

Final Project EERD Description

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The relationship between ART_OBJECT and ARTIST is many-to-one because we assume each art object is associated with one artist, whereas multiple objects can be linked to a single artist. ARTIST has total participation with ART_OBJECT as every artist must be connected to at least one art object, while ART_OBJECT has partial participation with ARTIST since not all art objects have attributed artists.

The relationship between BORROWED and COLLECTION is many-to-one because we assume multiple borrowed objects can originate from a single collection and a borrowed object can only come from one collection each. BORROWED has total participation with COLLECTION as all borrowed objects are from a collection. On the other hand, COLLECTION has partial participation with BORROWED as there might be collections not currently lending objects.

The connection between ART_OBJECT and EXHIBITION is many-to-many because multiple art objects can be showcased in an exhibition, and several exhibitions may display the same art object. EXHIBITION has total participation with ART_OBJECT because every exhibition requires art objects for its existence. However, ART_OBJECT has partial participation with EXHIBITION as not all art objects are necessarily displayed in each exhibition.

Regarding ART_OBJECT's classification, it is a disjoint specialization based on object type {PAINTING, SCULPTURE, STATUE, OTHER} because each art object is assumed to fit into one category only. Its completeness is total as all art objects must fall into one of the four categories.

Another disjoint specialization of ART_OBJECT is based on ownership, categorizing them as either PERMANENT_COLLECTION or BORROWED. This is disjoint as each art object is presumed to belong to one category and not both. Its completeness is total as all art objects must fit into one of these two ownership categories.

The representation of the date is not composite since it will be stored in the database in a YYYY/MM/DD format. As well, each exhibition is assigned a unique exhibition ID to track every individual exhibition occurrence.