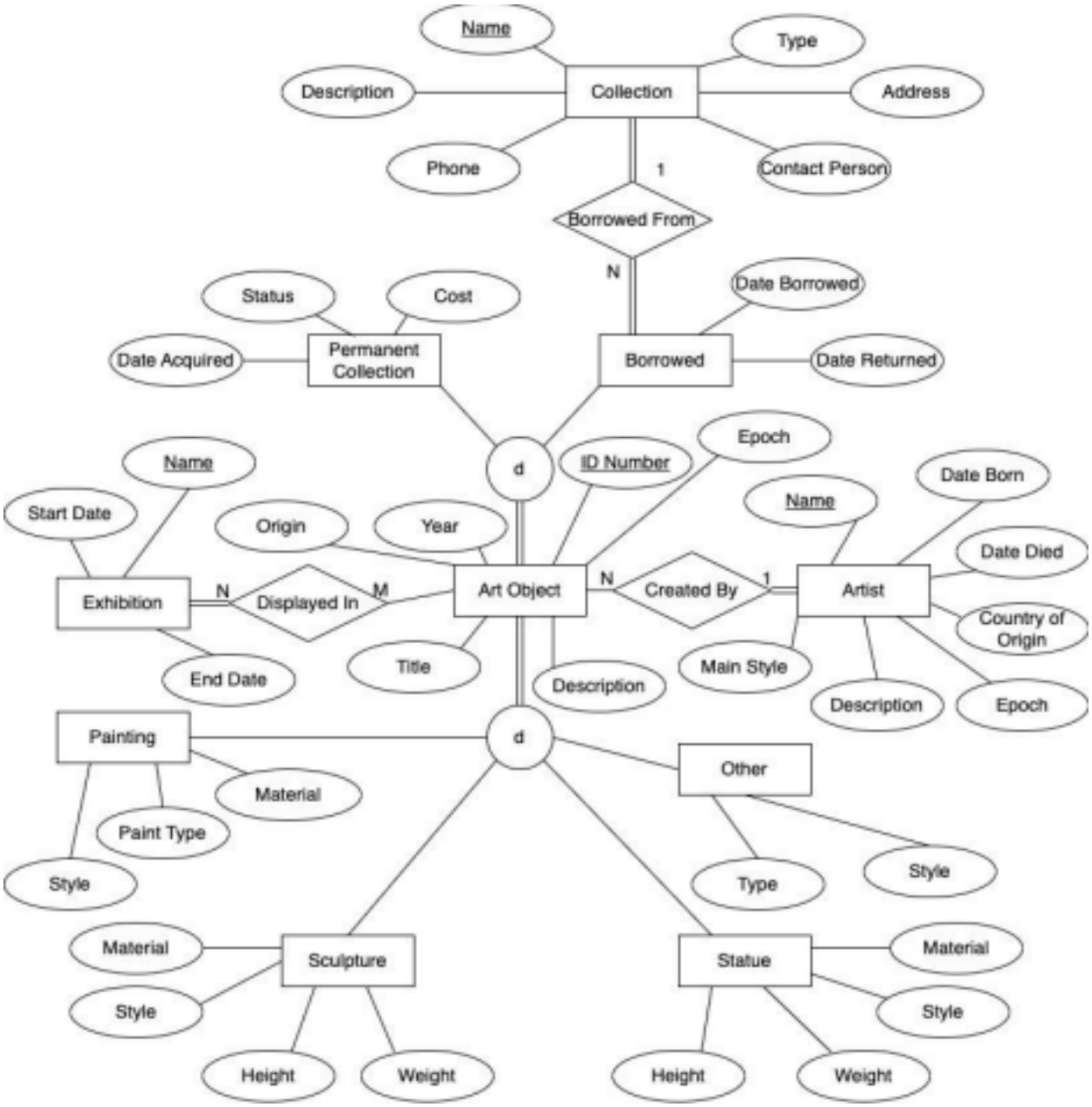
EER Diagram:


Name
Type
Description
Collection
Address
Phone
1
Contact Person
Borrowed From
N
Status
Cost
Date Borrowed
Date Acquired
Permanent Collection
Borrowed
Date Returned
d
ID Number
Epoch
Name
Date Born
Start Date
Origin
Year
Name
Date Died
Exhibition
N
Displayed In
M
Art Object
N
Created By
1
Artist
Country of Origin
End Date
Title
Description
Main Style
Description
Epoch
Painting
d
Other
Material
Paint Type
Style
Type
Style
Material
Sculpture
Statue
Material
Style
Style
Height
Weight
Height
Weight

Design Choices:

For this design, since the art objects were categorized into 4 different types, and each art object had to be one of the types, disjoint specialization with total participation was used to represent this. This same logic applied to the other categorization of the art objects into permanent and borrowed. For the relationship between the art object and the artist, it was assumed that since the artist of the object could be unknown, there is partial participation on the art object side, whereas for an artist to be in the museum database, they would need to have an art object in the museum, therefore having total participation on the artist side. In addition, it was assumed each object only had one artist, while each artist could create multiple objects, therefore represented by the N:1 relationship constraint. For the relationship between the borrowed object and the collection, this same N:1 logic also applies. However, both sides in this relationship have total participation as a borrowed object needs to have been borrowed from a collection, and it was assumed a collection needs to have interacted with the museum to be in the database. It was also assumed that the primary (unique) key of the exhibition entity was its name, as in a real world scenario high profile events of the same purpose such as art, would most likely not share the exact same name, and therefore, the exhibition entity is strong due to having this unique attribute. For the relationship between an art object and an exhibition, it was assumed that there was partial participation on the object side, as not every object needs to be in an exhibition, and there was total participation on the exhibition side, as an exhibition needs art to display. In this relationship it was also assumed that an art object could be in multiple exhibitions if they occurred at different times, and an exhibition could obviously have more than one object. Therefore, the M:N relationship constraint was used.