

ART GALLERY MANAGEMENT SYSTEM

Artist:

Attributes:

ArtistID (Primary key): Unique identifier for each artist.

Name: Name of the artist.

Birthdate: Date of birth of the artist.

Nationality: Nationality of the artist.

Style: Artistic style of the artist.

Cardinality: One artist can create many artworks, so the relationship is one-to-many with the Artwork entity.

Artwork:

Attributes:

ArtworkID (Primary key): Unique identifier for each artwork.

Title: Title of the artwork.

Description: Description of the artwork.

CreationYear: Year when the artwork was created.

Medium: Medium used in creating the artwork.

Cardinality: Each artwork is created by one artist, so the relationship is many-to-one with the Artist entity. Each artwork can be exhibited in multiple exhibitions, so the relationship with the Exhibition entity is many-to-many through the Catalog entity.

Exhibition:

Attributes:

ExhibitionID (Primary key): Unique identifier for each exhibition.

Name: Name of the exhibition.

StartDate: Start date of the exhibition.

EndDate: End date of the exhibition.

Location: Location of the exhibition.

Cardinality: Each exhibition can feature multiple artworks, and each artwork can be part of multiple exhibitions. So, the relationship with the Artwork entity is many-to-many through the Catalog entity.

Sale:

Attributes:

SaleID (Primary key): Unique identifier for each sale.

ArtworkID (Foreign key): References the artwork being sold.

Price: Price at which the artwork was sold.

Date: Date of the sale.

CollectorID (Foreign key): References the collector who purchased the artwork.

Cardinality: Each sale involves one artwork being sold to one collector, so the relationship is many-to-one with both the Artwork and Collector entities.

Collector:

Attributes:

CollectorID (Primary key): Unique identifier for each collector.

Name: Name of the collector.

Email: Email address of the collector.

Phone: Phone number of the collector.

Cardinality: One collector can make multiple purchases (sales), so the relationship with the Sale entity is one-to-many.

Catalog:

Attributes:

CatalogID (Primary key): Unique identifier for each catalog entry.

ArtworkID (Foreign key): References the artwork included in the exhibition.

ExhibitionID (Foreign key): References the exhibition in which the artwork is included.

Cardinality: Each artwork can be included in multiple exhibitions, and each exhibition can include multiple artworks. So, the relationship with both Artwork and Exhibition entities is many-to-many.

Loan:

Attributes:

LoanID (Primary key): Unique identifier for each loan.

ArtworkID (Foreign key): References the artwork being loaned.

StartDate: Start date of the loan period.

EndDate: End date of the loan period.

Cardinality: Each artwork can be loaned out multiple times, and each loan is for one artwork. So, the relationship with the Artwork entity is one-to-many.

Promotion:

Attributes:

PromotionID (Primary key): Unique identifier for each promotion.

Description: Description of the promotion.

StartDate: Start date of the promotion period.

EndDate: End date of the promotion period.

Cardinality: Each promotion is associated with either an artwork or an exhibition. So, the relationship can be one-to-one or one-to-many depending on whether the promotion is for a single artwork or an entire exhibition.

Inventory:

Attributes:

InventoryID (Primary key): Unique identifier for each inventory entry.

ArtworkID (Foreign key): References the artwork included in the inventory.

Quantity: Quantity of the artwork available in inventory.

Cardinality: Each artwork can have multiple inventory entries, indicating different quantities available. So, the relationship with the Artwork entity is one-to-many.

Conservation:

Attributes:

ConservationID (Primary key): Unique identifier for each conservation record.

ArtworkID (Foreign key): References the artwork being conserved.

Description: Description of the conservation activity.

Date: Date when the conservation activity took place.

Cardinality: Each artwork may have multiple conservation activities associated with it, so the relationship with the Artwork entity is one-to-many.

Now, let's draw the ER diagram:

